

# TC-K333ESX/K700ES

## SERVICE MANUAL

**RTV servis Horvat**

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[www.rtv-horvat-dj.hr](http://www.rtv-horvat-dj.hr)

TC-K333ESX:

*E Model*

TC-K700ES:

*US Model*

*Canadian Model*

*AEP Model*

*G-AEP Model*

*UK Model*



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### SPECIFICATIONS

|                                    |           |
|------------------------------------|-----------|
| Model Name Using Similar Mechanism | NEW       |
| Tape Transport Mechanism Type      | TCM-110D2 |

Recording system 4-track 2-channel stereo  
 Bias frequency 105 kHz  
 Heads Erase head × 1 (S & F head)  
 Record head × 1 (LA head)  
 Playback head × 1 (LA head)  
 Motors Capstan motor × 1 (direct drive linear torque BSL motor)  
 Reel motor × 1 (DC motor)  
 Wow and flutter ±0.04% W.peak (IEC)  
 0.025% WRMS  
 Fast-forward and rewind time  
 Approx. 90 sec (with C-60 cassette)  
 Frequency response  
 Dolby NR OFF  
 TYPE IV cassette (Sony METAL-ES)  
 20 – 20,000 Hz ±3 dB (DIN)  
 20 – 14,000 Hz ±3 dB (0 VU recording level)  
 15 – 22,000 Hz  
 TYPE II cassette (Sony UX-S)  
 20 – 18,000 Hz ±3 dB (DIN)  
 15 – 19,000 Hz  
 TYPE I cassette (Sony HF-S)  
 20 – 17,000 Hz ±3 dB (DIN)  
 15 – 19,000 Hz

Signal-to-noise ratio (at peak level)

| Cassette        | TYPE I<br>(Sony HF-S) | TYPE II<br>(Sony UX-S) | TYPE IV<br>(Sony METAL-ES) |
|-----------------|-----------------------|------------------------|----------------------------|
| Dolby NR system |                       |                        |                            |
| C-TYPE ON       | 69 dB                 | 72 dB                  | 73 dB                      |
| B-TYPE ON       | 63 dB                 | 66 dB                  | 67 dB                      |
| OFF             | 56 dB                 | 59 dB                  | 60 dB                      |

Total harmonic distortion  
 0.8% (with Sony METAL-ES cassette)  
 Inputs Line inputs (phono jacks)  
 Sensitivity 77.5 mV  
 Input impedance 50 k ohms  
 Outputs Line outputs (phono jacks)  
 Rated output level 0.44 V (–5 dB) at  
 load impedance 47 k ohms  
 Minimum load impedance 10 k ohms  
 Headphones output (stereo phone jack)  
 Output level continuously variable  
 from 0 – 3 mW (at load impedance 32 ohms)

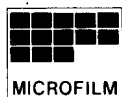
### General

Power requirements  
 U.S.A. and Canada: 120 V AC, 60 Hz  
 United Kingdom: 240 V AC, 50 Hz  
 (220 V AC adjustable by authorized Sony personnel)  
 European countries: 220 V AC, 50/60 Hz  
 (240 V AC adjustable by authorized Sony personnel)  
 Other countries: 120, 220 or 240 V AC  
 adjustable, 50/60 Hz

Power consumption 30 watts  
 Dimensions Approx. 430 × 125 × 350 mm (W/H/D)  
 (17 × 5 × 13<sup>3</sup>/<sub>4</sub> inches)  
 Weight Approx. 8.4 kg (18 lb 8 oz)  
 Supplied accessories  
 Connecting cord (2)

– Continued on page 2 –

## STEREO CASSETTE DECK



[www.rtv-horvat-dj.hr](http://www.rtv-horvat-dj.hr)

# SONY®



**Peak program meters**

|                            |                                    |
|----------------------------|------------------------------------|
| Display range              | -40 to +8 dB                       |
| Frequency response         | 20 – 20,000 Hz $\pm 1.5$ dB        |
| Attack time                | 1 ms                               |
| Recovery time              | 750 ms (from 0 to -20 dB)          |
| Number of display segments | 16 each for left and right channel |

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**SAFETY-RELATED COMPONENT WARNING!!**

COMPONENTS IDENTIFIED BY SHADING AND 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.

**OPERATING VOLTAGE**

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

The USA and Canada model operates on 120 V AC.

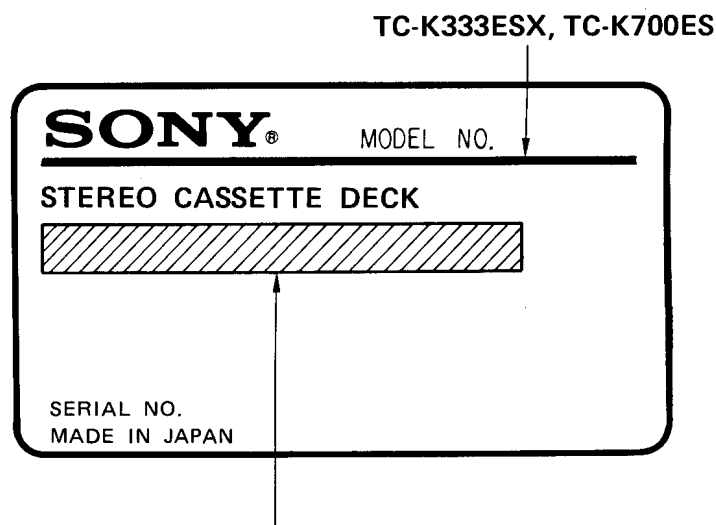
The European model operates on 220 V AC (or 240 V AC adjustable by authorized Sony personnel).

The United Kingdom model operates on 240 V AC (or 220 V AC adjustable by authorized Sony personnel).

The model for other countries operates on 120, 220 or 240 V AC. The voltage selector is located on the rear panel. If the selector must be reset, **disconnect the AC power cord** and set the selector to the appropriate voltage.

**MODEL IDENTIFICATION**

— Specification Label —



G-AEP, AEP Model: AC: 220 V ~ 50/60 Hz

UK Model: AC: 240 V ~ 50/60 Hz

E Model: AC: 120/220/240 V ~ 50/60 Hz

US Model: AC: 120 V 60 Hz

Canadian Model: AC: 120 V 60 Hz

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

LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET UNE MARQUE  SUR LES DIAGRAMMES SCHEMATIQUES 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.

## SAFETY CHECK-OUT (US Model)

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 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 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)

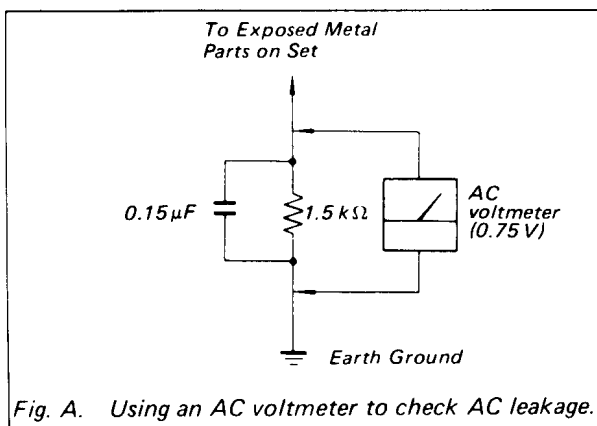


Fig. A. Using an AC voltmeter to check AC leakage.

## FEATURES

### Calibration brings out the best of every tape

Separate controls permit precise adjustment of recording bias current over a range of  $\pm 20\%$  and recording level (sensitivity) over a range of  $\pm 3$  dB. This assures optimum performance with any kind of tape.

### Large multi-function peak program meters

These meters provide accurate level indication and maintain the peak readings for about 2 seconds, for easy recording level setting which makes full use of the tape's dynamic range.

### Linear counter shows tape travel time

The electronic tape counter displays the playing time in minutes and seconds. It can also be used to determine the remaining playback or recording time to the end of the tape.

### 3-head system for instant monitoring

Separate record, playback and erase heads let you instantly check the recorded sound while a recording is in progress. The record and playback heads are made of laser amorphous material, to ensure wide dynamic range, extremely low noise and superior sound quality.

### Other convenient functions

- Any specific point on the tape can be stored in memory, to easily locate it later or automatically start playback from there.
- Unattended recording or automatic playback can be carried out with an optional timer.
- Dolby C-type noise reduction system guarantees natural and noise-free sound reproduction.
- Automatic tape slack take-up function prevents tape damage when cassette is inserted.

## LOCATION AND FUNCTION OF CONTROLS

Cassette holder

▲ (Eject) button

**COUNTER MEMORY button**

Press to enter a reference point for the memory play and memory stop function. The indication "MEMORY" appears below the tape counter. Press the button once more to deactivate the function.

**Linear tape counter**

Indicates the approximate tape running time in minutes and seconds.

**COUNTER RESET button**

Press to reset the counter to 0.00.

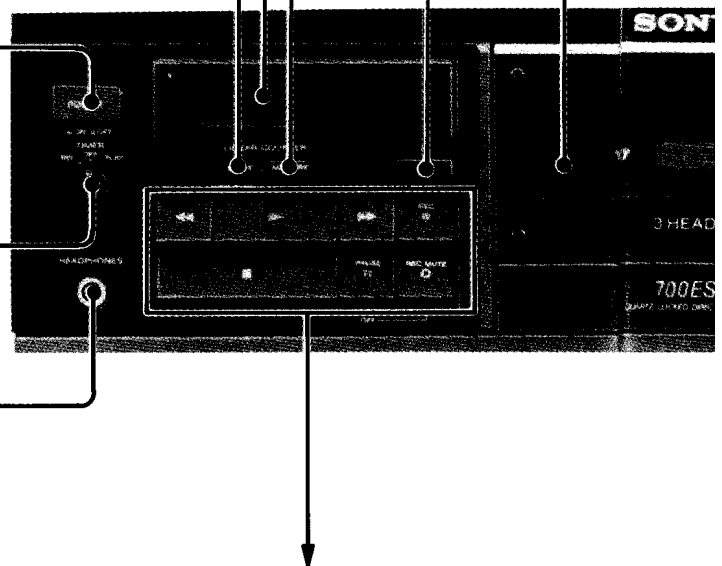
**POWER switch**

When the unit is turned on, the **II** indicator blinks and the other tape transport buttons are inactive for a few seconds, until all internal circuits have stabilized.

**TIMER switch**

Permits automatic recording or playback start at a predetermined time with an optional timer.

**HEADPHONES jack**  
(Stereo phone jack)



### Tape operation buttons

◀◀ (Rewind) button

Press to rewind the tape. When pressed together with ▶, playback automatically starts after rewinding.

■ (Stop) button

|| (Pause) button

Press to temporarily stop the tape during recording or playback. Press once more to release the pause mode.

▶ (Play) button

▶▶ (Fast-forward) button

● (Record) button

○ (Record muting) button

Serves to insert blank spaces between selections during recording. When the button is pressed, a blank of four seconds is created and the tape automatically stops at pause mode.

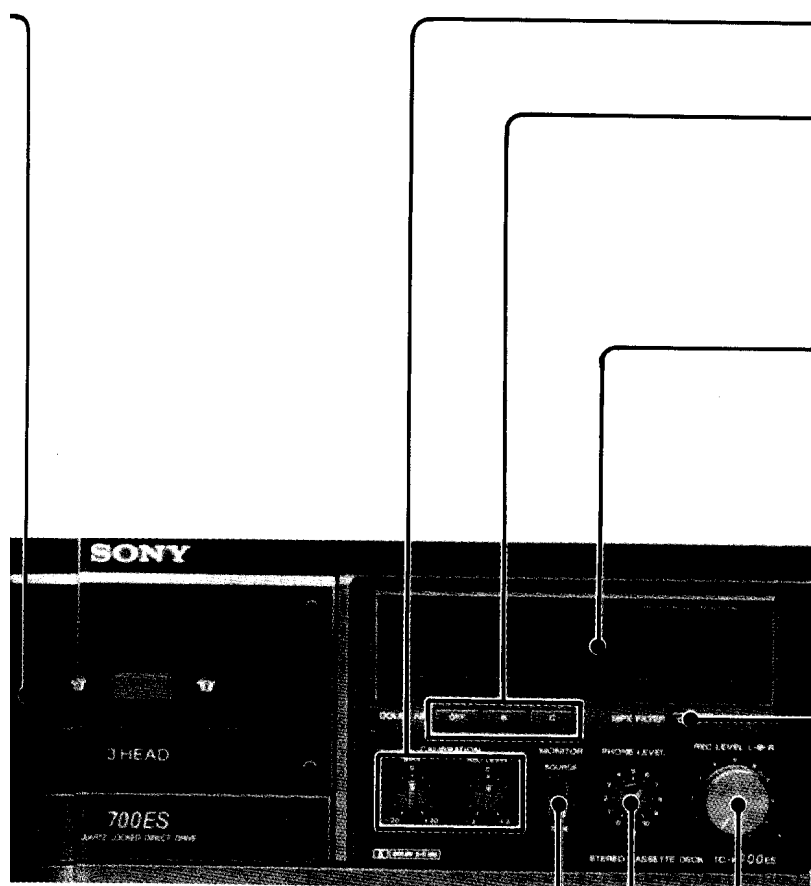


Photo: TC-K700ES

**CALIBRATION controls**

**DOLBY NR\* switches**

Press to select the Dolby B-type or C-type NR system. The selected noise reduction type is shown above the peak program meters.

**Peak program meters**

Show the input level (recording level) when the MONITOR switch is set to SOURCE, and the playback level (recorded level) when the switch is set to TAPE. The tape type is also shown on the meter panel.

**MPX FILTER switch**

This switch is active only when Dolby B or C noise reduction is selected. Normally, the switch should be set to OFF.

The MPX filter serves to cut off any remnants of the 19-kHz stereo carrier and 38-kHz subcarrier signals, which may otherwise interfere with proper operation of the Dolby noise reduction when recording FM broadcasts. Almost all modern high-performance tuners incorporate filters which adequately remove such signal components from the output. If a tuner with insufficient filtering is used (sound quality degradation is noted when recording with Dolby NR), set the MPX FILTER switch to ON. The indication "FILTER" appears on the meter panel.

**REC LEVEL (recording level) controls**

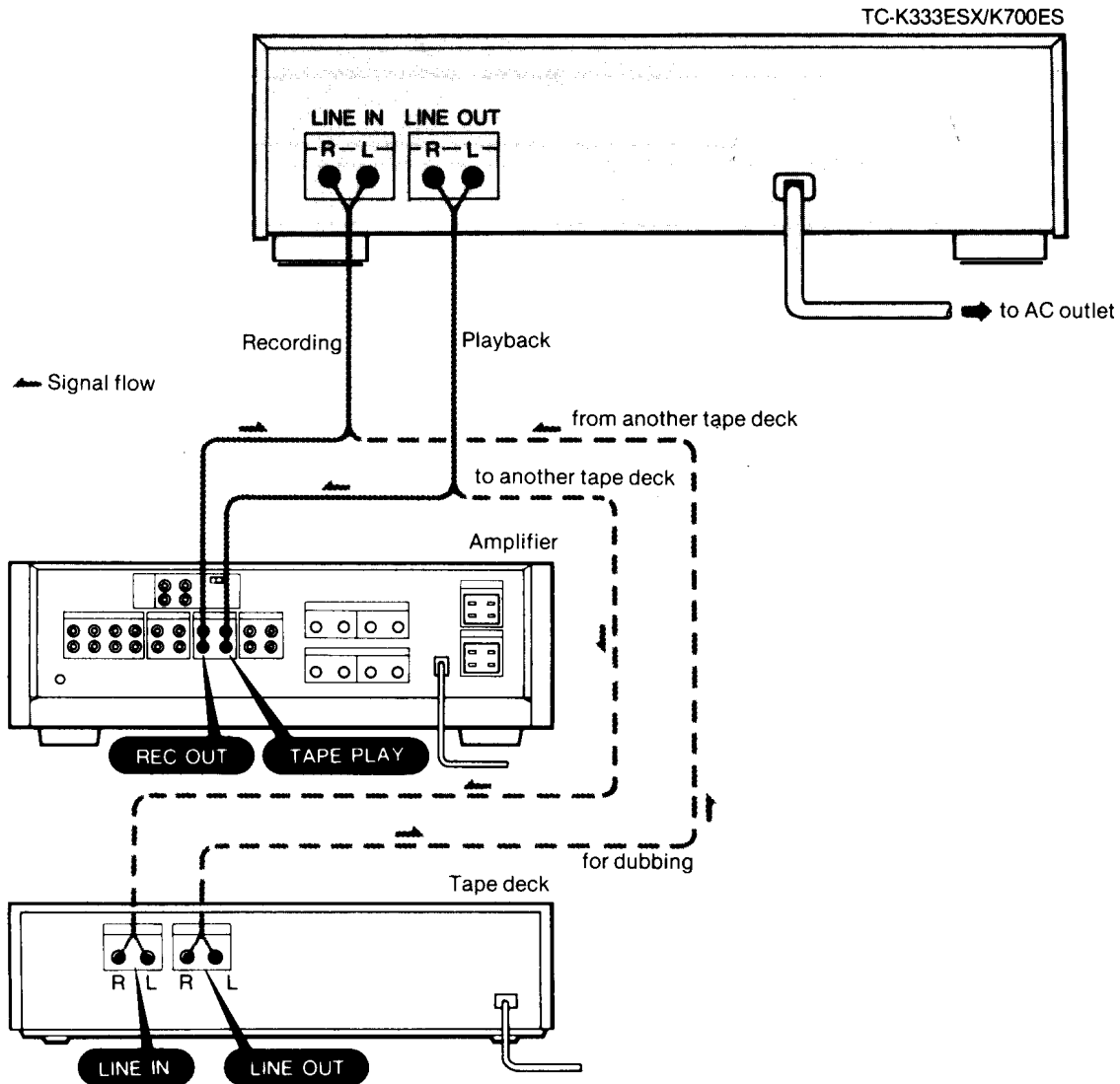
**PHONE LEVEL control**

**MONITOR switch**

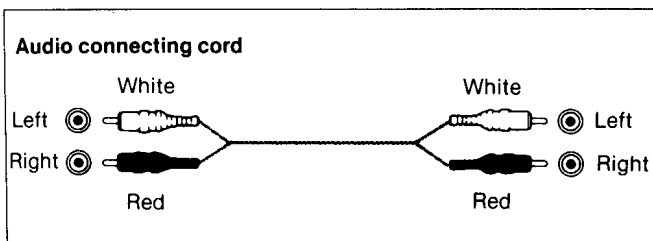
Set this switch to SOURCE to listen to the input signal and to TAPE to listen to the playback signal from the tape or to monitor the recorded sound during recording. For recording level adjustment, set the switch to SOURCE.

## CONNECTIONS

Turn the power to all components off before making any connections.



Use the supplied cables and make connections as shown in the illustration.



### Notes on connection

- Note that the red plugs of the supplied connecting cord are for the right channel and the white plugs for the left channel.
- Always insert the plugs fully into the jacks. A loose connection may cause hum pickup.
- Always hold the plug when disconnecting a cable. Do not pull the cord itself.

### Power cord

A white mark is visible on one lead of the power cord. This will help you drive the tape deck and other components in the system "in phase" by matching the AC power cord polarities with AC outlet polarities. In most cases, the marked power cord of the tape deck should be inserted into the negative potential of the AC outlet.

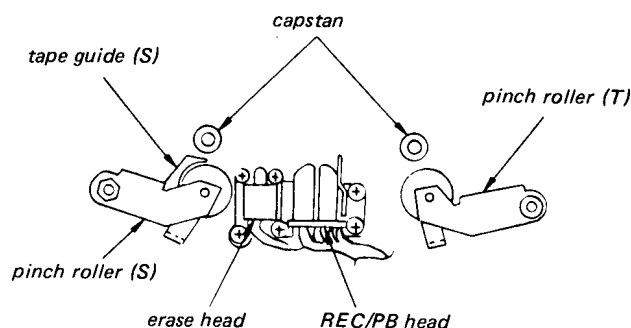
## SECTION 1 ADJUSTMENTS

### 1-1. MECHANICAL ADJUSTMENTS

#### PRECAUTION

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

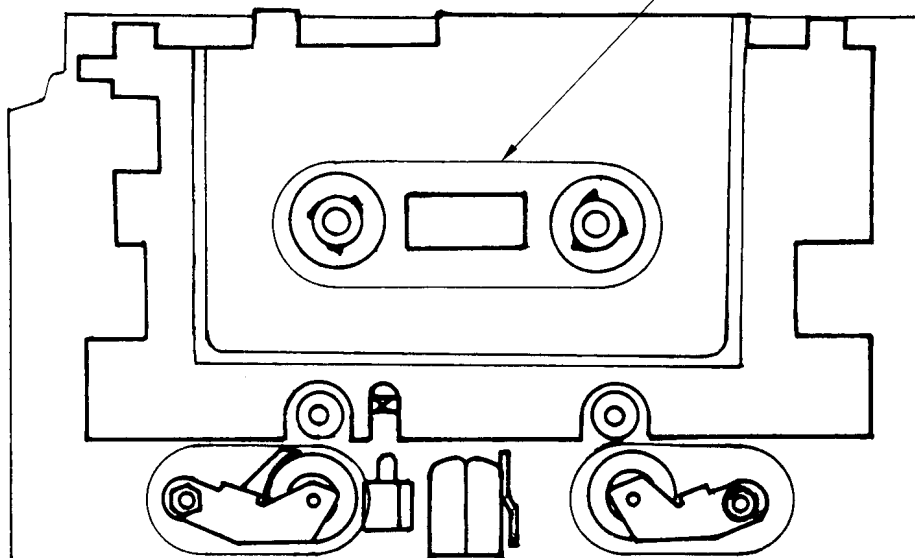
|                      |              |
|----------------------|--------------|
| record/playback head | pinch roller |
| erase head           | rubber belts |
| capstan              | idlers       |
2. Demagnetize the record/playback and erase head with a head demagnetizer.
3. Do not use a magnetized 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.



#### FF, REW Torque Check

1. Insert the torque meter CQ201B.
2. Check FF torque when changing the mode STOP → FF.
3. Check REW torque when changing the mode STOP → REW.

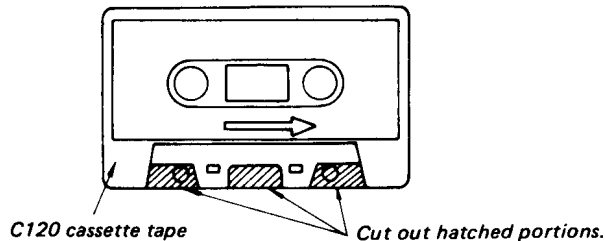
| Torque  | Torque meter | Reading                                  |
|---------|--------------|------------------------------------------|
| FF, REW | CQ201B       | 60 to 130 g·cm<br>(0.84 to 1.82 oz·inch) |



# Head Height Adjustment

Insert a mirror cassette or adjustment cassette and adjust screws **A** – **C** so that the tape enters the tape guide of the record/playback head smoothly when pushing the head base out by hand.

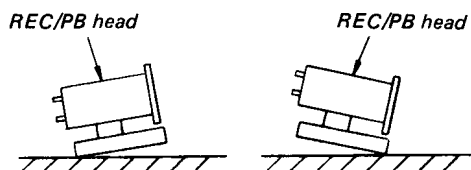
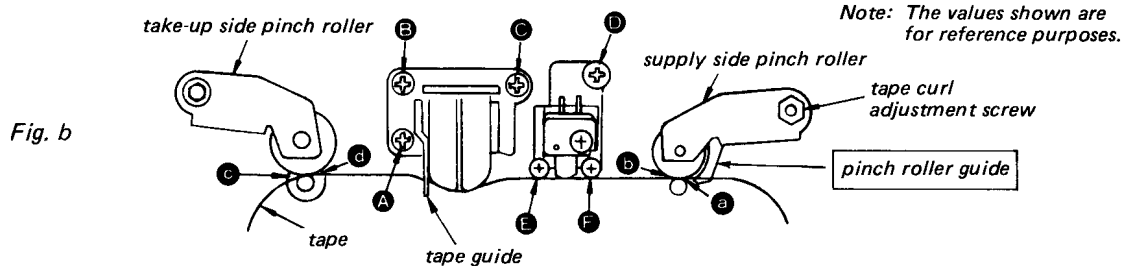
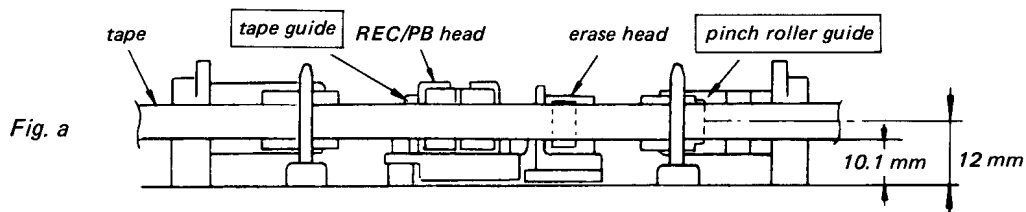
1. Make an adjustment cassette as shown below or use a mirror cassette.



2. Insert the mirror cassette (or adjustment cassette) into the set. In FWD mode, the tape should not curl at the portions shown by arrows (tape guides) in Fig. a. If it does, adjust the height of tape guide of supply pinch roller.

## Adjustment locations:

adjustment screw of tape curl in Fig. b  
(Be careful not to turn the screw more than 1/2 turn.)

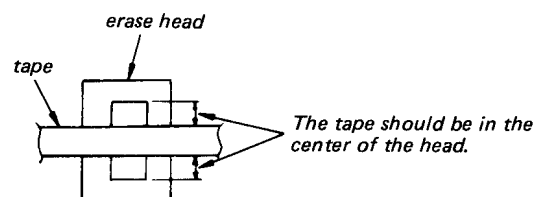


3. Back tension: 0  
Make sure that there is no tape twist at portions **a** – **d**.

1. When the tape twists upwards:  
Turn adjustment screws **B**, **C** of the record/playback head and recline the head as shown in Fig. c.
2. When the tape twists downwards:  
Turn adjustment screws **B**, **C** and recline the head as shown in Fig. d.

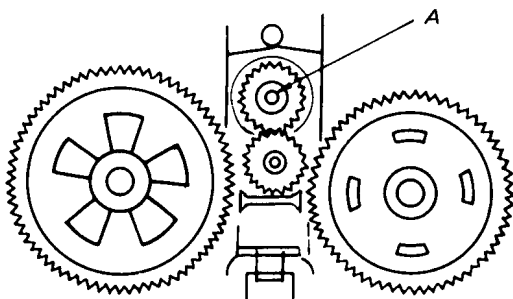
4. Measure the height of erase head.  
If it is out of the range indicated in Fig. e, follow the procedures below.

1. When the height of erase head is out of the range:  
Adjust the height by screws **D**, **E**, **F** of the erase head.
2. After adjusting the height of the erase head, make sure that the head is not inclined. If necessary, loosen or tighten adjustment screw **D**.



## Forward Torque/Back Tension Torque Adjustment

1. Insert the taken-up tape, and set the Forward mode. Adjust RV701 so that the A begins to rotate.



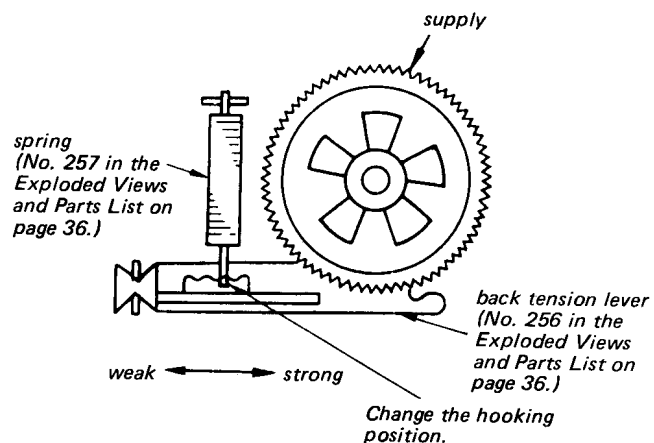
2. Insert the torque meter CQ102C, make sure that the forward torque and the back tension torque meet the specifications.

### Specifications

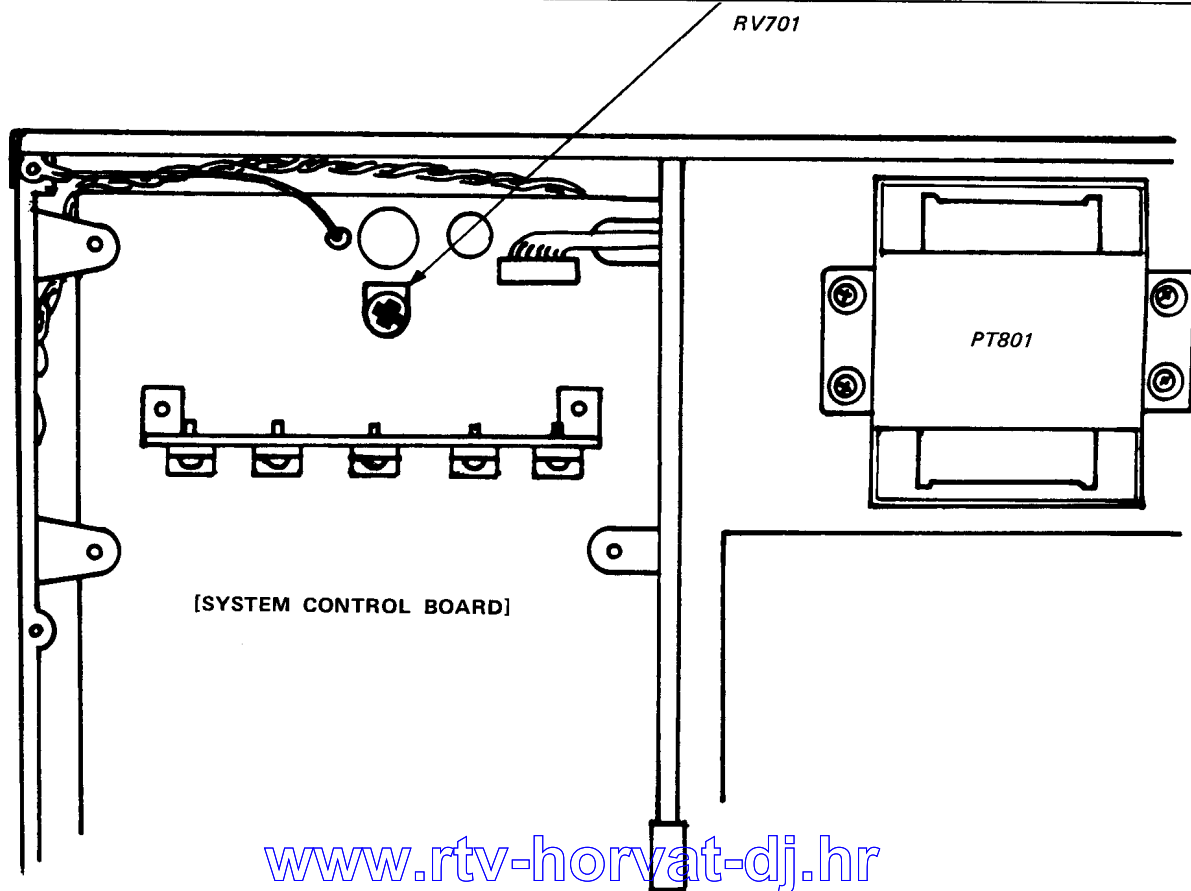
Forward torque: 30 to 60 g·cm  
(0.42 to 0.84 oz·inch)

Forward back tension torque:  
7 to 10.5 g·cm  
(0.1 to 0.15 oz·inch)

3. When the forward back tension torque doesn't meet the specifications, adjust by changing the hooking position of the spring as shown below.



Adjustment Location: system control board



## 1-2. 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

NPX FILTER ..... OFF

TIMER ..... OFF

- **Standard Record:**

Deliver the standard input signal level to the input jack and set the REC LEVEL control to obtain the standard output signal level.

Standard Input Level

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

Standard Output Level

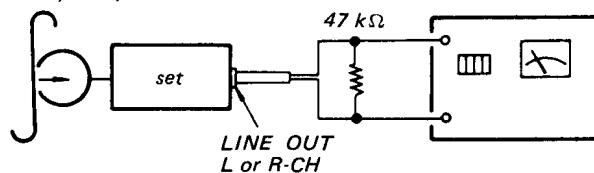
| Output Terminal | LINE OUT       |
|-----------------|----------------|
| load impedance  | 47 k $\Omega$  |
| output level    | 0.44 V (–5 dB) |

### Tape Speed/WOW Check

**Procedure:**

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

frequency counter  
& WOW meter



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 against the values of the step 1.

**Specification:**

TAPE SPEED deviation: within 2,990 to 3,010 Hz

TAPE SPEED fluctuating width: within 2,990 to 3,010 Hz

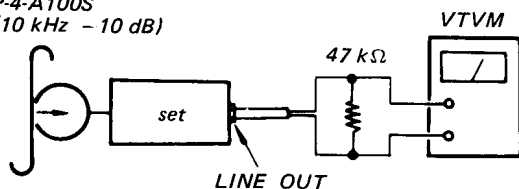
WOW (WRMS): 0.037% below

## Provisional Playback Head Azimuth Adjustment

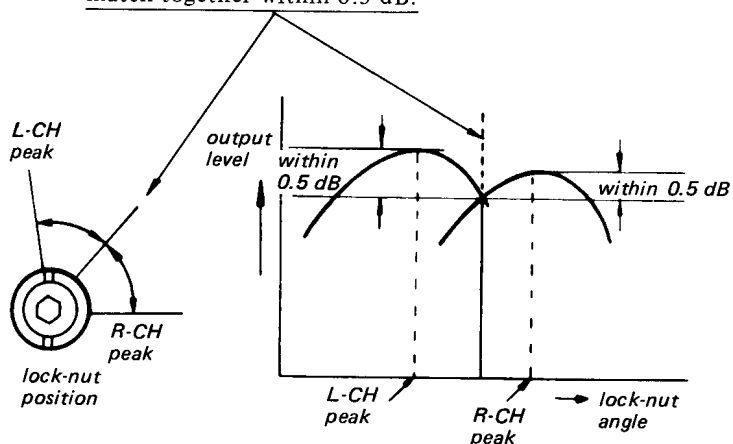
### Procedure:

1. Mode: playback

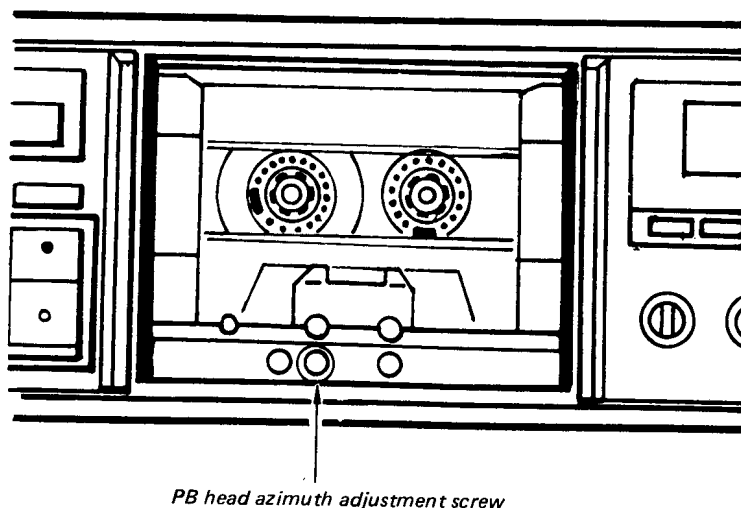
test tape  
P-4-A100S  
(10 kHz -10 dB)



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



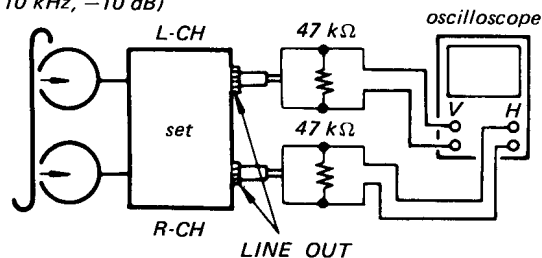
### Adjustment Location:



3. Phase check.

Mode: playback

test tape  
P-4-A100S  
(10 kHz, -10 dB)



4. Make sure the phase difference is in between in-phase to 90°.

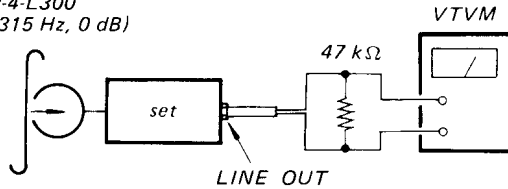
| screen pattern |     |     |       |      |
|----------------|-----|-----|-------|------|
|                |     |     |       |      |
| in phase       | 45° | 90° | 135°  | 180° |
| good           |     |     | wrong |      |

## Playback Level Adjustment

### Procedure:

Mode: playback

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



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

### Specification:

LINE OUT level: 0.41 to 0.46 V  
(-5.5 to -4.5 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.

Adjustment Location: PB board

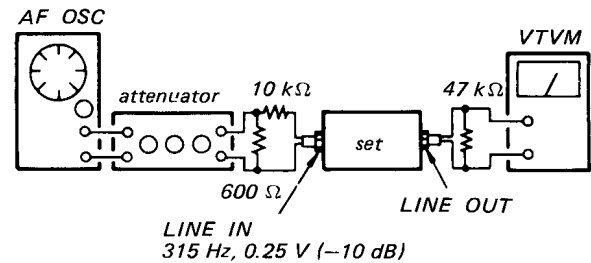
## Meter Level Adjustment

### Setting:

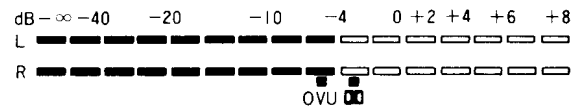
MONITOR switch: SOURCE

### Procedure:

1. Stop mode.

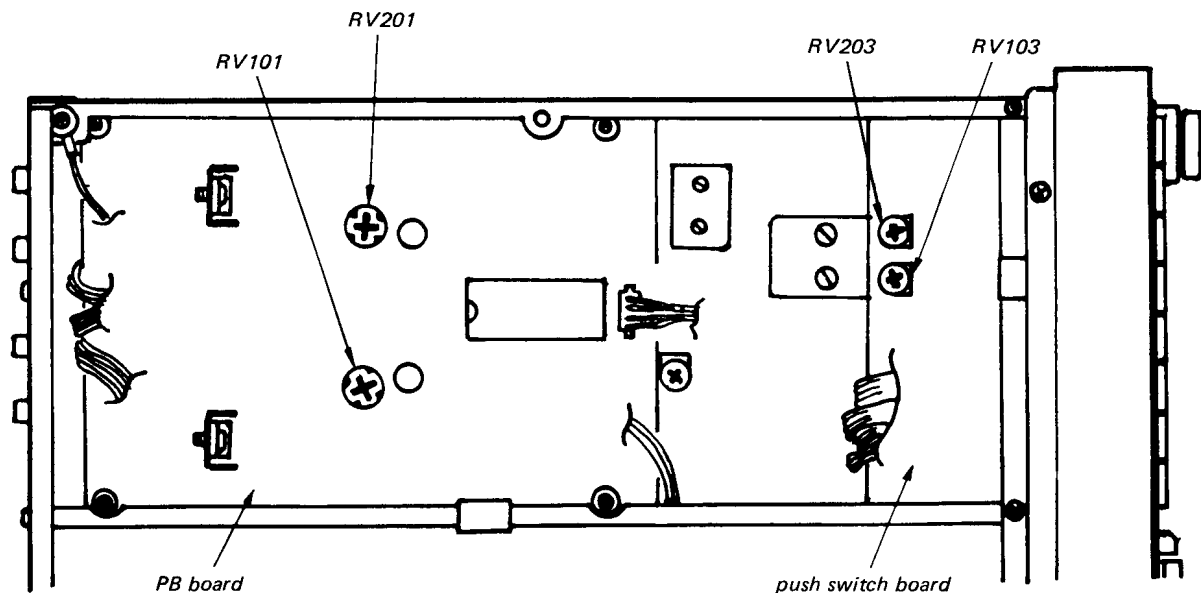


2. Adjust the recording level so that the LINE OUT level is 0.44 V (-5 dB). In this time adjust RV103 (L-CH) and RV203 (R-CH) so that the 0 VU (-4 dB) segments of the meter light-up.



3. Adjust the recording level so that the LINE OUT level is 1.9 V (8 dB). In this time, make sure that all the segments of the meter light-up.

Adjustment Location: push switch board

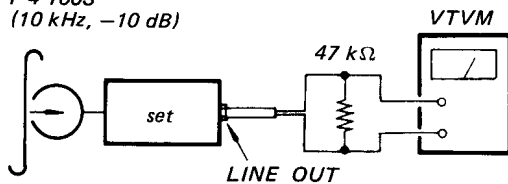


## PB DOLBY NR Check

### Procedure:

1. Mode: playback

test tape  
P-4-100S  
(10 kHz, -10 dB)



2. Make sure that the output levels are different in DOLBY NR OFF, B, and C.

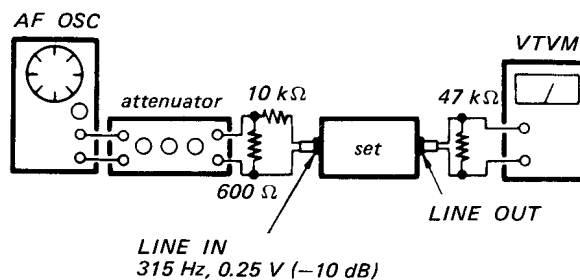
### Specification:

- OFF ↔ B level difference -0.5 to -2.5 dB  
B ↔ C level difference -0.5 to -2.5 dB

## MPX FILTER Check

### Procedure:

1. Mode: stop



2. Apply 315 Hz, 0.25 V (-10 dB) signal and adjust REC LEVEL control so that the LINE OUT level is 0.44 V (-5 dB).
3. Apply 19 kHz, 0.25 V (-10 dB) signal and measure the LINE OUT level.

### Specification:

- DOLBY NR: OFF, FILTER: ON/OFF  
0.49 to 0.39 V (-4 to -6 dB)  
DOLBY NR: B, C, FILTER: ON  
0.25 V (-30 dB) or less

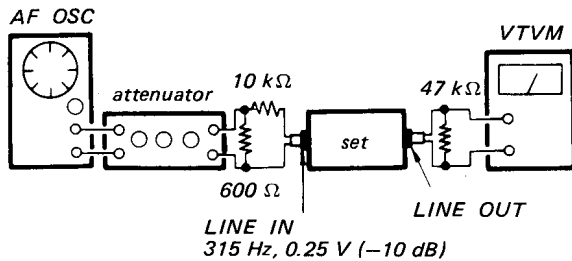
# Provisional Record Head Azimuth Adjustment

## Setting:

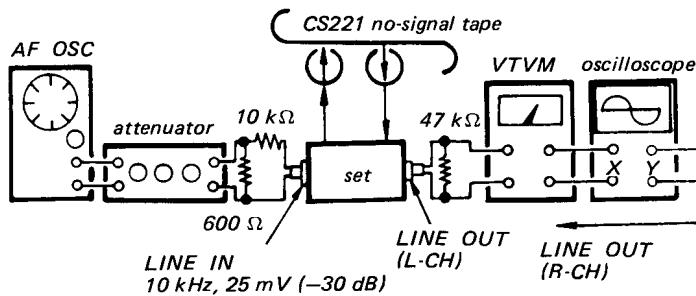
BIAS CAL control: center click

Turn CT301 (L-CH, R-CH) fully clockwise and counterclockwise 1/2 to 1 time. (See Record Bias Adjustment on page 17.)

## Procedure:

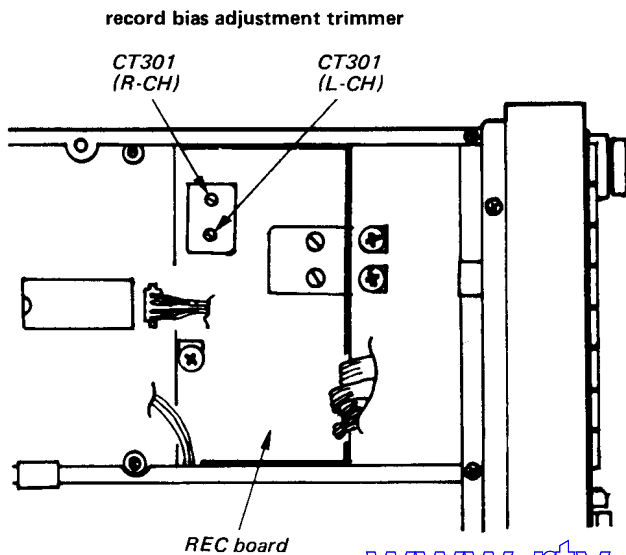


1. Apply 315 Hz, 0.25 V (-10 dB) signal and adjust REC LEVEL control so that the LINE OUT level is 0.44 V (-5 dB).

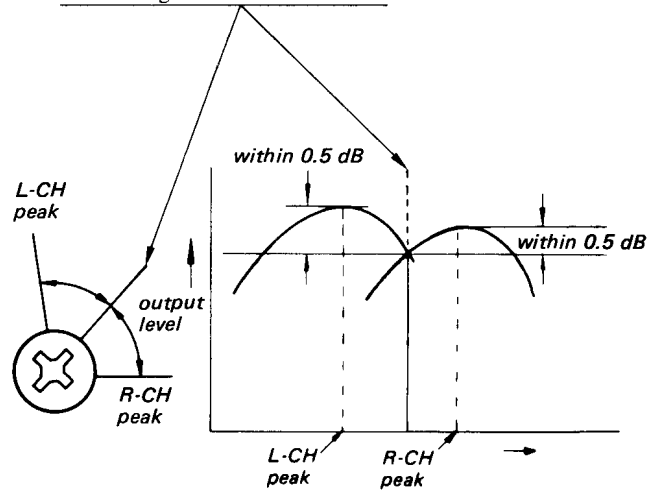


2. Apply 10 kHz, 25 mV (-30 dB) signal, set to the simultaneous REC/PB mode.

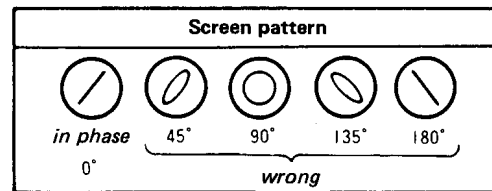
Adjustment Location: REC board



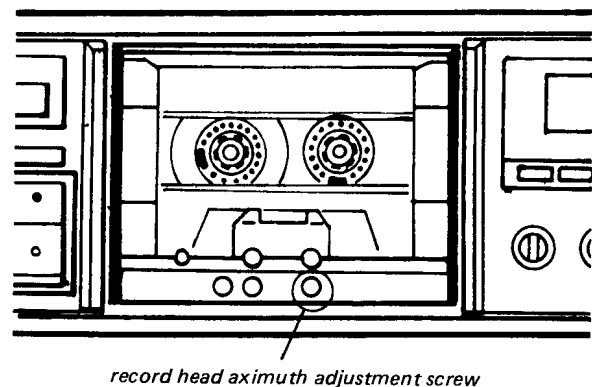
3. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 0.5 dB.



4. Simultaneously, adjust the azimuth screw so that the phase difference between L-CH and R-CH is 0°.



Adjustment Location: head



## Bias Osc Frequency and Bias Trap Adjustment

### Setting:

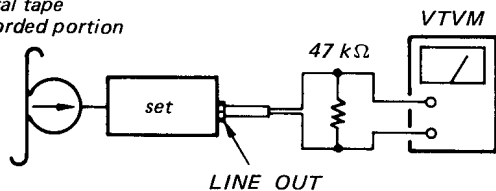
Metal Tape (TYPE IV)  
 LINE IN: no signal  
 REC LEVEL knob: standard record position  
 (See page 11.)

### • Bias Osc Frequency

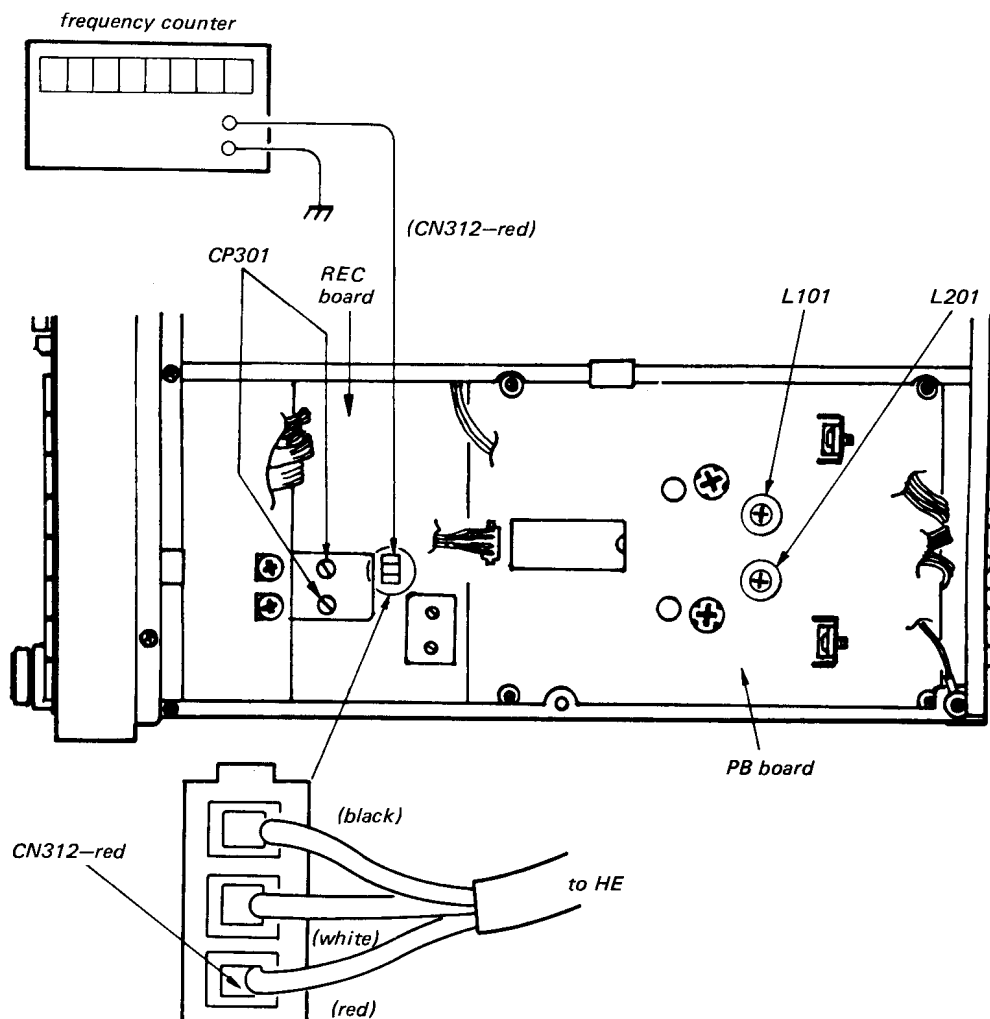
#### Procedure:

1. Mode: record

metal tape  
 recorded portion



2. Connect the frequency counter lead, to the erase head connecting terminal. Adjust CP301 so that the reading on the frequency counter is 105 kHz (within 104 to 106 kHz).



### • Bias Trap

#### Procedure:

Set the MONITOR switch to TAPE, and adjust L101 and L201 so that the reading on VTVM connected to LINE OUT is minimum.

#### Specification:

2.75 mV or below (−49 dB or less)

Adjustment Location: PB board, REC board

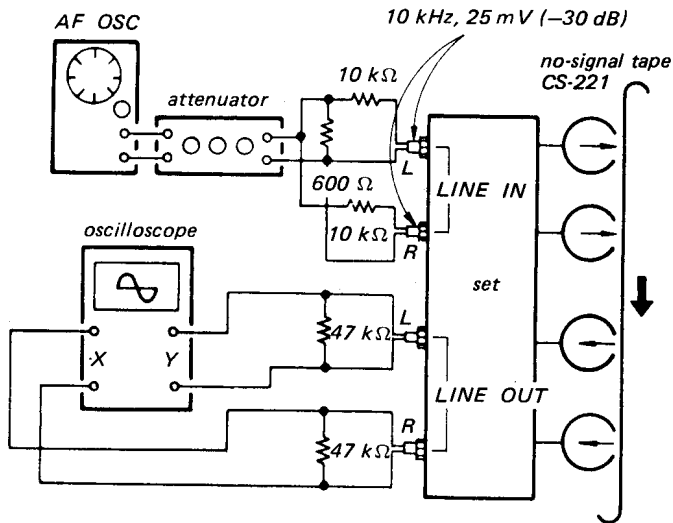
## Record Head Azimuth Adjustment

### Setting:

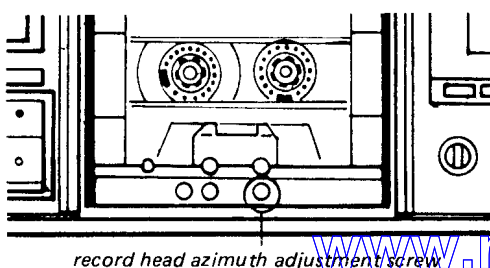
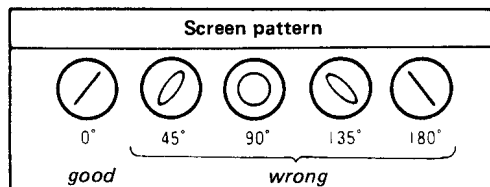
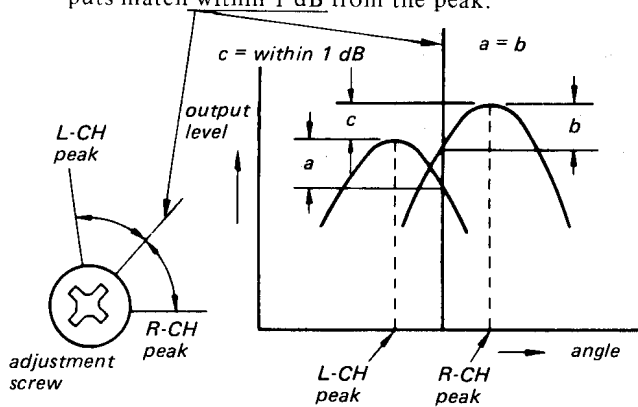
REC LEVEL knob: standard record position  
(See page 11.)

### Procedure:

1. Mode: simultaneous REC/PB



2. Adjust the record head azimuth adjustment screw so that the phase difference is  $0^\circ$  (the difference between L-CH and R-CH is within  $5^\circ$ ), and outputs match within 1 dB from the peak.



record head azimuth adjustment screw

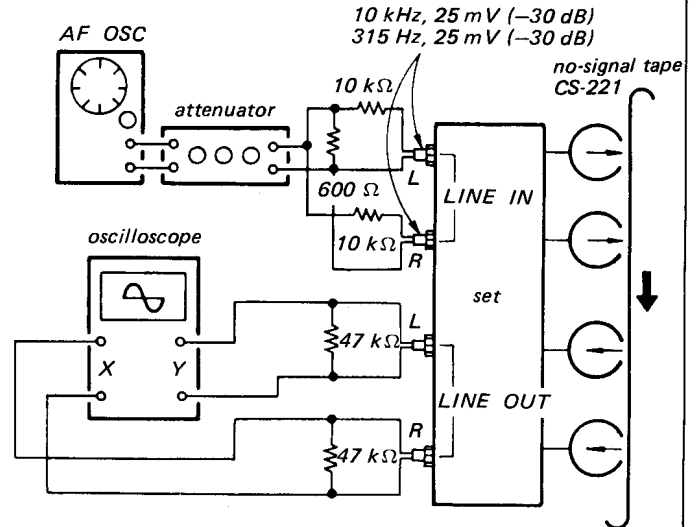
## Record Bias Adjustment

### Setting:

REC LEVEL knob: standard record position  
(See page 11.)

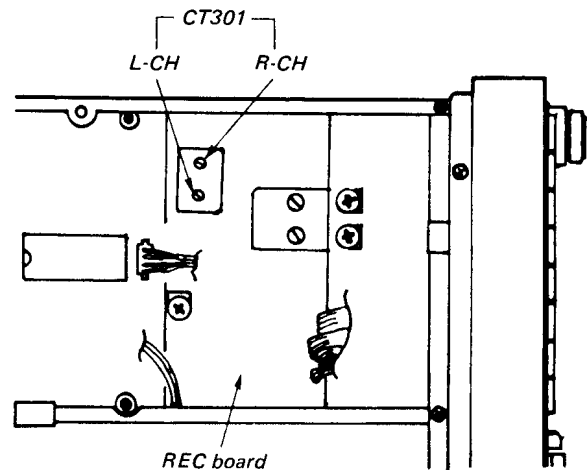
### Procedure:

1. Mode: simultaneous REC/PB

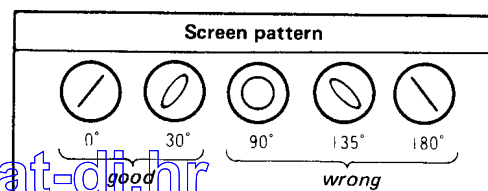


2. Adjust CT301 (L-CH, R-CH) to obtain the same playback level at 315 Hz and 10 kHz.

Adjustment Location: REC board



3. After the adjustment, confirm the phase at 10 kHz is  $0^\circ$  (the difference between L-CH and R-CH is within  $30^\circ$ ). Repeat the record head azimuth adjustment and the record bias adjustment satisfy the specification again.



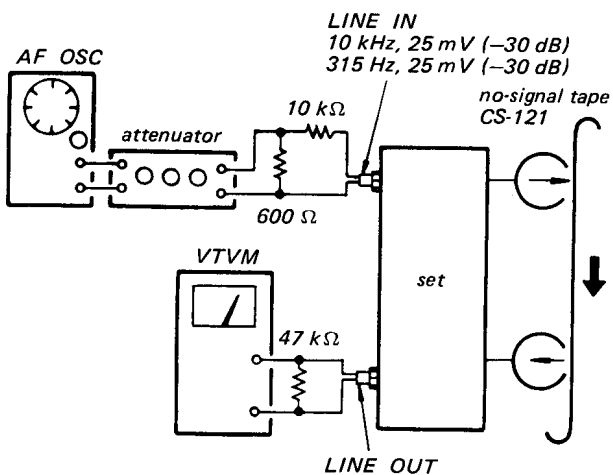
## Normal Bias Adjustment

### Setting:

REC LEVEL knob: standard record position  
(See page 11.)

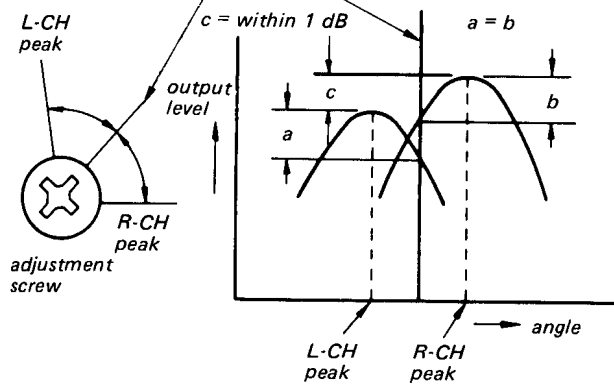
### Procedure:

1. Mode: simultaneous REC/PB

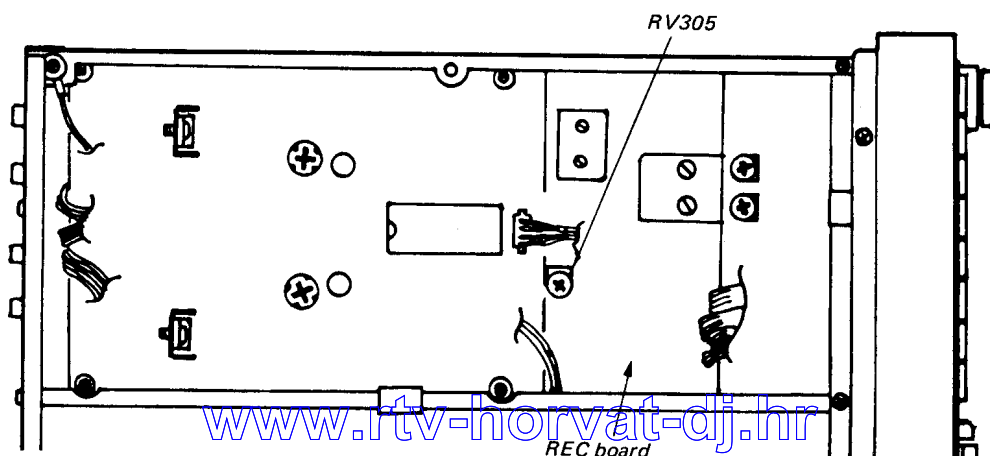


2. Adjust RV305 to obtain the same playback level at 315 Hz and 10 kHz.

(The difference is within 1 dB.)



Adjustment Location: REC board



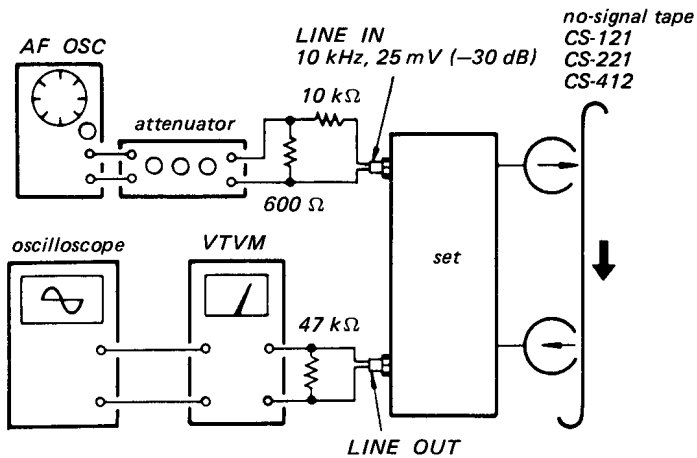
## Record Level Adjustment

### Setting:

REC LEVEL knob: standard record position  
(See page 11.)

### Procedure:

1. Mode: simultaneous REC/PB

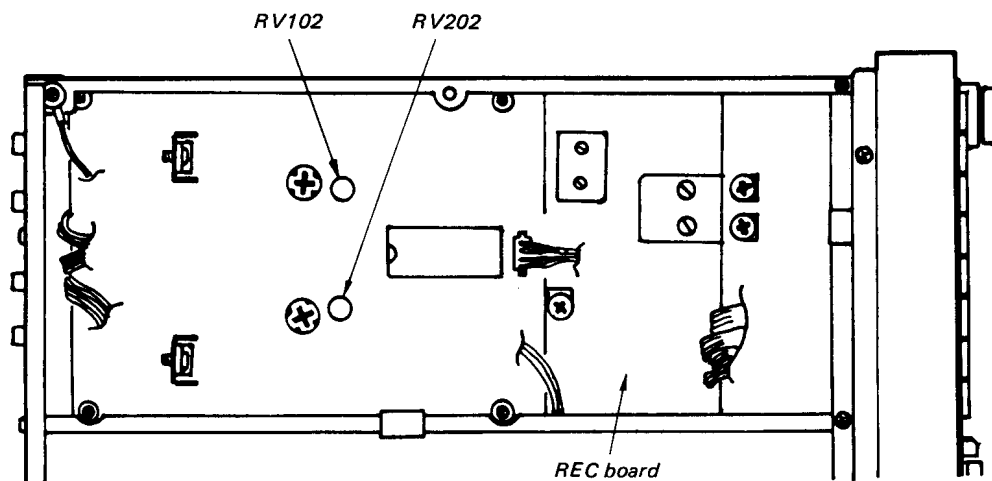


2. Adjust RV102 (L-CH) and RV202 (R-CH) to satisfy the specification.

### Specification:

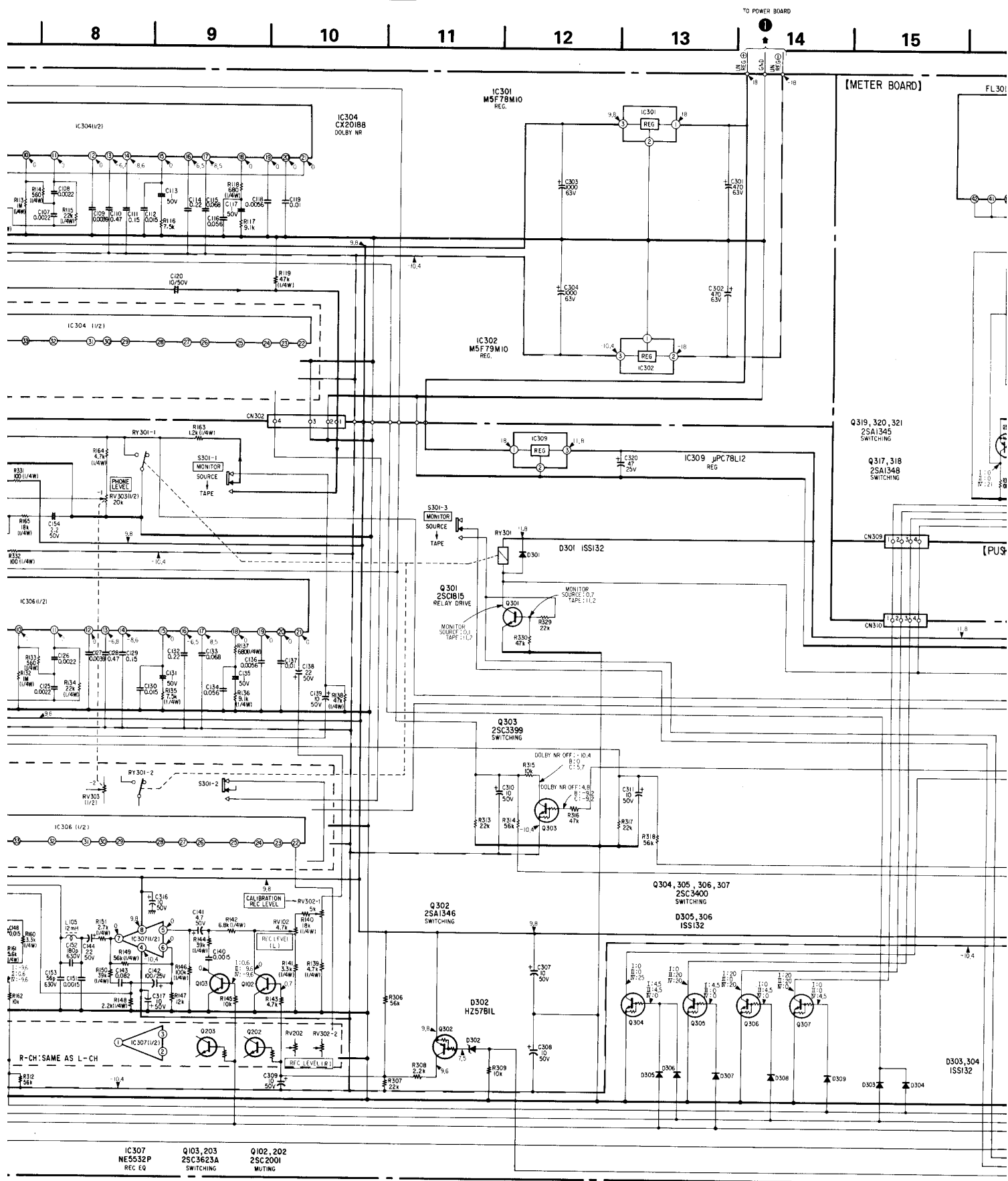
|                  |                                                   |
|------------------|---------------------------------------------------|
| Tape CS-221      | within 0.41 to 0.46 V<br>(within -5.5 to -4.5 dB) |
| Tape CS-121, 412 | within 0.39 to 0.49 V<br>(within -6 to -4 dB)     |

Adjustment Location: REC board





# 00ES TC-K333ESX/K700ES



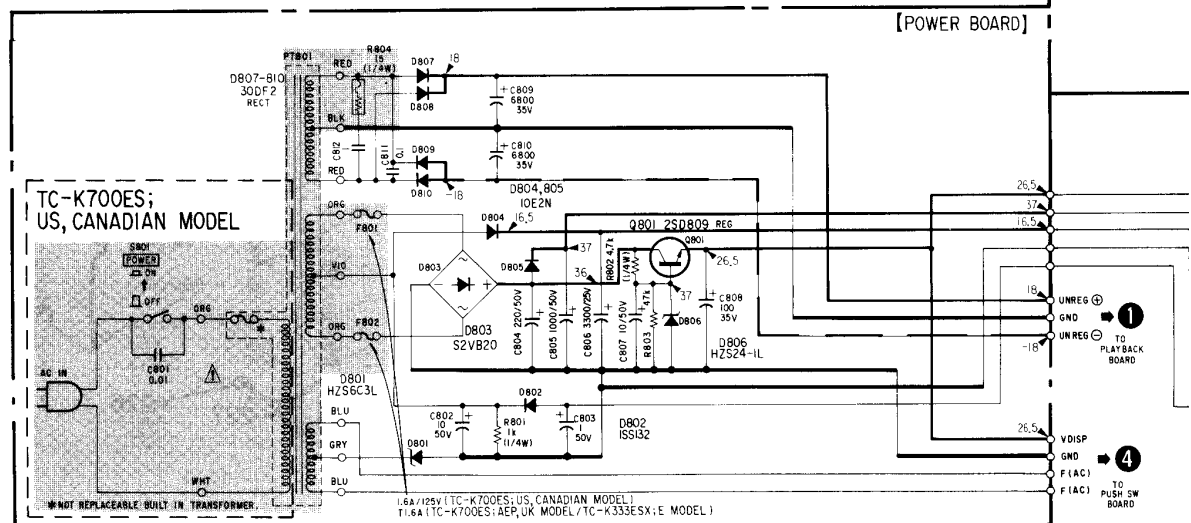
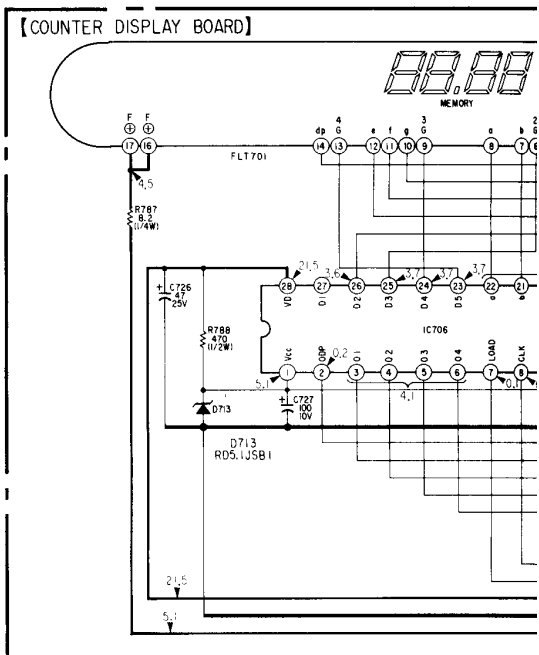
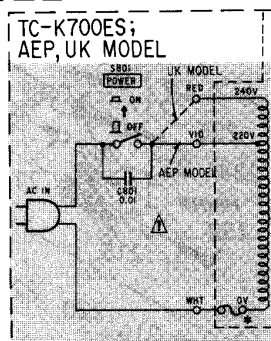
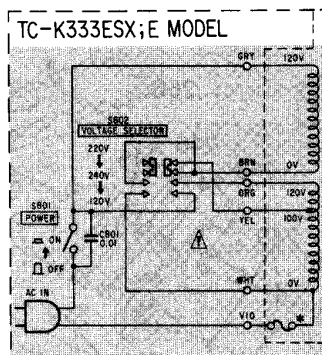


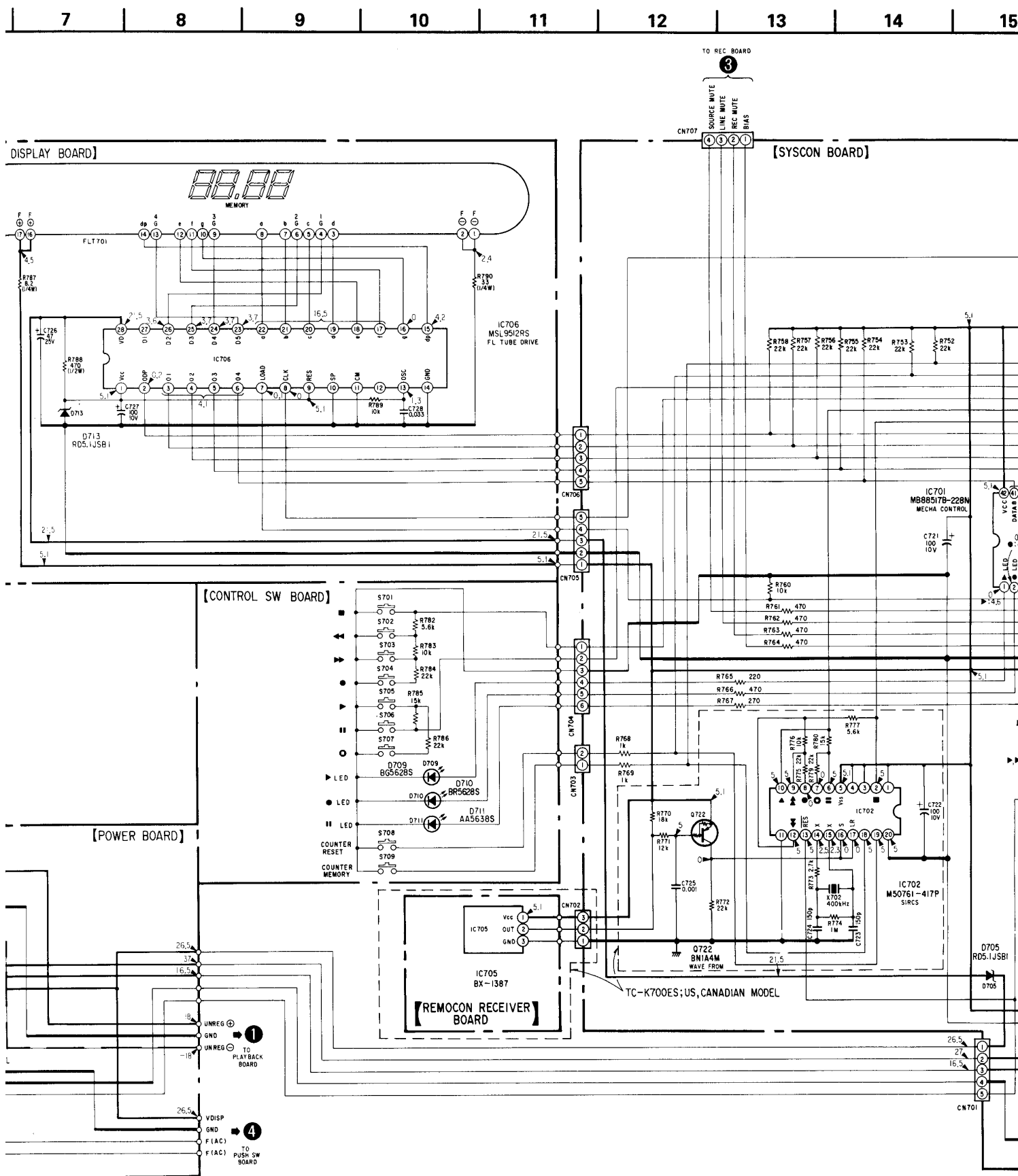
**TC-K3:**

|   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|

- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}$ :  $\mu\text{F}$  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $\frac{1}{4}\text{W}$  or less unless otherwise specified.
-  : fusible resistor.
-  : B+ bus.
-  : B- bus.
-  : adjustment for repair.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken under no-signal conditions with a VOM (50 k $\Omega$ /V).
- ▶ : PLAY
- ▶▶ : FF
- ◀◀ : REW
- : REC
- || : PAUSE
- Voltage variations may be noted due to normal production tolerances.
- Switch

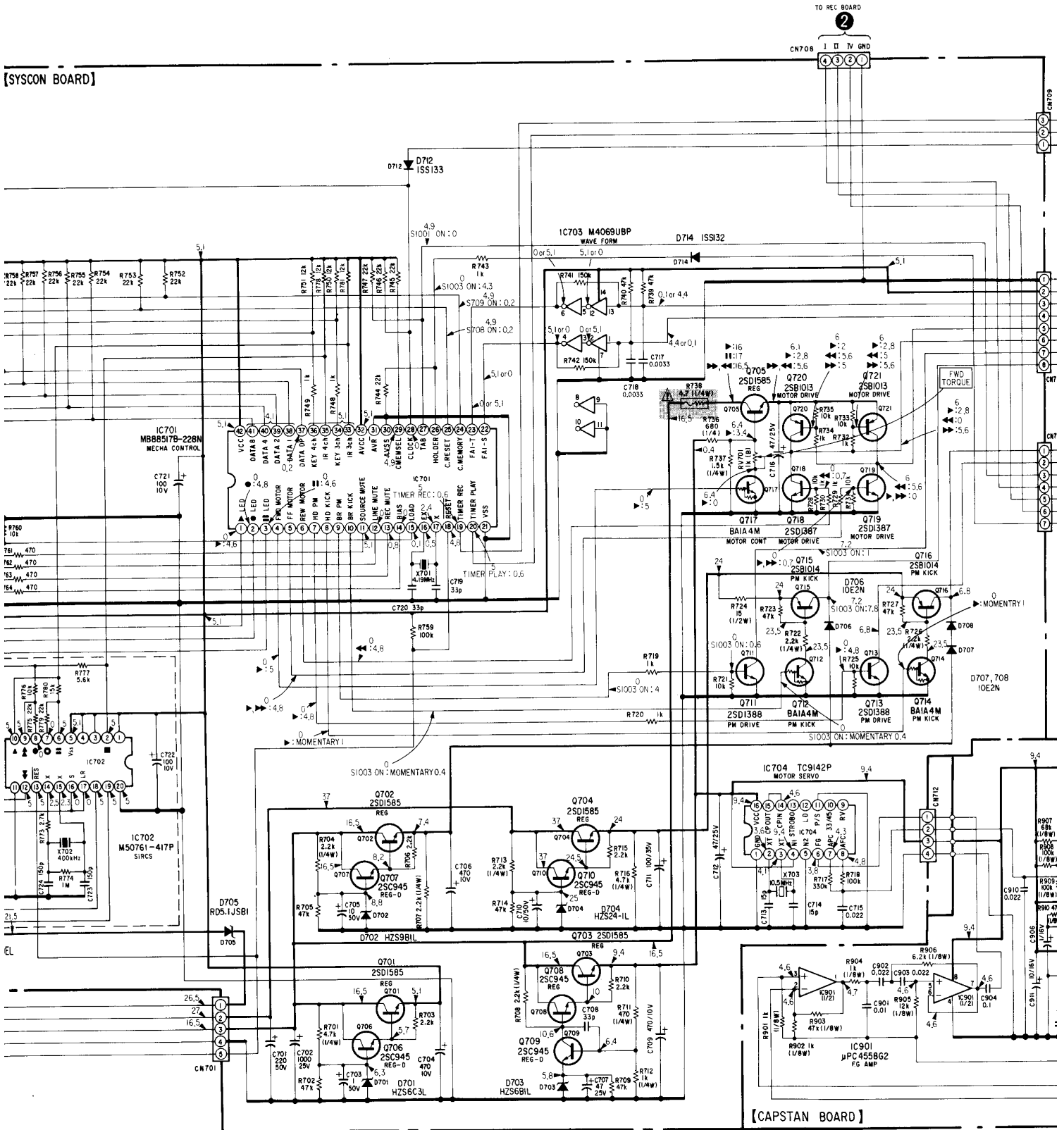
| Ref. No. | Switch                     | Position |
|----------|----------------------------|----------|
| S701     | STOP                       |          |
| S702     | REW                        |          |
| S703     | FF                         |          |
| S704     | REC                        |          |
| S705     | PLAY                       |          |
| S706     | PAUSE                      |          |
| S707     | REC MUTE                   |          |
| S708     | COUNTER RESET              |          |
| S709     | COUNTER MEMORY             |          |
| S710     | TIMER                      | OFF      |
| S801     | POWER                      | OFF      |
| S802     | VOLTAGE SELECTOR (E Model) | 120V     |
| S1001    | ERASE PREVENTION           | OFF      |
| S1002    | HALF DET                   | OFF      |
| S1003    | CASSETTE HOLDER LOCK DET   | OFF      |
| S1004    | METAL                      | OFF      |
| S1005    | CrO <sub>2</sub>           | OFF      |



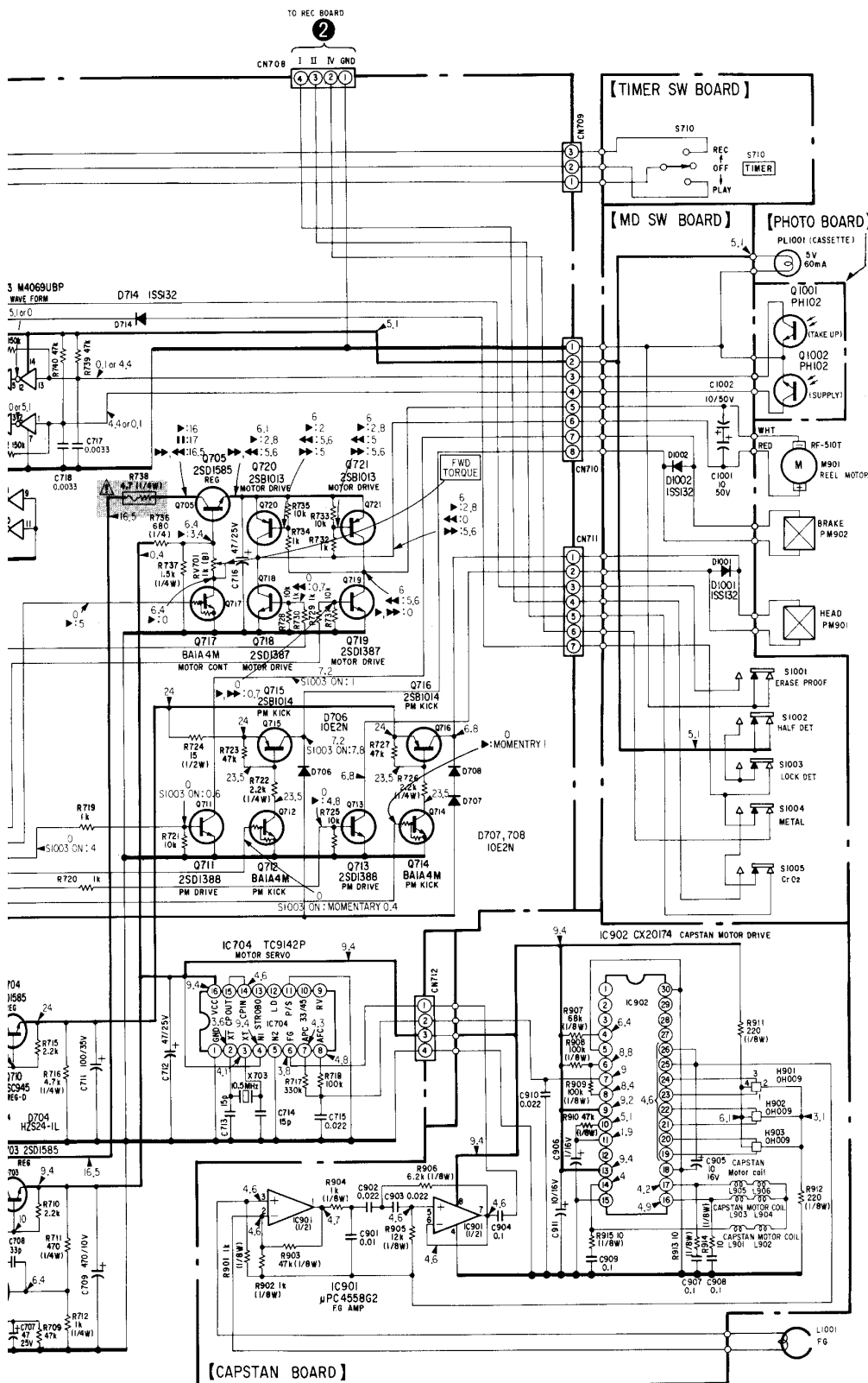


3 14 15 16 17 18 19 20 21

[SYSCON BOARD]



[CAPSTAN BOARD]

**Audio Section Note:**

- All capacitors are in  $\mu\text{F}$  unless otherwise noted. 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $\frac{1}{4}W$  or less unless specified.
- Components for right channel have same value as left channel. Reference numbers are coded from 21.
- — : B+ bus.
- --- : B- bus.
- □ : adjustment for repair.
- Voltages are dc with respect to ground unless noted.
- Readings are taken under no-signal condition with a VOM (50  $k\Omega/V$ ).
- ( ) : REC
- I : NORMAL
- II : CrO<sub>2</sub>
- IV : METAL
- Voltage variations may be noted due to normal tolerances.
- Switch

| Ref. No. | Switch          | I |
|----------|-----------------|---|
| S301     | MONITOR         | S |
| S303-1   | DOLBY NR ON/OFF |   |
| S303-2   | DOLBY NR B      |   |
| S303-3   | DOLBY NR C      |   |
| S303-4   | MPX FILTER      |   |

→ : signal path.

**Note:** The components identified by shaded triangles are critical for safety. Replace with the part number specified.

**Note:** Les composants identifiés par un triangle hachuré sont critiques pour la sécurité. Remplacez-les par une pièce portant le numéro spécifié.



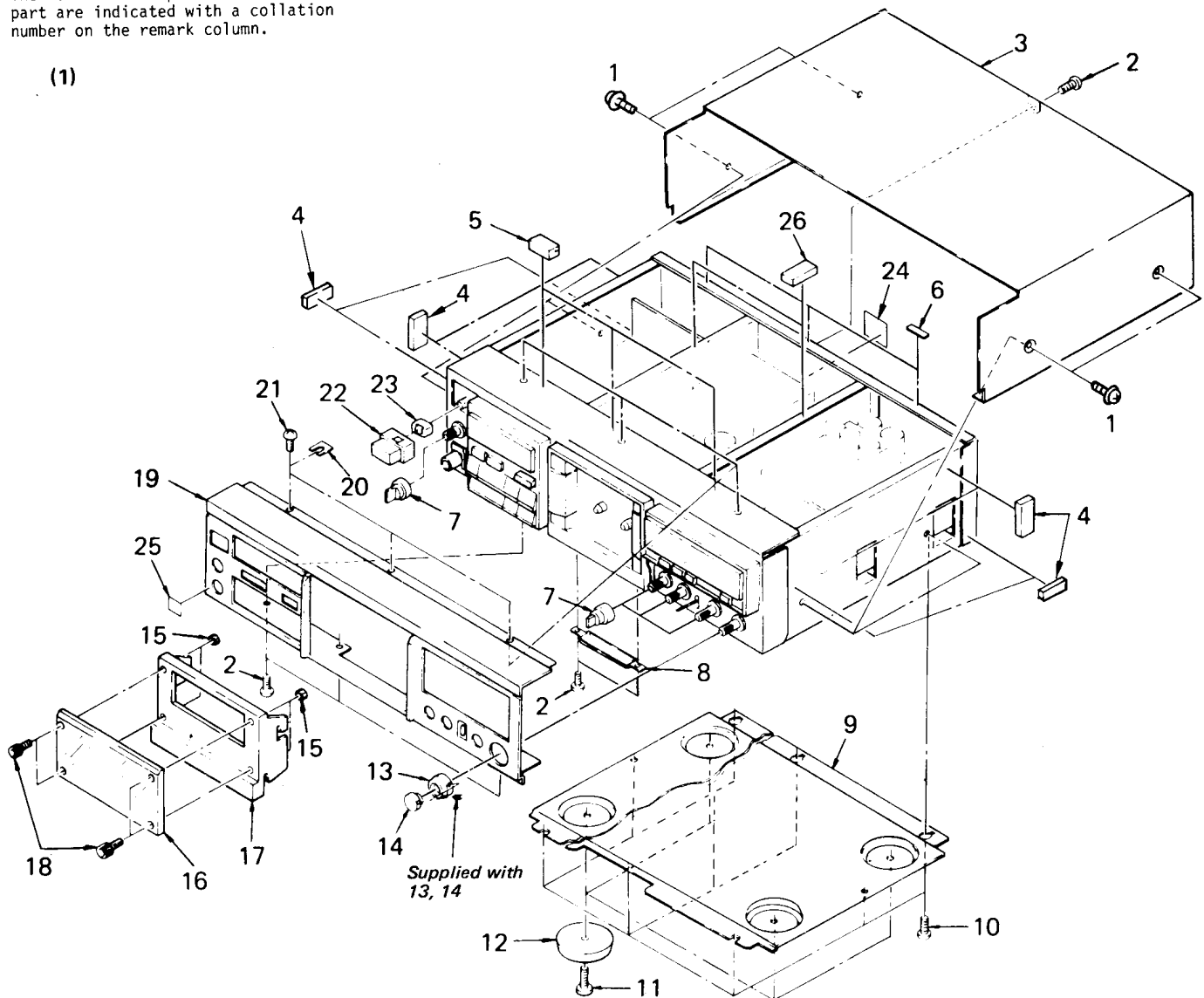
## EXPLODED VIEWS AND PARTS LIST

## NOTE:

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

The components identified by shading and mark  are critical for safety. Replace only with part number specified.

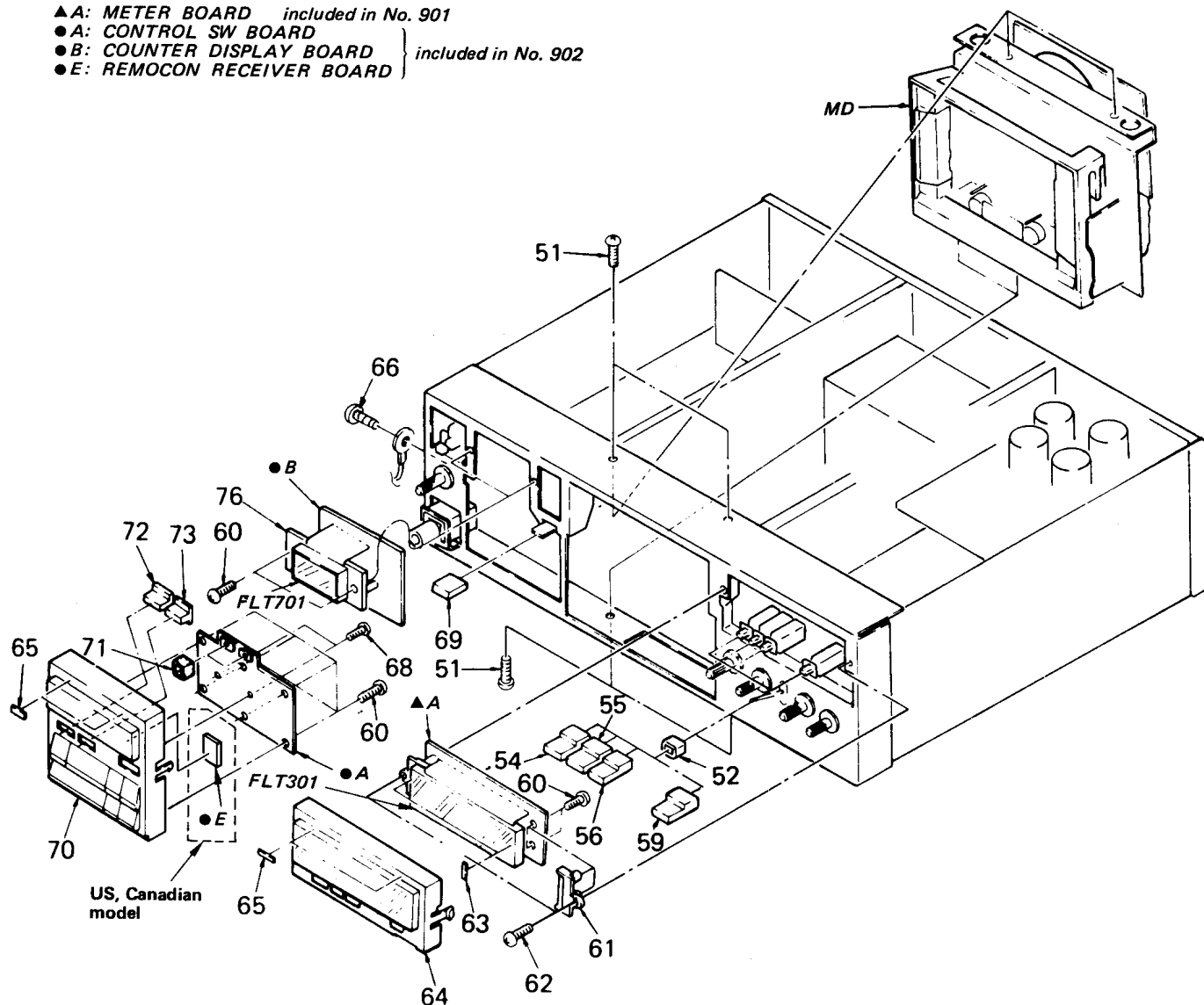
Les composants identifiés par une trame et une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.



| No. | Part No.      | Description                                     | Remarks | No. | Part No.      | Description                                        | Remarks |
|-----|---------------|-------------------------------------------------|---------|-----|---------------|----------------------------------------------------|---------|
| 1   | 4-820-330-31  | SCREW, BW, PLUS MINUS                           |         | 18  | 7-683-412-05  | BOLT, HEXAGON SOCKET 2.6X6                         |         |
| 2   | 3-703-108-21  | SCREW +BV 3X6, S TIGHT                          |         | 19  | X-3304-934-1  | (E).....PANEL ASSY, FRONT                          |         |
| 3   | 3-318-660-01  | COVER, TOP                                      |         |     | X-3304-935-1  | (US,Canadian,AEP,G-AEP,UK)<br>...PANEL ASSY, FRONT |         |
| 4   | 9-911-841-XX  | CUSHION                                         |         | 20  | 3-544-028-21  | SPACER                                             |         |
| 5   | 9-911-843-XX  | CUSHION, FLYWHEEL                               |         | 21  | 7-682-547-09  | SCREW +B 3X6                                       |         |
| 6   | 9-911-837-XX  | CUSHION (B), FILTER                             |         | 22  | 4-908-046-01  | KNOB, SQUARE                                       |         |
| 7   | 3-304-929-11  | KNOB, HEADPHONE                                 |         | 23  | *4-864-307-00 | RING                                               |         |
| 8   | 3-304-962-00  | COVER, MD                                       |         | 24  | *3-318-674-01 | (US,Canadian)...LABEL, MODEL NUMBER                |         |
| 9   | *3-318-659-01 | PLATE, BOTTOM                                   |         |     | *3-318-675-01 | (AEP,G-AEP).....LABEL, MODEL NUMBER                |         |
| 10  | 7-682-148-01  | SCREW +BVTT 3X8 (S)                             |         |     | *3-318-676-01 | (UK).....LABEL, MODEL NUMBER                       |         |
| 11  | 7-682-562-09  | SCREW +B 4X10                                   |         |     | *3-318-680-01 | (E).....LABEL, MODEL NUMBER                        |         |
| 12  | X-3304-930-1  | FOOT ASSY                                       |         | 25  | 3-703-710-41  | STICKER, SONY SYMBOL (12)                          |         |
| 13  | X-3304-924-1  | (US,Canadian)...KNOB (LEFT) ASSY, REC           |         | 26  | 9-911-843-XX  | CUSHION, RUBBER                                    |         |
| 14  | X-3304-925-1  | KNOB (RIGHT) ASSY, REC                          |         |     |               |                                                    |         |
| 15  | 7-622-207-05  | N 2.6, TYPE 2                                   |         |     |               |                                                    |         |
| 16  | 3-318-642-01  | WINDOW, CASSETTE                                |         |     |               |                                                    |         |
| 17  | 3-318-663-11  | (E).....LID, CASSETTE                           |         |     |               |                                                    |         |
|     | 3-318-663-21  | (US,Canadian,AEP,G-AEP,UK)<br>....LID, CASSETTE |         |     |               |                                                    |         |

(2)

- ▲A: METER BOARD included in No. 901  
 ●A: CONTROL SW BOARD  
 ●B: COUNTER DISPLAY BOARD  
 ●E: REMOCON RECEIVER BOARD } included in No. 902



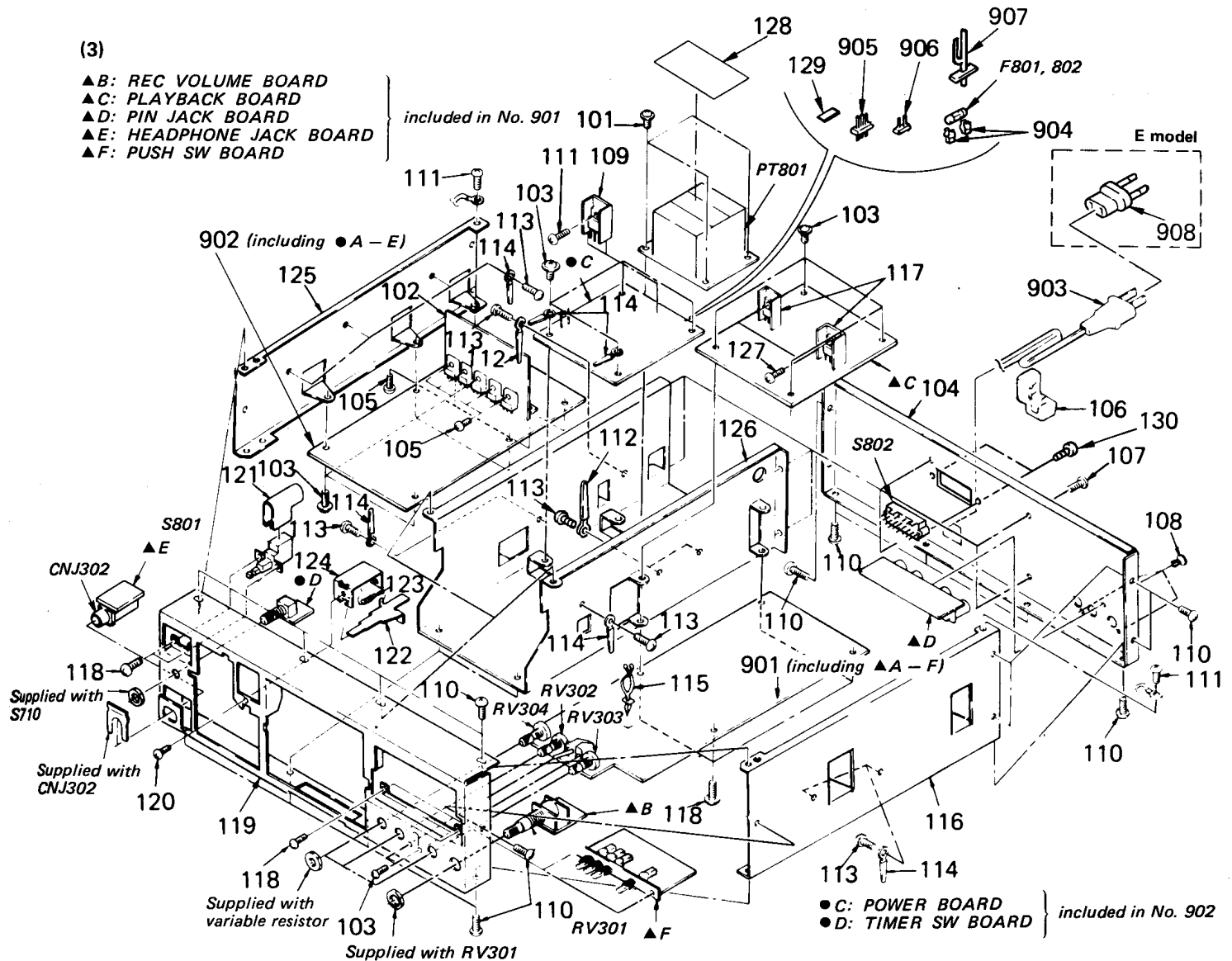
| No. | Part No.      | Description                | Remarks |
|-----|---------------|----------------------------|---------|
| 51  | 7-685-870-09  | SCREW +BVTT 3X5 (S)        |         |
| 52  | *4-864-307-00 | RING                       |         |
| 54  | 3-318-652-41  | PUSH BUTTON                |         |
| 55  | 3-318-652-51  | PUSH BUTTON                |         |
| 56  | 3-318-652-61  | PUSH BUTTON                |         |
| 59  | 3-318-652-01  | PUSH BUTTON                |         |
| 60  | 7-685-133-19  | SCREW +BTP 2.6X6 TYPE2 N-S |         |
| 61  | *3-318-632-01 | BRACKET, METER             |         |
| 62  | 7-685-791-09  | SCREW +BVTT 2.6X5 (S)      |         |
| 63  | 9-911-837-XX  | CUSHION (B), FILTER        |         |
| 64  | X-3304-933-1  | ESCUTCHEON ASSY, METER     |         |
| 65  | 3-553-566-00  | CUSHION                    |         |

| No.    | Part No.      | Description                        | Remarks |
|--------|---------------|------------------------------------|---------|
| 66     | 7-682-147-01  | SCREW +BVTT 3X6 (S)                |         |
| 68     | 7-621-772-50  | SCREW +B 2X10                      |         |
| 69     | 3-318-643-01  | BUTTON, EJECT                      |         |
| 70     | X-3304-927-1  | (US, Canadian)                     |         |
|        |               | ...ESCUTCHEON ASSY, CONTROL BUTTON |         |
|        | X-3304-932-1  | (AEP, G-AEP, UK, E)                |         |
|        |               | ...ESCUTCHEON ASSY, CONTROL BUTTON |         |
| 71     | *3-311-546-00 | CUSHION, SWITCH, MONITOR           |         |
| 72     | 3-311-506-01  | BUTTON, COUNTER                    |         |
| 73     | 3-311-506-11  | BUTTON, COUNTER                    |         |
| 76     | *3-318-651-01 | BRACKET, COUNTER                   |         |
| FLT301 | 1-519-408-11  | INDICATOR TUBE, FLUORESCENT        |         |
| FLT701 | 1-519-409-11  | INDICATOR TUBE, FLUORESCENT        |         |

(3)

- ▲B: REC VOLUME BOARD  
 ▲C: PLAYBACK BOARD  
 ▲D: PIN JACK BOARD  
 ▲E: HEADPHONE JACK BOARD  
 ▲F: PUSH SW BOARD

included in No. 901



- C: POWER BOARD  
 ●D: TIMER SW BOARD

included in No. 902

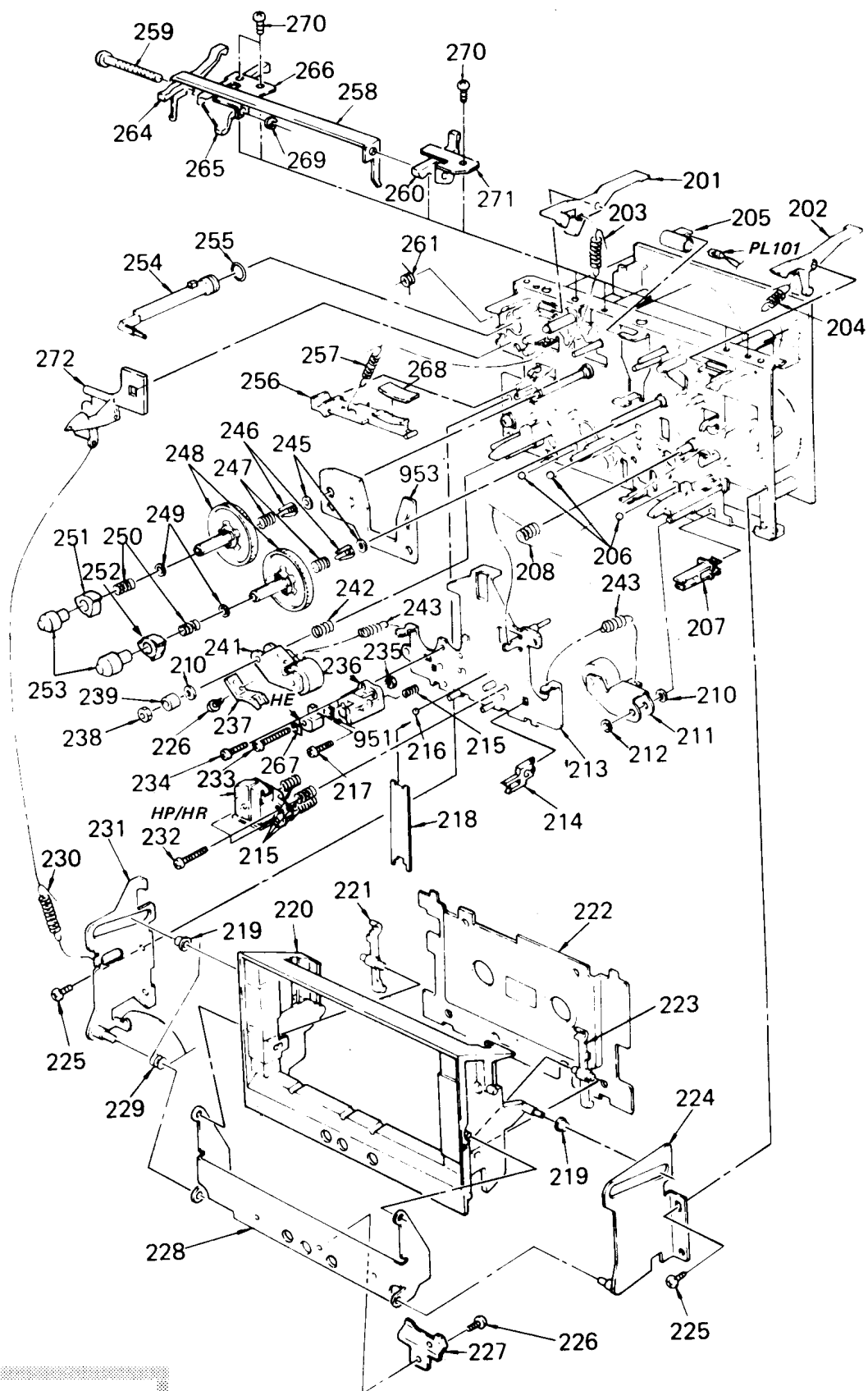
Supplied with RV301

| No. | Part No.      | Description                              | Remarks |
|-----|---------------|------------------------------------------|---------|
| 101 | 7-682-947-01  | SCREW +PSW 3X6                           |         |
| 102 | *3-304-987-01 | HEAT SINK                                |         |
| 103 | 4-886-821-11  | SCREW, S TIGHT, +PTWH 3X6                |         |
| 104 | *3-318-658-01 | (US,Canadian,AEP,G-AEP,UK)...PLATE, JACK |         |
|     | *3-318-658-11 | (E).....PLATE, JACK                      |         |
| 105 | 7-682-547-09  | SCREW +B 3X6                             |         |
| 106 | *3-703-244-00 | BUSHING (2104), CORD                     |         |
| 107 | 3-703-108-21  | SCREW +BV 3X6, S TIGHT                   |         |
| 108 | 3-646-090-11  | RIVET, NYLON                             |         |
| 109 | *3-312-615-31 | HEAT SINK                                |         |
| 110 | 3-703-685-21  | SCREW (+BV 3X8)                          |         |
| 111 | 7-682-147-01  | SCREW +BVTT 3X6 (S)                      |         |
| 112 | *3-703-150-11 | CLAMP                                    |         |
| 113 | 7-682-546-04  | SCREW +BVTT 3X5 (S)                      |         |
| 114 | *3-701-822-00 | HOLDER, WIRE                             |         |
| 115 | *4-308-851-00 | PURSE LOCK                               |         |
| 116 | *3-318-657-01 | PLATE, SIDE, RIGHT                       |         |
| 117 | *3-309-144-01 | HEAT SINK                                |         |
| 118 | 7-682-647-09  | SCREW +PS 3X6                            |         |
| 119 | *3-318-665-01 | CHASSIS, AMPLIFIER                       |         |
| 120 | 7-685-791-09  | SCREW +BVTT 2.6X5 (S)                    |         |
| 121 | 3-575-524-00  | COVER, POWER SWITCH                      |         |
| 122 | *3-318-628-01 | SLIDER, EJECT                            |         |
| 123 | 3-534-238-XX  | SPRING, TENSION                          |         |
| 124 | *3-575-502-00 | BRACKET, EJECT                           |         |
| 125 | *3-318-656-01 | PLATE, SIDE, LEFT                        |         |
| 126 | *3-318-664-01 | PLATE, RELAY                             |         |
| 127 | 7-682-147-15  | SCREW, TR                                |         |
| 128 | *3-318-666-01 | LABEL, TRANSFORMER                       |         |

| No.   | Part No.       | Description                            | Remarks |
|-------|----------------|----------------------------------------|---------|
| 129   | *3-701-948-16  | (AEP,G-AEP,UK,E)...LABEL, FUSE         |         |
| 130   | 7-685-646-79   | (E)...SCREW +BTP 3X8                   |         |
| 901   | *A-2010-255-A  | PC BOARD ASSY, AUDIO                   |         |
| 902   | *A-2019-203-A  | (E).....PC BOARD ASSY, SYSTEM CONTROL  |         |
|       | *A-2019-204-A  | (AEP,G-AEP,UK)                         |         |
|       |                | ...PC BOARD ASSY, SYSTEM CONTROL       |         |
|       | *A-2019-205-A  | (US,Canadian)                          |         |
|       |                | ...PC BOARD ASSY, SYSTEM CONTROL       |         |
| 903   | ▲.1-555-701-00 | (US,Canadian)...CORD, POWER            |         |
|       | ▲.1-555-795-00 | (AEP,G-AEP)...CORD, POWER              |         |
|       | ▲.1-556-035-00 | (UK).....CORD, POWER                   |         |
|       | ▲.1-556-091-00 | (E).....CORD, POWER                    |         |
| 904   | 1-533-162-00   | HOLDER, FUSE                           |         |
| 905   | *1-535-116-00  | TERMINAL                               |         |
| 906   | *1-535-139-00  | (US,Canadian,AEP,G-AEP,UK)             |         |
|       |                | ...BASE POST 19MM (10MM PITCH) 2P      |         |
|       | *1-535-139-21  | (E).....BASE POST 22MM (10MM PITCH)    |         |
| 907   | 1-535-416-00   | (AEP,G-AEP,UK)...TERMINAL              |         |
| 908   | ▲.1-526-565-00 | (E)...AC PLUG ADAPTOR                  |         |
| F801  | ▲.1-532-259-00 | (AEP,G-AEP,UK,E)...FUSE, TIME-LAG 1.6A |         |
| F801  | ▲.1-532-742-11 | (US,Canadian)...FUSE, GLASS TUBE 1.6A  |         |
| F802  | ▲.1-532-259-00 | (AEP,G-AEP,UK,E)...FUSE, TIME-LAG 1.6A |         |
| F802  | ▲.1-532-742-11 | (US,Canadian)...FUSE, GLASS TUBE 1.6A  |         |
| PT801 | ▲.1-448-948-11 | (US,Canadian,AEP,G-AEP,UK)             |         |
|       |                | ...TRANSFORMER, POWER                  |         |
| PT801 | ▲.1-449-005-11 | (E).....TRANSFORMER, POWER             |         |
| S801  | ▲.1-553-318-00 | SWITCH, PUSH (AC POWER)(1 KEY)         |         |
| S802  | ▲.1-570-307-11 | (E)...SWITCH, VOLTAGE CHANGE           |         |

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(4)



Components identified  
by a triangle and mark A are  
critical for safety.  
Only replace with part  
specified.

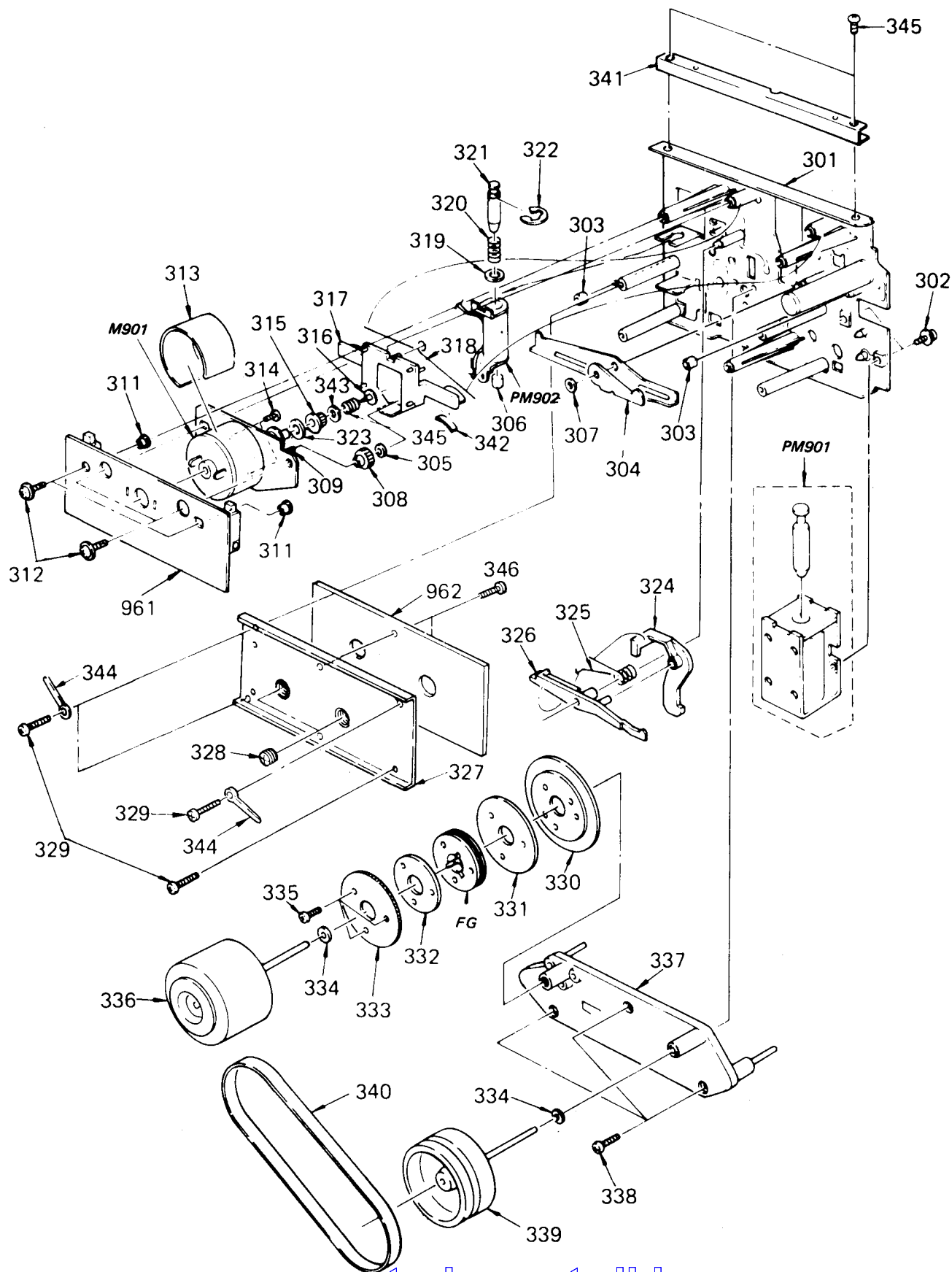
Les composants identifiés par  
une trame et une marque A sont  
critiques pour la sécurité.  
Ne les remplacer que par  
une pièce portant le numéro  
spécifié.

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(5)

| No.   | Part No.      | Description                   | Remarks |
|-------|---------------|-------------------------------|---------|
| 201   | 3-575-449-00  | LEVER, DETECTION, REC         |         |
| 202   | 3-575-331-00  | LEVER, DETECTION, HALF        |         |
| 203   | 3-650-542-00  | SPRING, TENSION               |         |
| 204   | 3-575-358-00  | SPRING, TENSION               |         |
| 205   | 3-575-328-00  | HOLDER, LAMP                  |         |
| 206   | 7-671-112-11  | BALL, STEEL                   |         |
| 207   | *3-575-378-00 | GUIDE, LEAD                   |         |
| 208   | 3-575-351-00  | SPRING                        |         |
| 210   | 3-701-439-21  | WASHER                        |         |
| 211   | X-3575-380-1  | PINCH LEVER (T) ASSY          |         |
| 212   | 7-624-105-04  | STOP RING 2.3, TYPE -E        |         |
| 213   | X-3575-323-0  | CHASSIS ASSY, HEAD            |         |
| 214   | *3-304-963-00 | RETAINER, LEAD                |         |
| 215   | 3-564-121-00  | SPRING, COMPRESSION           |         |
| 216   | 7-671-113-11  | BALL, STEEL                   |         |
| 217   | 7-621-775-20  | SCREW +B 2.6X5                |         |
| 218   | *3-575-377-00 | SPRING                        |         |
| 219   | 3-575-348-00  | ROLLER, GUIDE, THREADING      |         |
| 220   | 3-575-355-31  | HOLDER, CASSETTE              |         |
| 221   | 3-555-114-00  | SPRING (LEFT)                 |         |
| 222   | X-3575-399-1  | PLATE ASSY, ORNAMENTAL        |         |
| 223   | 3-555-113-00  | SPRING (RIGHT)                |         |
| 224   | *X-3575-339-0 | PLATE (RIGHT) ASSY, FULCRUM   |         |
| 225   | 7-621-259-35  | SCREW +PTT 2.6X5 (S)          |         |
| 226   | 7-721-772-10  | SCREW +B 2X4                  |         |
| 227   | 3-304-639-00  | PLATE, SHIELD, HEAD           |         |
| 228   | 3-306-215-00  | LEVER, FULCRUM, HOLDER        |         |
| 229   | 3-575-356-00  | SPRING                        |         |
| 230   | 3-575-364-00  | SPRING, TENSION               |         |
| 231   | *X-3575-338-0 | PLATE (LEFT) ASSY, FULCRUM    |         |
| 232   | 3-701-467-00  | SCREW, LOCK                   |         |
| 233   | 7-621-772-88  | SCREW +B 2X16                 |         |
| 234   | 7-621-771-06  | SCREW +B 2X5                  |         |
| 235   | 7-622-205-05  | NUT M2 TYPE2                  |         |
| 236   | *3-306-216-00 | BRACKET, HEAD, ERASE          |         |
| 237   | 3-564-138-00  | GUIDE (S), TAPE               |         |
| 238   | 7-684-023-04  | N 3, TYPE 2                   |         |
| 239   | 3-491-191-00  | COLLAR                        |         |
| 241   | X-3575-321-0  | PINCH LEVER (S) ASSY          |         |
| 242   | 3-537-213-00  | SPRING, COMPRESSION           |         |
| 243   | 3-575-481-00  | SPRING, TENSION               |         |
| 245   | 3-701-439-11  | WASHER                        |         |
| 246   | 3-318-405-01  | RETAINER, SPRING              |         |
| 247   | 3-571-850-11  | SPRING, COMPRESSION           |         |
| 248   | 3-318-438-01  | TABLE, REEL                   |         |
| 249   | 3-558-708-11  | WASHER, STOPPER               |         |
| 250   | 3-576-921-00  | SPRING, COMPRESSION           |         |
| 251   | 3-531-760-00  | CLAW, REEL SPINDLE            |         |
| 252   | 3-558-339-00  | CLAW (R), REEL TABLE          |         |
| 253   | 3-576-983-01  | CAP, REEL                     |         |
| 254   | 3-575-459-00  | PISTON                        |         |
| 255   | 3-575-392-00  | RING, PISTON                  |         |
| 256   | X-3575-310-0  | LEVER ASSY, TENSION, BACK     |         |
| 257   | 3-307-381-00  | SPRING, TENSION               |         |
| 258   | *3-306-279-00 | LEVER, ERASING PROTECTION     |         |
| 259   | *3-306-281-00 | SHAFT, DETECTION LEVER        |         |
| 260   | *3-306-282-00 | LEVER, REC DETECTION, REVERSE |         |
| 261   | 3-318-408-01  | SPRING                        |         |
| 262   | 9-911-815-02  | CUSHION                       |         |
| 264   | 3-575-438-00  | LEVER, DETECTION              |         |
| 265   | 3-575-446-00  | LEVER, DETECTION, METAL       |         |
| 266   | *3-575-440-00 | BRACKET, LEVER, DETECTION     |         |
| 267   | 3-318-433-01  | SPRING                        |         |
| 268   | 3-575-346-01  | FELT, BREKE                   |         |
| 269   | 7-624-104-04  | STOP RING 2.0, TYPE -E        |         |
| 270   | 7-682-546-04  | SCREW +BVTT 3X5 (S)           |         |
| 271   | *X-3575-364-0 | BRACKET ASSY, LEVER           |         |
| 272   | 3-575-448-00  | LEVER, LOCK                   |         |
| 951   | *1-608-268-00 | PC BOARD, ERASE HEAD          |         |
| 953   | *1-603-823-00 | PC BOARD, PHOTO               |         |
| HE    | 1-543-358-11  | HEAD, MAGNETIC (ERASE)        |         |
| HP    | 8-825-770-51  | HEAD, REC/PB RPA230-3602C     |         |
| PL101 | 1-518-313-00  | LAMP, PILOT                   |         |

| No.   | Part No.      | Description                   | Remarks |
|-------|---------------|-------------------------------|---------|
| 301   | *X-3306-201-1 | CHASSIS ASSY, MECHANICAL      |         |
| 302   | 7-682-649-09  | SCREW +PSW 3X10               |         |
| 303   | 4-855-109-12  | RUBBER, LIFTER CUSHION        |         |
| 304   | *3-306-260-00 | LEVER, FWD                    |         |
| 305   | 3-558-708-01  | WASHER, STOPPER               |         |
| 306   | 3-575-416-11  | ARBOR, FIXED                  |         |
| 307   | 3-558-708-11  | WASHER, STOPPER               |         |
| 308   | 3-575-332-00  | GEAR, FR                      |         |
| 309   | 3-575-304-00  | SHAFT, GEAR, FR               |         |
| 311   | 3-306-277-00  | LIFTER, PC BOARD              |         |
| 312   | 7-687-246-21  | SCREW, TOTSU PTPWH 3X8, TYPE2 |         |
| 313   | 3-306-209-00  | PLATE (D), SHIELD, MOTOR      |         |
| 314   | 7-621-775-10  | SCREW +B 2.6X4                |         |
| 315   | 3-575-324-00  | GEAR, LIMITER                 |         |
| 316   | 3-575-327-00  | STOPPER                       |         |
| 317   | *X-3575-342-0 | PLATE ASSY, BRAKE             |         |
| 318   | 3-575-345-00  | SPRING                        |         |
| 319   | 3-701-444-11  | WASHER, 6                     |         |
| 320   | 3-575-414-00  | SPRING, COMPRESSION           |         |
| 321   | 3-575-415-11  | ARBOR, MOVABLE                |         |
| 322   | 7-624-109-04  | STOP RING 5.0, TYPE -E        |         |
| 323   | 3-564-027-11  | FELT, LIMITER                 |         |
| 324   | 3-575-318-00  | LEVER, LOCK, TUNING           |         |
| 325   | 3-575-458-00  | SPRING                        |         |
| 326   | 3-575-460-00  | LEVER, SELECT TUNE            |         |
| 327   | X-3306-202-1  | RETAINER ASSY, THRUST         |         |
| 328   | 3-489-073-00  | SCREW, THRUST                 |         |
| 329   | 7-682-647-09  | SCREW +PS 3X6                 |         |
| 330   | *3-310-831-01 | PLATE, SHIELD, MOTOR          |         |
| 331   | *3-576-810-00 | PLATE, RETURN CIRCUIT         |         |
| 332   | 3-310-865-00  | WASHER, INSULATING            |         |
| 333   | 3-576-961-11  | PLATE, FG                     |         |
| 334   | 3-701-438-21  | WASHER                        |         |
| 335   | 7-621-775-60  | SCREW +B 2.6X12               |         |
| 336   | X-3575-377-1  | FLYWHEEL (TAKE-UP) ASSY       |         |
| 337   | X-3575-383-1  | BASE ASSY, CAPSTAN            |         |
| 338   | 7-621-259-35  | SCREW +PTT 2.6X5 (S)          |         |
| 339   | X-3575-378-1  | FLYWHEEL (SUPPLY) ASSY        |         |
| 340   | 3-576-812-00  | BELT, CAPSTAN                 |         |
| 341   | *3-318-437-01 | BRACKET, MD                   |         |
| 342   | 3-575-469-00  | SHOE, BRAKE                   |         |
| 343   | 3-701-441-11  | WASHER                        |         |
| 344   | 3-701-748-00  | CLAMP                         |         |
| 345   | 3-575-487-01  | SPRING, COMPRESSION           |         |
| 346   | 7-621-259-35  | SCREW +BVTT 2.6X5 (S)         |         |
| 961   | *1-620-542-11 | PC BOARD, MD SWITCH           |         |
| 962   | *1-620-086-11 | PC BOARD, CAPSTAN             |         |
| FG    | 1-459-426-00  | COIL                          |         |
| M901  | X-3575-382-1  | MOTOR ASSY, REEL              |         |
| PM901 | 1-454-333-00  | SOLENOID, PLUNGER             |         |
| PM902 | 1-454-291-00  | SOLENOID, PLUNGER             |         |



## SECTION 4

### ELECTRICAL PARTS LIST

## NOTE:

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 shading and mark  $\Delta$  are critical for safety. Replace only with part number specified.

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

## ELECTRICAL PARTS

| Ref.No. | Part No.               | Description                                                     |
|---------|------------------------|-----------------------------------------------------------------|
| 901     | *A-2010-255-A          | PC BOARD ASSY, AUDIO                                            |
| 902     | *A-2019-203-A          | (E)...PC BOARD ASSY, SYSTEM CONTROL                             |
|         | *A-2019-204-A          | (AEP,G-AEP,UK)...PC BOARD ASSY, SYSTEM CONTROL                  |
|         | *A-2019-205-A          | (US,Canadian)...PC BOARD ASSY, SYSTEM CONTROL                   |
| 903     | $\Delta$ .1-555-701-00 | (US,Canadian)...CORD, POWER                                     |
|         | $\Delta$ .1-555-795-00 | (AEP,G-AEP)...CORD, POWER                                       |
|         | $\Delta$ .1-556-035-00 | (UK)...CORD, POWER                                              |
|         | $\Delta$ .1-556-091-00 | (E)...CORD, POWER                                               |
| 904     | 1-533-162-00           | HOLDER, FUSE                                                    |
| 905     | *1-535-116-00          | TERMINAL                                                        |
| 906     | *1-535-139-00          | (US,Canadian,AEP,G-AEP,UK)<br>...BASE POST 19MM (10MM PITCH) 2P |
|         | *1-535-139-21          | (E)...BASE POST 22MM (10MM PITCH)                               |
| 907     | 1-535-416-00           | (AEP,G-AEP,UK)...TERMINAL                                       |
| 908     | $\Delta$ .1-526-565-00 | (E)...AC PLUG ADAPTOR                                           |
| 951     | *1-608-268-00          | PC BOARD, ERASE HEAD                                            |
| 953     | *1-603-823-00          | PC BOARD, PHOTO                                                 |
| 961     | *1-620-542-11          | PC BOARD, MD SWITCH                                             |
| 962     | *1-620-086-11          | PC BOARD, CAPSTAN                                               |
| C101    | 1-130-893-00           | FILM 0.027MF 3% 100V                                            |
| C102    | 1-124-657-00           | ELECT 10MF 20% 50V                                              |
| C103    | 1-130-893-00           | FILM 0.027MF 3% 100V                                            |
| C104    | 1-110-201-00           | MYLAR 0.0033MF 5% 50V                                           |
| C105    | 1-136-433-11           | FILM 100PF 5% 630V                                              |
| C106    | 1-130-471-00           | MYLAR 0.001MF 5% 50V                                            |
| C107    | 1-130-475-00           | MYLAR 0.0022MF 5% 50V                                           |
| C108    | 1-130-475-00           | MYLAR 0.0022MF 5% 50V                                           |
| C109    | 1-130-478-00           | MYLAR 0.0039MF 5% 50V                                           |
| C110    | 1-136-173-00           | FILM 0.47MF 5% 50V                                              |
| C111    | 1-136-167-00           | FILM 0.15MF 5% 50V                                              |
| C112    | 1-136-155-00           | FILM 0.015MF 5% 50V                                             |
| C113    | 1-124-611-00           | ELECT 1MF 20% 50V                                               |
| C114    | 1-136-169-00           | FILM 0.22MF 5% 50V                                              |
| C115    | 1-136-163-00           | FILM 0.068MF 5% 50V                                             |
| C116    | 1-136-162-00           | FILM 0.056MF 5% 50V                                             |
| C117    | 1-124-611-00           | ELECT 1MF 20% 50V                                               |
| C118    | 1-130-480-00           | MYLAR 0.0056MF 5% 50V                                           |
| C119    | 1-136-153-00           | FILM 0.01MF 5% 50V                                              |
| C120    | 1-124-657-00           | ELECT 10MF 20% 50V                                              |
| C121    | 1-123-381-00           | ELECT 2.2MF 20% 50V                                             |
| C122    | 1-124-767-00           | ELECT 2.2MF 20% 50V                                             |
| C123    | 1-136-440-11           | FILM 39PF 5% 630V                                               |
| C124    | 1-136-440-11           | FILM 39PF 5% 630V                                               |

## ELECTRICAL PARTS

| Ref.No. | Part No.     | Description           |
|---------|--------------|-----------------------|
| C125    | 1-130-475-00 | MYLAR 0.0022MF 5% 50V |
| C126    | 1-130-475-00 | MYLAR 0.0022MF 5% 50V |
| C127    | 1-130-478-00 | MYLAR 0.0039MF 5% 50V |
| C128    | 1-136-173-00 | FILM 0.47MF 5% 50V    |
| C129    | 1-136-167-00 | FILM 0.15MF 5% 50V    |
| C130    | 1-136-155-00 | FILM 0.015MF 5% 50V   |
| C131    | 1-124-611-00 | ELECT 1MF 20% 50V     |
| C132    | 1-136-169-00 | FILM 0.22MF 5% 50V    |
| C133    | 1-136-163-00 | FILM 0.068MF 5% 50V   |
| C134    | 1-136-162-00 | FILM 0.056MF 5% 50V   |
| C135    | 1-124-611-00 | ELECT 1MF 20% 50V     |
| C136    | 1-130-480-00 | MYLAR 0.0056MF 5% 50V |
| C137    | 1-136-153-00 | FILM 0.01MF 5% 50V    |
| C138    | 1-123-357-00 | ELECT 22MF 20% 50V    |
| C139    | 1-123-356-00 | ELECT 10MF 20% 50V    |
| C140    | 1-130-473-00 | MYLAR 0.0015MF 5% 50V |
| C141    | 1-123-369-00 | ELECT 4.7MF 20% 50V   |
| C142    | 1-123-333-00 | ELECT 100MF 20% 25V   |
| C143    | 1-136-164-00 | FILM 0.082MF 5% 50V   |
| C144    | 1-123-357-00 | ELECT 22MF 20% 50V    |
| C145    | 1-136-155-00 | FILM 0.015MF 5% 50V   |
| C146    | 1-136-153-00 | FILM 0.01MF 5% 50V    |
| C147    | 1-136-157-00 | FILM 0.022MF 5% 50V   |
| C148    | 1-136-155-00 | FILM 0.015MF 5% 50V   |
| C149    | 1-136-156-00 | FILM 0.018MF 5% 50V   |
| C150    | 1-130-475-00 | MYLAR 0.0022MF 5% 50V |
| C151    | 1-130-473-00 | MYLAR 0.0015MF 5% 50V |
| C152    | 1-136-436-11 | FILM 180PF 5% 630     |
| C153    | 1-136-271-00 | FILM 56PF 5% 630      |
| C154    | 1-124-767-00 | ELECT 2.2MF 20% 50V   |
| C155    | 1-124-767-00 | ELECT 2.2MF 20% 50V   |
| C156    | 1-124-927-11 | ELECT 4.7MF 20% 50V   |
| C201    | 1-130-893-00 | FILM 0.027MF 3% 10C   |
| C202    | 1-124-657-00 | ELECT 10MF 20% 50V    |
| C203    | 1-130-893-00 | FILM 0.027MF 3% 10C   |
| C204    | 1-110-201-00 | MYLAR 0.0033MF 5% 50V |
| C205    | 1-136-433-11 | FILM 100PF 5% 630     |
| C206    | 1-130-471-00 | MYLAR 0.001MF 5% 50V  |
| C207    | 1-130-475-00 | MYLAR 0.0022MF 5% 50V |
| C208    | 1-130-475-00 | MYLAR 0.0022MF 5% 50V |
| C209    | 1-130-478-00 | MYLAR 0.0039MF 5% 50V |
| C210    | 1-136-173-00 | FILM 0.47MF 5% 50V    |
| C211    | 1-136-167-00 | FILM 0.15MF 5% 50V    |
| C212    | 1-136-155-00 | FILM 0.015MF 5% 50V   |
| C213    | 1-124-611-00 | ELECT 1MF 20% 50V     |

## ELECTRICAL PARTS

| Ref.No. | Part No.     | Description |          |     |      |
|---------|--------------|-------------|----------|-----|------|
| C214    | 1-136-169-00 | FILM        | 0.22MF   | 5%  | 50V  |
| C215    | 1-136-163-00 | FILM        | 0.068MF  | 5%  | 50V  |
| C216    | 1-136-162-00 | FILM        | 0.056MF  | 5%  | 50V  |
| C217    | 1-124-611-00 | ELECT       | 1MF      | 20% | 50V  |
| C218    | 1-130-480-00 | MYLAR       | 0.0056MF | 5%  | 50V  |
| C219    | 1-136-153-00 | FILM        | 0.01MF   | 5%  | 50V  |
| C220    | 1-124-657-00 | ELECT       | 10MF     | 20% | 50V  |
| C221    | 1-123-381-00 | ELECT       | 2.2MF    | 20% | 50V  |
| C222    | 1-124-767-00 | ELECT       | 2.2MF    | 20% | 50V  |
| C223    | 1-136-440-11 | FILM        | 39PF     | 5%  | 630V |
| C224    | 1-136-440-11 | FILM        | 39PF     | 5%  | 630V |
| C225    | 1-130-475-00 | MYLAR       | 0.0022MF | 5%  | 50V  |
| C226    | 1-130-475-00 | MYLAR       | 0.0022MF | 5%  | 50V  |
| C227    | 1-130-478-00 | MYLAR       | 0.0039MF | 5%  | 50V  |
| C228    | 1-136-173-00 | FILM        | 0.47MF   | 5%  | 50V  |
| C229    | 1-136-167-00 | FILM        | 0.15MF   | 5%  | 50V  |
| C230    | 1-136-155-00 | FILM        | 0.015MF  | 5%  | 50V  |
| C231    | 1-124-611-00 | ELECT       | 1MF      | 20% | 50V  |
| C232    | 1-136-169-00 | FILM        | 0.22MF   | 5%  | 50V  |
| C233    | 1-136-163-00 | FILM        | 0.068MF  | 5%  | 50V  |
| C234    | 1-136-162-00 | FILM        | 0.056MF  | 5%  | 50V  |
| C235    | 1-124-611-00 | ELECT       | 1MF      | 20% | 50V  |
| C236    | 1-130-480-00 | MYLAR       | 0.0056MF | 5%  | 50V  |
| C237    | 1-136-153-00 | FILM        | 0.01MF   | 5%  | 50V  |
| C238    | 1-123-357-00 | ELECT       | 22MF     | 20% | 50V  |
| C239    | 1-123-356-00 | ELECT       | 10MF     | 20% | 50V  |
| C240    | 1-130-473-00 | MYLAR       | 0.0015MF | 5%  | 50V  |
| C241    | 1-123-369-00 | ELECT       | 4.7MF    | 20% | 50V  |
| C242    | 1-123-333-00 | ELECT       | 100MF    | 20% | 25V  |
| C243    | 1-136-164-00 | FILM        | 0.082MF  | 5%  | 50V  |
| C244    | 1-123-357-00 | ELECT       | 22MF     | 20% | 50V  |
| C245    | 1-136-155-00 | FILM        | 0.015MF  | 5%  | 50V  |
| C246    | 1-136-153-00 | FILM        | 0.01MF   | 5%  | 50V  |
| C247    | 1-136-157-00 | FILM        | 0.022MF  | 5%  | 50V  |
| C248    | 1-136-155-00 | FILM        | 0.015MF  | 5%  | 50V  |
| C249    | 1-136-156-00 | FILM        | 0.018MF  | 5%  | 50V  |
| C250    | 1-130-475-00 | MYLAR       | 0.0022MF | 5%  | 50V  |
| C251    | 1-130-473-00 | MYLAR       | 0.0015MF | 5%  | 50V  |
| C252    | 1-136-436-11 | FILM        | 180PF    | 5%  | 630V |
| C253    | 1-136-271-00 | FILM        | 56PF     | 5%  | 630V |
| C254    | 1-124-767-00 | ELECT       | 2.2MF    | 20% | 50V  |
| C255    | 1-124-767-00 | ELECT       | 2.2MF    | 20% | 50V  |
| C256    | 1-124-927-11 | ELECT       | 4.7MF    | 20% | 50V  |
| C301    | 1-123-377-00 | ELECT       | 470MF    | 20% | 63V  |
| C302    | 1-123-377-00 | ELECT       | 470MF    | 20% | 63V  |
| C303    | 1-123-378-00 | ELECT       | 1000MF   | 20% | 63V  |
| C304    | 1-123-378-00 | ELECT       | 1000MF   | 20% | 63V  |
| C307    | 1-123-356-00 | ELECT       | 10MF     | 20% | 50V  |
| C308    | 1-123-356-00 | ELECT       | 10MF     | 20% | 50V  |
| C309    | 1-123-875-91 | ELECT       | 10MF     | 20% | 50V  |
| C310    | 1-123-875-91 | ELECT       | 10MF     | 20% | 50V  |
| C311    | 1-123-875-91 | ELECT       | 10MF     | 20% | 50V  |
| C312    | 1-162-282-31 | CERAMIC     | 100PF    | 10% | 50V  |
| C313    | 1-162-282-31 | CERAMIC     | 100PF    | 10% | 50V  |
| C314    | 1-162-282-31 | CERAMIC     | 100PF    | 10% | 50V  |
| C315    | 1-124-925-11 | ELECT       | 2.2MF    | 20% | 50V  |
| C316    | 1-123-356-00 | ELECT       | 10MF     | 20% | 50V  |

## ELECTRICAL PARTS

| Ref.No. | Part No.     | Description             |          |     |      |
|---------|--------------|-------------------------|----------|-----|------|
| C317    | 1-123-356-00 | ELECT                   | 10MF     | 20% | 50V  |
| C318    | 1-123-333-00 | ELECT                   | 100MF    | 20% | 16V  |
| C319    | 1-123-333-00 | ELECT                   | 100MF    | 20% | 16V  |
| C320    | 1-124-477-11 | ELECT                   | 47MF     | 20% | 25V  |
| C321    | 1-123-333-00 | ELECT                   | 100MF    | 20% | 16V  |
| C322    | 1-123-333-00 | ELECT                   | 100MF    | 20% | 16V  |
| C323    | 1-124-477-11 | ELECT                   | 47MF     | 20% | 25V  |
| C324    | 1-162-294-31 | CERAMIC                 | 0.001MF  | 10% | 50V  |
| C325    | 1-136-156-00 | FILM                    | 0.018MF  | 5%  | 50V  |
| C326    | 1-131-368-00 | TANTALUM                | 3.3MF    | 10% | 10V  |
| C327    | 1-162-291-31 | CERAMIC                 | 560PF    | 10% | 50V  |
| C328    | 1-162-291-31 | CERAMIC                 | 560PF    | 10% | 50V  |
| C329    | 1-162-294-31 | CERAMIC                 | 0.001MF  | 10% | 50V  |
| C701    | 1-124-911-11 | ELECT                   | 220MF    | 20% | 50V  |
| C702    | 1-124-557-11 | ELECT                   | 1000MF   | 20% | 25V  |
| C703    | 1-124-791-11 | ELECT                   | 1MF      | 20% | 50V  |
| C704    | 1-124-472-11 | ELECT                   | 470MF    | 20% | 10V  |
| C705    | 1-123-875-91 | ELECT                   | 10MF     | 20% | 50V  |
| C706    | 1-124-472-11 | ELECT                   | 470MF    | 20% | 10V  |
| C707    | 1-124-477-11 | ELECT                   | 47MF     | 20% | 25V  |
| C708    | 1-162-211-31 | CERAMIC                 | 33PF     | 5%  | 50V  |
| C709    | 1-124-472-11 | ELECT                   | 470MF    | 20% | 10V  |
| C710    | 1-123-875-91 | ELECT                   | 10MF     | 20% | 50V  |
| C711    | 1-124-121-00 | ELECT                   | 100MF    | 20% | 35V  |
| C712    | 1-124-477-11 | ELECT                   | 47MF     | 20% | 25V  |
| C713    | 1-162-203-31 | CERAMIC                 | 15PF     | 5%  | 50V  |
| C714    | 1-162-203-31 | CERAMIC                 | 15PF     | 5%  | 50V  |
| C715    | 1-136-157-00 | FILM                    | 0.022MF  | 5%  | 50V  |
| C716    | 1-124-477-11 | ELECT                   | 47MF     | 20% | 25V  |
| C717    | 1-161-327-00 | CERAMIC                 | 0.0033MF | 20% | 16V  |
| C718    | 1-161-327-00 | CERAMIC                 | 0.0033MF | 20% | 16V  |
| C719    | 1-162-211-31 | CERAMIC                 | 33PF     | 5%  | 50V  |
| C720    | 1-162-211-31 | CERAMIC                 | 33PF     | 5%  | 50V  |
| C721    | 1-124-443-00 | ELECT                   | 100MF    | 20% | 10V  |
| C722    | 1-124-443-00 | (US,Canadian)...ELECT   | 100MF    | 20% | 10V  |
| C723    | 1-162-284-31 | (US,Canadian)...CERAMIC | 150PF    | 10% | 50V  |
| C724    | 1-162-284-31 | (US,Canadian)...CERAMIC | 150PF    | 10% | 50V  |
| C725    | 1-162-294-31 | (US,Canadian)...CERAMIC | 0.001MF  | 10% | 50V  |
| C726    | 1-124-477-11 | ELECT                   | 47MF     | 20% | 25V  |
| C727    | 1-124-443-00 | ELECT                   | 100MF    | 20% | 10V  |
| C728    | 1-136-159-00 | FILM                    | 0.033MF  | 5%  | 50V  |
| C801    | 1-161-744-00 | CERAMIC                 | 0.01MF   |     | 400V |
| C802    | 1-123-875-91 | ELECT                   | 10MF     | 20% | 50V  |
| C803    | 1-124-791-11 | ELECT                   | 1MF      | 20% | 50V  |
| C804    | 1-124-911-11 | ELECT                   | 220MF    | 20% | 50V  |
| C805    | 1-124-637-11 | ELECT                   | 1000MF   | 20% | 50V  |
| C806    | 1-124-636-00 | ELECT                   | 3300MF   | 20% | 25V  |
| C807    | 1-123-875-91 | ELECT                   | 10MF     | 20% | 50V  |
| C808    | 1-124-121-00 | ELECT                   | 100MF    | 20% | 35V  |
| C809    | 1-126-129-11 | ELECT                   | 6800MF   | 20% | 35V  |
| C810    | 1-126-129-11 | ELECT                   | 6800MF   | 20% | 35V  |
| C811    | 1-136-165-00 | FILM                    | 0.1MF    | 5%  | 50V  |
| C812    | 1-136-177-00 | FILM                    | 1MF      | 5%  | 50V  |
| C901    | 1-163-059-00 | CERAMIC CHIP            | 0.01MF   | 10% | 50V  |
| C902    | 1-163-063-00 | CERAMIC CHIP            | 0.022MF  | 10% | 50V  |
| C903    | 1-163-063-00 | CERAMIC CHIP            | 0.022MF  | 10% | 50V  |
| C904    | 1-163-077-00 | CERAMIC CHIP            | 0.1MF    |     | 50V  |

The components identified by shading and mark A are critical for safety. Replace only with part number specified.

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

**ELECTRICAL PARTS**

| Ref.No. | Part No.      | Description            |              |     |     |
|---------|---------------|------------------------|--------------|-----|-----|
| C905    | 1-124-779-00  | ELECT                  | 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    | 1-163-063-00  | CERAMIC CHIP           | 0.022MF      | 10% | 50V |
| C911    | 1-124-779-00  | ELECT                  | 10MF         | 20% | 16V |
| C1001   | 1-123-875-91  | ELECT                  | 10MF         | 20% | 50V |
| C1002   | 1-123-875-91  | ELECT                  | 10MF         | 20% | 50V |
| CN301   | *1-560-062-00 | PIN, CONNECTOR         | 4P           |     |     |
| CN302   | *1-564-507-11 | PLUG, CONNECTOR        | 4P           |     |     |
| CN303   | *1-564-506-11 | PLUG, CONNECTOR        | 3P           |     |     |
| CN304   | *1-560-062-00 | PIN, CONNECTOR         | 4P           |     |     |
| CN305   | *1-560-061-00 | PIN, CONNECTOR         | 3P           |     |     |
| CN306   | *1-564-338-61 | PIN, CONNECTOR         | 4P           |     |     |
| CN307   | *1-564-340-21 | PIN, CONNECTOR         | 6P           |     |     |
| CN308   | *1-564-340-00 | PIN, CONNECTOR         | 6P           |     |     |
| CN309   | *1-564-338-51 | PIN, CONNECTOR         | 4P           |     |     |
| CN310   | *1-564-338-21 | PIN, CONNECTOR         | 4P           |     |     |
| CN311   | *1-564-338-71 | PIN, CONNECTOR         | 4P           |     |     |
| CN312   | *1-564-337-51 | PIN, CONNECTOR         | 3P           |     |     |
| CN701   | *1-564-508-11 | PLUG, CONNECTOR        | 5P           |     |     |
| CN702   | *1-564-337-51 | (US,Canadian)...PIN,   | CONNECTOR 4P |     |     |
| CN703   | *1-564-336-21 | PIN, CONNECTOR         | 2P           |     |     |
| CN704   | *1-564-340-21 | PIN, CONNECTOR         | 6P           |     |     |
| CN705   | *1-564-339-61 | PIN, CONNECTOR         | 5P           |     |     |
| CN706   | *1-564-339-51 | PIN, CONNECTOR         | 5P           |     |     |
| CN707   | *1-564-338-61 | PIN, CONNECTOR         | 4P           |     |     |
| CN708   | *1-564-338-51 | PIN, CONNECTOR         | 4P           |     |     |
| CN709   | *1-564-337-61 | PIN, CONNECTOR         | 3P           |     |     |
| CN710   | *1-564-342-51 | PIN, CONNECTOR         | 8P           |     |     |
| CN711   | *1-564-341-51 | PIN, CONNECTOR         | 7P           |     |     |
| CN712   | *1-564-507-11 | PLUG, CONNECTOR        | 4P           |     |     |
| CNJ301  | 1-507-531-31  | PLATE, PIN-JACK        |              |     |     |
| CNJ302  | 1-507-796-21  | JACK                   |              |     |     |
| CP301   | 1-464-328-11  | OSCILLATION UNIT, BIAS |              |     |     |
| CT301   | 1-141-225-00  | CAP, TUNING, TRIMAR    |              |     |     |
| D301    | 8-719-000-26  | DIODE                  | US1060M      |     |     |
| D302    | 8-719-933-47  | DIODE                  | HZS7B2L      |     |     |
| D303    | 8-719-000-26  | DIODE                  | US1060M      |     |     |
| D304    | 8-719-000-26  | DIODE                  | US1060M      |     |     |
| D305    | 8-719-000-26  | DIODE                  | US1060M      |     |     |
| D306    | 8-719-000-26  | DIODE                  | US1060M      |     |     |
| D307    | 8-719-000-26  | DIODE                  | US1060M      |     |     |
| D308    | 8-719-000-26  | DIODE                  | US1060M      |     |     |
| D309    | 8-719-000-26  | DIODE                  | US1060M      |     |     |
| D310    | 8-719-000-26  | DIODE                  | US1060M      |     |     |
| D311    | 8-719-114-30  | DIODE                  | RD5.1JS-B2   |     |     |
| D312    | 8-719-114-30  | DIODE                  | RD5.1JS-B2   |     |     |
| D313    | 8-719-933-71  | DIODE                  | HZS11C3L     |     |     |
| D314    | 8-719-933-71  | DIODE                  | HZS11C3L     |     |     |
| D701    | 8-719-933-41  | DIODE                  | HZS6C3L      |     |     |
| D702    | 8-719-933-57  | DIODE                  | HZS9B2L      |     |     |
| D703    | 8-719-933-36  | DIODE                  | HZS6B1L      |     |     |
| D704    | 8-719-934-13  | DIODE                  | HZS24-1L     |     |     |

**ELECTRICAL PARTS**

| Ref.No. | Part No.     | Description                            |
|---------|--------------|----------------------------------------|
| D705    | 8-719-114-30 | DIODE RD5.1JS-B2                       |
| D706    | 8-719-200-77 | DIODE 10E2N                            |
| D707    | 8-719-200-77 | DIODE 10E2N                            |
| D708    | 8-719-200-77 | DIODE 10E2N                            |
| D709    | 8-719-900-79 | DIODE BG5628S                          |
| D710    | 8-719-956-28 | DIODE BR5628S                          |
| D711    | 8-719-907-85 | DIODE AA5638S                          |
| D712    | 8-719-000-26 | DIODE US1060M                          |
| D713    | 8-719-114-30 | DIODE RD5.1JS-B2                       |
| D714    | 8-719-000-26 | DIODE US1060M                          |
| D801    | 8-719-114-30 | DIODE RD5.1JS-B2                       |
| D802    | 8-719-000-26 | DIODE US1060M                          |
| D803    | 8-719-502-20 | DIODE S2VB20                           |
| D804    | 8-719-200-77 | DIODE 10E2N                            |
| D805    | 8-719-200-77 | DIODE 10E2N                            |
| D807    | 8-719-934-18 | DIODE HZS27-2L                         |
| D807    | 8-719-230-04 | DIODE 30D4                             |
| D808    | 8-719-230-04 | DIODE 30D4                             |
| D809    | 8-719-230-04 | DIODE 30D4                             |
| D810    | 8-719-230-04 | DIODE 30D4                             |
| D1001   | 8-719-940-76 | DIODE 1SS132                           |
| D1002   | 8-719-940-76 | DIODE 1SS132                           |
| F801    | 1-532-259-00 | (AEP,G-AEP,UK,E)...FUSE, TIME-LAG 1.6A |
| F801    | 1-532-742-11 | (US,Canadian)...FUSE, GLASS TUBE 1.6A  |
| F802    | 1-532-259-00 | (AEP,G-AEP,UK,E)...FUSE, TIME-LAG 1.6A |
| F802    | 1-532-742-11 | (US,Canadian)...FUSE, GLASS TUBE 1.6A  |
| FG      | 1-459-426-00 | COIL                                   |
| FLT301  | 1-519-408-11 | INDICATOR TUBE, FLUORESCENT            |
| FLT701  | 1-519-409-11 | INDICATOR TUBE, FLUORESCENT            |
| H901    | 8-719-404-05 | OH009-TW                               |
| H902    | 8-719-404-05 | OH009-TW                               |
| H903    | 8-719-404-05 | OH009-TW                               |
| HE      | 1-543-358-11 | HEAD, MAGNETIC (ERASE)                 |
| HP      | 8-825-770-51 | HEAD, REC/PB RPA230-3602C              |
| IC301   | 8-759-604-38 | IC M5F78M10                            |
| IC302   | 8-759-604-44 | IC M5F79M10                            |
| IC303   | 8-759-602-01 | IC M5220P                              |
| IC304   | 8-752-018-80 | IC CX20188                             |
| IC305   | 8-759-602-83 | IC M5238P                              |
| IC306   | 8-752-018-80 | IC CX20188                             |
| IC307   | 8-759-745-60 | IC NJM4560D                            |
| IC308   | 8-759-745-60 | IC NJM4560D                            |
| IC309   | 8-759-178-12 | IC UPC78L12                            |
| IC310   | 8-759-145-58 | IC UPC4558C                            |
| IC311   | 8-759-961-38 | IC BA6138                              |
| IC312   | 8-759-904-72 | IC MSL9359RS                           |
| IC701   | 8-759-938-34 | IC MB88517B-228N                       |
| IC702   | 8-759-602-47 | (US,Canadian)...IC M50761-417P         |
| IC703   | 8-759-601-45 | IC M4069UBP                            |
| IC704   | 8-759-201-58 | IC TC9142P                             |
| IC705   | 8-741-138-70 | (US,Canadian)...IC BX-1387             |
| IC706   | 8-759-905-48 | IC MSL9512RS                           |
| IC901   | 8-759-100-96 | IC UPC4558G2                           |
| IC902   | 8-752-017-40 | IC CX20174                             |

## ELECTRICAL PARTS

| Ref.No. | Part No.     | Description                                         |
|---------|--------------|-----------------------------------------------------|
| JR901   | 1-216-296-00 | METAL CHIP 0 5% 1/8W                                |
| JR902   | 1-216-296-00 | METAL CHIP 0 5% 1/8W                                |
| JR903   | 1-216-296-00 | METAL CHIP 0 5% 1/8W                                |
| JR904   | 1-216-296-00 | METAL CHIP 0 5% 1/8W                                |
| JR905   | 1-216-296-00 | METAL CHIP 0 5% 1/8W                                |
| L101    | 1-407-240-00 | MICRO INDUCTOR 22MMH                                |
| L102    | 1-408-253-00 | MICRO INDUCTOR 4.7MMH                               |
| L103    | 1-408-250-00 | MICRO INDUCTOR 2.7MMH                               |
| L104    | 1-408-249-00 | MICRO INDUCTOR 2.2MMH                               |
| L105    | 1-408-258-00 | MICRO INDUCTOR 12MMH                                |
| L201    | 1-407-240-00 | MICRO INDUCTOR 22MMH                                |
| L202    | 1-408-253-00 | MICRO INDUCTOR 4.7MMH                               |
| L203    | 1-408-250-00 | MICRO INDUCTOR 2.7MMH                               |
| L204    | 1-408-249-00 | MICRO INDUCTOR 2.2MMH                               |
| L205    | 1-408-258-00 | MICRO INDUCTOR 12MMH                                |
| L301    | 1-408-579-00 | MICRO INDUCTOR 220UH                                |
| L302    | 1-408-579-00 | MICRO INDUCTOR 220UH                                |
| L303    | 1-408-579-00 | MICRO INDUCTOR 220UH                                |
| LPF101  | 1-231-388-00 | FILTER, LOW PASS                                    |
| LPF201  | 1-231-388-00 | FILTER, LOW PASS                                    |
| M901    | X-3575-382-1 | MOTOR ASSY, REEL                                    |
| PL101   | 1-518-313-00 | LAMP, PILOT                                         |
| PM901   | 1-454-333-00 | SOLENOID, PLUNGER                                   |
| PM902   | 1-454-291-00 | SOLENOID, PLUNGER                                   |
| PT801A  | 1-448-948-11 | (US,Canadian,AEP,G-AEP,UK)<br>...TRANSFORMER, POWER |
| PT801A  | 1-449-005-11 | (E).....TRANSFORMER, POWER                          |
| Q101    | 8-729-107-84 | TRANSISTOR 2SC3623A                                 |
| Q102    | 8-729-100-12 | TRANSISTOR 2SC2001-L                                |
| Q103    | 8-729-107-84 | TRANSISTOR 2SC3623A                                 |
| Q104    | 8-729-107-84 | TRANSISTOR 2SC3623A                                 |
| Q105    | 8-729-107-84 | TRANSISTOR 2SC3623A                                 |
| Q106    | 8-729-107-84 | TRANSISTOR 2SC3623A                                 |
| Q201    | 8-729-107-84 | TRANSISTOR 2SC3623A                                 |
| Q202    | 8-729-100-12 | TRANSISTOR 2SC2001-L                                |
| Q203    | 8-729-107-84 | TRANSISTOR 2SC3623A                                 |
| Q204    | 8-729-107-84 | TRANSISTOR 2SC3623A                                 |
| Q205    | 8-729-107-84 | TRANSISTOR 2SC3623A                                 |
| Q206    | 8-729-107-84 | TRANSISTOR 2SC3623A                                 |
| Q301    | 8-729-600-27 | TRANSISTOR 2SC634SP                                 |
| Q302    | 8-729-806-16 | TRANSISTOR 2SC1345                                  |
| Q303    | 8-729-806-38 | TRANSISTOR 2SC3399                                  |
| Q304    | 8-729-806-34 | TRANSISTOR 2SC3400                                  |
| Q305    | 8-729-806-34 | TRANSISTOR 2SC3400                                  |
| Q306    | 8-729-806-34 | TRANSISTOR 2SC3400                                  |
| Q307    | 8-729-806-34 | TRANSISTOR 2SC3400                                  |
| Q308    | 8-729-806-34 | TRANSISTOR 2SC3400                                  |
| Q309    | 8-729-281-53 | TRANSISTOR 2SC1815-GR                               |
| Q310    | 8-729-281-53 | TRANSISTOR 2SC1815-GR                               |
| Q311    | 8-729-600-27 | TRANSISTOR 2SC634SP                                 |
| Q312    | 8-729-806-34 | TRANSISTOR 2SC3400                                  |
| Q313    | 8-729-806-34 | TRANSISTOR 2SC3400                                  |
| Q314    | 8-729-204-83 | TRANSISTOR 2SA1048-GR                               |
| Q315    | 8-729-806-20 | TRANSISTOR 2SA1345                                  |
| Q316    | 8-729-806-38 | TRANSISTOR 2SC3399                                  |
| Q317    | 8-729-806-20 | TRANSISTOR 2SA1345                                  |
| Q318    | 8-729-806-20 | TRANSISTOR 2SA1345                                  |

## ELECTRICAL PARTS

| Ref.No. | Part No.     | Description                       |
|---------|--------------|-----------------------------------|
| Q319    | 8-729-806-20 | TRANSISTOR 2SA1345                |
| Q320    | 8-729-806-20 | TRANSISTOR 2SA1345                |
| Q321    | 8-729-806-20 | TRANSISTOR 2SA1345                |
| Q701    | 8-729-107-26 | TRANSISTOR 2SD1585-K              |
| Q702    | 8-729-107-26 | TRANSISTOR 2SD1585-K              |
| Q703    | 8-729-107-26 | TRANSISTOR 2SD1585-K              |
| Q704    | 8-729-107-26 | TRANSISTOR 2SD1585-K              |
| Q705    | 8-729-107-26 | TRANSISTOR 2SD1585-K              |
| Q706    | 8-729-600-27 | TRANSISTOR 2SC634SP               |
| Q707    | 8-729-600-27 | TRANSISTOR 2SC634SP               |
| Q708    | 8-729-600-27 | TRANSISTOR 2SC634SP               |
| Q709    | 8-729-600-27 | TRANSISTOR 2SC634SP               |
| Q710    | 8-729-600-27 | TRANSISTOR 2SC634SP               |
| Q711    | 8-729-802-34 | TRANSISTOR 2SD1388                |
| Q712    | 8-729-806-34 | TRANSISTOR 2SC3402                |
| Q713    | 8-729-802-34 | TRANSISTOR 2SD1388                |
| Q714    | 8-729-806-28 | TRANSISTOR 2SC3402                |
| Q715    | 8-729-802-22 | TRANSISTOR 2SB1014                |
| Q716    | 8-729-802-22 | TRANSISTOR 2SB1014                |
| Q717    | 8-729-806-34 | TRANSISTOR 2SC3402                |
| Q718    | 8-729-801-93 | TRANSISTOR 2SD1387                |
| Q719    | 8-729-801-93 | TRANSISTOR 2SD1387                |
| Q720    | 8-729-801-83 | TRANSISTOR 2SB1013                |
| Q721    | 8-729-801-83 | TRANSISTOR 2SB1013                |
| Q722    | 8-729-115-15 | (US,Canadian)...TRANSISTOR BN1A4M |
| Q801    | 8-729-180-93 | TRANSISTOR 2SD809                 |
| Q1001   | 8-729-101-02 | TRANSISTOR PH102                  |
| Q1002   | 8-729-101-02 | TRANSISTOR PH102                  |
| R101    | 1-249-466-11 | CARBON 56K 1/4W                   |
| R102    | 1-249-531-91 | CARBON 130 1/4W                   |
| R103    | 1-249-602-11 | CARBON 120K 1/4W                  |
| R104    | 1-247-146-00 | CARBON 4.3K 1/4W                  |
| R105    | 1-247-716-11 | CARBON 1.8K 1/4W                  |
| R106    | 1-247-138-00 | CARBON 2K 1/4W                    |
| R107    | 1-249-429-11 | CARBON 10K 5% 1/6W                |
| R108    | 1-247-717-11 | CARBON 2.2K 1/4W                  |
| R109    | 1-247-710-11 | CARBON 560 1/4W                   |
| R110    | 1-247-725-11 | CARBON 10K 1/4W                   |
| R111    | 1-247-142-00 | CARBON 3K 1/4W                    |
| R112    | 1-247-146-00 | CARBON 4.3K 1/4W                  |
| R113    | 1-246-545-00 | CARBON 1M 5% 1/4W                 |
| R114    | 1-247-710-11 | CARBON 560 1/4W                   |
| R115    | 1-249-584-91 | CARBON 22K 1/4W                   |
| R116    | 1-247-152-00 | CARBON 7.5K 5% 1/4W               |
| R117    | 1-247-154-00 | CARBON 9.1K 5% 1/4W               |
| R118    | 1-247-711-11 | CARBON 680 5% 1/4W                |
| R119    | 1-249-465-11 | CARBON 47K 5% 1/4W                |
| R120    | 1-249-586-11 | CARBON 27K 1/4W                   |
| R121    | 1-247-152-00 | CARBON 8.2K 1/4W                  |
| R122    | 1-249-469-11 | CARBON 100K 5% 1/4W               |
| R123    | 1-247-723-11 | CARBON 6.8K 5% 1/4W               |
| R124    | 1-247-720-11 | CARBON 3.9K 5% 1/4W               |
| R125    | 1-247-719-11 | CARBON 3.3K 5% 1/4W               |
| R126    | 1-247-723-11 | CARBON 6.8K 5% 1/4W               |
| R127    | 1-249-469-11 | CARBON 100K 5% 1/4W               |
| R128    | 1-247-708-11 | CARBON 470 1/4W                   |
| R129    | 1-247-725-11 | CARBON 10K 1/4W                   |
| R130    | 1-247-142-00 | CARBON 3K 1/4W                    |

The components identified by shading and mark A are critical for safety. Replace only with part number specified.

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

## ELECTRICAL PARTS

| Ref.No. | Part No.     | Description |      |    |      |
|---------|--------------|-------------|------|----|------|
| R131    | 1-247-146-00 | CARBON      | 4.3K |    | 1/4W |
| R132    | 1-246-545-00 | CARBON      | 1M   | 5% | 1/4W |
| R133    | 1-247-710-11 | CARBON      | 560  |    | 1/4W |
| R134    | 1-249-584-91 | CARBON      | 22K  |    | 1/4W |
| R135    | 1-247-152-00 | CARBON      | 7.5K | 5% | 1/4W |
| R136    | 1-247-154-00 | CARBON      | 9.1K | 5% | 1/4W |
| R137    | 1-247-711-11 | CARBON      | 680  | 5% | 1/4W |
| R138    | 1-249-465-11 | CARBON      | 47K  | 5% | 1/4W |
| R139    | 1-247-721-11 | CARBON      | 4.7K |    | 1/4W |
| R140    | 1-249-461-11 | CARBON      | 18K  |    | 1/4W |
| R141    | 1-247-719-11 | CARBON      | 3.3K |    | 1/4W |
| R142    | 1-247-723-11 | CARBON      | 6.8K |    | 1/4W |
| R143    | 1-249-425-11 | CARBON      | 4.7K | 5% | 1/6W |
| R144    | 1-249-464-11 | CARBON      | 39K  | 5% | 1/4W |
| R145    | 1-249-429-11 | CARBON      | 10K  | 5% | 1/6W |
| R146    | 1-249-469-11 | CARBON      | 100K | 5% | 1/4W |
| R147    | 1-249-459-11 | CARBON      | 12K  | 5% | 1/4W |
| R148    | 1-247-717-11 | CARBON      | 2.2K |    | 1/4W |
| R149    | 1-249-466-11 | CARBON      | 56K  |    | 1/4W |
| R150    | 1-249-590-11 | CARBON      | 39K  |    | 1/4W |
| R151    | 1-247-718-11 | CARBON      | 2.7K |    | 1/4W |
| R152    | 1-247-703-11 | CARBON      | 180  | 5% | 1/4W |
| R153    | 1-249-459-11 | CARBON      | 12K  | 5% | 1/4W |
| R154    | 1-249-429-11 | CARBON      | 10K  | 5% | 1/6W |
| R155    | 1-247-701-11 | CARBON      | 120  | 5% | 1/4W |
| R156    | 1-247-721-11 | CARBON      | 4.7K | 5% | 1/4W |
| R157    | 1-247-723-11 | CARBON      | 6.8K | 5% | 1/4W |
| R158    | 1-249-429-11 | CARBON      | 10K  | 5% | 1/6W |
| R159    | 1-247-701-11 | CARBON      | 120  | 5% | 1/4W |
| R160    | 1-247-719-11 | CARBON      | 3.3K | 5% | 1/4W |
| R161    | 1-247-722-11 | CARBON      | 5.6K | 5% | 1/4W |
| R162    | 1-249-429-11 | CARBON      | 10K  | 5% | 1/6W |
| R163    | 1-247-714-11 | CARBON      | 1.2K |    | 1/4W |
| R164    | 1-247-721-11 | CARBON      | 4.7K | 5% | 1/4W |
| R165    | 1-249-461-11 | CARBON      | 18K  | 5% | 1/4W |
| R166    | 1-249-469-11 | CARBON      | 100K | 5% | 1/4W |
| R167    | 1-247-704-11 | CARBON      | 220  | 5% | 1/4W |
| R168    | 1-247-710-11 | CARBON      | 560  |    | 1/4W |
| R169    | 1-249-421-11 | CARBON      | 2.2K | 5% | 1/6W |
| R170    | 1-249-397-11 | CARBON      | 22   | 5% | 1/6W |
| R171    | 1-247-883-00 | CARBON      | 150K | 5% | 1/6W |
| R172    | 1-249-429-11 | CARBON      | 10K  | 5% | 1/6W |
| R201    | 1-249-466-11 | CARBON      | 56K  |    | 1/4W |
| R202    | 1-249-531-91 | CARBON      | 130  |    | 1/4W |
| R203    | 1-249-602-11 | CARBON      | 120K |    | 1/4W |
| R204    | 1-247-146-00 | CARBON      | 4.3K |    | 1/4W |
| R205    | 1-247-716-11 | CARBON      | 1.8K |    | 1/4W |
| R206    | 1-247-138-00 | CARBON      | 2K   |    | 1/4W |
| R207    | 1-249-429-11 | CARBON      | 10K  | 5% | 1/6W |
| R208    | 1-247-717-11 | CARBON      | 2.2K |    | 1/4W |
| R209    | 1-247-710-11 | CARBON      | 560  |    | 1/4W |
| R210    | 1-247-725-11 | CARBON      | 10K  |    | 1/4W |
| R211    | 1-247-142-00 | CARBON      | 3K   |    | 1/4W |
| R212    | 1-247-146-00 | CARBON      | 4.3K |    | 1/4W |
| R213    | 1-246-545-00 | CARBON      | 1M   | 5% | 1/4W |
| R214    | 1-247-710-11 | CARBON      | 560  |    | 1/4W |
| R215    | 1-249-584-91 | CARBON      | 22K  |    | 1/4W |

## ELECTRICAL PARTS

| Ref.No. | Part No.     | Description |      |    |      |
|---------|--------------|-------------|------|----|------|
| R216    | 1-247-152-00 | CARBON      | 7.5K | 5% | 1/4W |
| R217    | 1-247-154-00 | CARBON      | 9.1K | 5% | 1/4W |
| R218    | 1-247-711-11 | CARBON      | 680  | 5% | 1/4W |
| R219    | 1-249-465-11 | CARBON      | 47K  | 5% | 1/4W |
| R220    | 1-249-586-11 | CARBON      | 27K  |    | 1/4W |
| R221    | 1-247-152-00 | CARBON      | 8.2K |    | 1/4W |
| R222    | 1-249-469-11 | CARBON      | 100K | 5% | 1/4W |
| R223    | 1-247-723-11 | CARBON      | 6.8K | 5% | 1/4W |
| R224    | 1-247-720-11 | CARBON      | 3.9K | 5% | 1/4W |
| R225    | 1-247-719-11 | CARBON      | 3.3K | 5% | 1/4W |
| R226    | 1-247-723-11 | CARBON      | 6.8K | 5% | 1/4W |
| R227    | 1-249-469-11 | CARBON      | 100K | 5% | 1/4W |
| R228    | 1-247-708-11 | CARBON      | 470  |    | 1/4W |
| R229    | 1-247-725-11 | CARBON      | 10K  |    | 1/4W |
| R230    | 1-247-142-00 | CARBON      | 3K   |    | 1/4W |
| R231    | 1-247-146-00 | CARBON      | 4.3K |    | 1/4W |
| R232    | 1-246-545-00 | CARBON      | 1M   | 5% | 1/4W |
| R233    | 1-247-710-11 | CARBON      | 560  |    | 1/4W |
| R234    | 1-249-584-91 | CARBON      | 22K  |    | 1/4W |
| R235    | 1-247-152-00 | CARBON      | 7.5K | 5% | 1/4W |
| R236    | 1-247-154-00 | CARBON      | 9.1K | 5% | 1/4W |
| R237    | 1-247-711-11 | CARBON      | 680  | 5% | 1/4W |
| R238    | 1-249-465-11 | CARBON      | 47K  | 5% | 1/4W |
| R239    | 1-247-721-11 | CARBON      | 4.7K |    | 1/4W |
| R240    | 1-249-461-11 | CARBON      | 18K  |    | 1/4W |
| R241    | 1-247-719-11 | CARBON      | 3.3K |    | 1/4W |
| R242    | 1-247-723-11 | CARBON      | 6.8K |    | 1/4W |
| R243    | 1-249-425-11 | CARBON      | 4.7K | 5% | 1/6W |
| R244    | 1-249-464-11 | CARBON      | 39K  | 5% | 1/4W |
| R245    | 1-249-429-11 | CARBON      | 10K  | 5% | 1/6W |
| R246    | 1-249-469-11 | CARBON      | 100K | 5% | 1/4W |
| R247    | 1-249-459-11 | CARBON      | 12K  | 5% | 1/4W |
| R248    | 1-247-717-11 | CARBON      | 2.2K |    | 1/4W |
| R249    | 1-249-466-11 | CARBON      | 56K  |    | 1/4W |
| R250    | 1-249-590-11 | CARBON      | 39K  |    | 1/4W |
| R251    | 1-247-718-11 | CARBON      | 2.7K |    | 1/4W |
| R252    | 1-247-703-11 | CARBON      | 180  | 5% | 1/4W |
| R253    | 1-249-459-11 | CARBON      | 12K  | 5% | 1/4W |
| R254    | 1-249-429-11 | CARBON      | 10K  | 5% | 1/6W |
| R255    | 1-247-701-11 | CARBON      | 120  | 5% | 1/4W |
| R256    | 1-247-721-11 | CARBON      | 4.7K | 5% | 1/4W |
| R257    | 1-247-723-11 | CARBON      | 6.8K | 5% | 1/4W |
| R258    | 1-249-429-11 | CARBON      | 10K  | 5% | 1/6W |
| R259    | 1-247-701-11 | CARBON      | 120  | 5% | 1/4W |
| R260    | 1-247-719-11 | CARBON      | 3.3K | 5% | 1/4W |
| R261    | 1-247-722-11 | CARBON      | 5.6K | 5% | 1/4W |
| R262    | 1-249-429-11 | CARBON      | 10K  | 5% | 1/6W |
| R263    | 1-247-714-11 | CARBON      | 1.2K |    | 1/4W |
| R264    | 1-247-721-11 | CARBON      | 4.7K | 5% | 1/4W |
| R265    | 1-249-461-11 | CARBON      | 18K  | 5% | 1/4W |
| R266    | 1-249-469-11 | CARBON      | 100K | 5% | 1/4W |
| R267    | 1-247-704-11 | CARBON      | 220  | 5% | 1/4W |
| R268    | 1-247-710-11 | CARBON      | 560  |    | 1/4W |
| R269    | 1-249-421-11 | CARBON      | 2.2K | 5% | 1/6W |
| R270    | 1-249-397-11 | CARBON      | 22   | 5% | 1/6W |
| R271    | 1-247-883-00 | CARBON      | 150K | 5% | 1/6W |
| R272    | 1-249-429-11 | CARBON      | 10K  | 5% | 1/6W |

## ELECTRICAL PARTS

| Ref.No. | Part No.     | Description |      |    |      |
|---------|--------------|-------------|------|----|------|
| R301    | 1-249-603-11 | CARBON      | 130K |    | 1/4W |
| R302    | 1-249-417-11 | CARBON      | 1K   | 5% | 1/6W |
| R303    | 1-249-438-11 | CARBON      | 56K  | 5% | 1/6W |
| R304    | 1-249-417-11 | CARBON      | 1K   | 5% | 1/6W |
| R305    | 1-249-603-11 | CARBON      | 130K |    | 1/4W |
| R306    | 1-249-438-11 | CARBON      | 56K  | 5% | 1/6W |
| R307    | 1-249-433-11 | CARBON      | 22K  | 5% | 1/6W |
| R308    | 1-249-421-11 | CARBON      | 2.2K | 5% | 1/6W |
| R309    | 1-249-429-11 | CARBON      | 10K  | 5% | 1/6W |
| R310    | 1-249-438-11 | CARBON      | 56K  | 5% | 1/6W |
| R311    | 1-249-438-11 | CARBON      | 56K  | 5% | 1/6W |
| R312    | 1-249-438-11 | CARBON      | 56K  | 5% | 1/6W |
| R313    | 1-249-433-11 | CARBON      | 22K  | 5% | 1/6W |
| R314    | 1-249-438-11 | CARBON      | 56K  | 5% | 1/6W |
| R315    | 1-249-429-11 | CARBON      | 10K  | 5% | 1/6W |
| R316    | 1-249-437-11 | CARBON      | 47K  | 5% | 1/6W |
| R317    | 1-249-433-11 | CARBON      | 22K  | 5% | 1/6W |
| R318    | 1-249-438-11 | CARBON      | 56K  | 5% | 1/6W |
| R319    | 1-249-437-11 | CARBON      | 47K  | 5% | 1/6W |
| R320    | 1-249-437-11 | CARBON      | 47K  | 5% | 1/6W |
| R321    | 1-249-421-11 | CARBON      | 2.2K | 5% | 1/6W |
| R322    | 1-249-425-11 | CARBON      | 4.7K | 5% | 1/6W |
| R323    | 1-249-425-11 | CARBON      | 4.7K | 5% | 1/6W |
| R324    | 1-247-838-00 | CARBON      | 2K   | 5% | 1/6W |
| R325    | 1-249-422-11 | CARBON      | 2.7K | 5% | 1/6W |
| R326    | 1-249-441-11 | CARBON      | 100K | 5% | 1/6W |
| R327    | 1-249-433-11 | CARBON      | 22K  | 5% | 1/6W |
| R328    | 1-249-437-11 | CARBON      | 47K  | 5% | 1/6W |
| R329    | 1-249-433-11 | CARBON      | 22K  | 5% | 1/6W |
| R330    | 1-249-437-11 | CARBON      | 47K  | 5% | 1/6W |
| R332    | 1-247-700-11 | CARBON      | 100  |    | 1/4W |
| R333    | 1-247-700-11 | CARBON      | 100  |    | 1/4W |
| R334    | 1-247-700-11 | CARBON      | 100  |    | 1/4W |
| R335    | 1-249-433-11 | CARBON      | 22K  | 5% | 1/6W |
| R336    | 1-249-441-11 | CARBON      | 100K | 5% | 1/6W |
| R337    | 1-249-441-11 | CARBON      | 100K | 5% | 1/6W |
| R338    | 1-249-441-11 | CARBON      | 100K | 5% | 1/6W |
| R339    | 1-249-429-11 | CARBON      | 10K  | 5% | 1/6W |
| R340    | 1-249-429-11 | CARBON      | 10K  | 5% | 1/6W |
| R341    | 1-249-433-11 | CARBON      | 22K  | 5% | 1/6W |
| R342    | 1-247-887-00 | CARBON      | 220K | 5% | 1/6W |
| R343    | 1-249-410-11 | CARBON      | 270  | 5% | 1/6W |
| R344    | 1-249-410-11 | CARBON      | 270  | 5% | 1/6W |
| R345    | 1-249-441-11 | CARBON      | 100K | 5% | 1/6W |
| R346    | 1-249-441-11 | CARBON      | 100K | 5% | 1/6W |
| R347    | 1-249-441-11 | CARBON      | 100K | 5% | 1/6W |
| R348    | 1-249-441-11 | CARBON      | 100K | 5% | 1/6W |
| R349    | 1-249-441-11 | CARBON      | 100K | 5% | 1/6W |
| R701    | 1-247-721-11 | CARBON      | 4.7K | 5% | 1/4W |
| R702    | 1-249-437-11 | CARBON      | 47K  | 5% | 1/6W |
| R703    | 1-249-421-11 | CARBON      | 2.2K | 5% | 1/6W |
| R704    | 1-247-717-11 | CARBON      | 2.2K | 5% | 1/4W |
| R705    | 1-249-437-11 | CARBON      | 47K  | 5% | 1/6W |
| R706    | 1-249-421-11 | CARBON      | 2.2K | 5% | 1/6W |
| R707    | 1-247-717-11 | CARBON      | 2.2K | 5% | 1/4W |
| R708    | 1-247-717-11 | CARBON      | 2.2K | 5% | 1/4W |
| R709    | 1-249-437-11 | CARBON      | 47K  | 5% | 1/6W |

## ELECTRICAL PARTS

| Ref.No.         | Part No.                | Description        |                |               |                 |
|-----------------|-------------------------|--------------------|----------------|---------------|-----------------|
| R710            | 1-249-421-11            | CARBON             | 2.2K           | 5%            | 1/6W            |
| R711            | 1-247-708-11            | CARBON             | 470            | 5%            | 1/4W            |
| R712            | 1-247-713-11            | CARBON             | 1K             | 5%            | 1/4W            |
| R713            | 1-247-717-11            | CARBON             | 2.2K           | 5%            | 1/4W            |
| R714            | 1-249-437-11            | CARBON             | 47K            | 5%            | 1/6W            |
| R715            | 1-249-421-11            | CARBON             | 2.2K           | 5%            | 1/6W            |
| R716            | 1-247-721-11            | CARBON             | 4.7K           | 5%            | 1/4W            |
| R717            | 1-247-891-00            | CARBON             | 330K           | 5%            | 1/6W            |
| R718            | 1-249-441-11            | CARBON             | 100K           | 5%            | 1/6W            |
| R719            | 1-249-417-11            | CARBON             | 1K             | 5%            | 1/6W            |
| R720            | 1-249-417-11            | CARBON             | 1K             | 5%            | 1/6W            |
| R721            | 1-249-429-11            | CARBON             | 10K            | 5%            | 1/6W            |
| R722            | 1-247-717-11            | CARBON             | 2.2K           | 5%            | 1/4W            |
| R723            | 1-249-437-11            | CARBON             | 47K            | 5%            | 1/6W            |
| R724            | 1-247-729-11            | CARBON             | 15             | 5%            | 1/2W            |
| R725            | 1-249-429-11            | CARBON             | 10K            | 5%            | 1/6W            |
| R726            | 1-247-717-11            | CARBON             | 2.2K           | 5%            | 1/4W            |
| R727            | 1-249-437-11            | CARBON             | 47K            | 5%            | 1/6W            |
| R728            | 1-249-429-11            | CARBON             | 10K            | 5%            | 1/6W            |
| R729            | 1-249-417-11            | CARBON             | 1K             | 5%            | 1/6W            |
| R730            | 1-249-417-11            | CARBON             | 1K             | 5%            | 1/6W            |
| R731            | 1-249-429-11            | CARBON             | 10K            | 5%            | 1/6W            |
| R732            | 1-249-417-11            | CARBON             | 1K             | 5%            | 1/6W            |
| R733            | 1-249-429-11            | CARBON             | 10K            | 5%            | 1/6W            |
| R734            | 1-249-417-11            | CARBON             | 1K             | 5%            | 1/6W            |
| R735            | 1-249-429-11            | CARBON             | 10K            | 5%            | 1/6W            |
| R736            | 1-247-711-11            | CARBON             | 680            | 5%            | 1/4W            |
| R737            | 1-247-715-11            | CARBON             | 1.5K           | 5%            | 1/4W            |
| <del>R738</del> | <del>1-217-383-00</del> | <del>FUSIBLE</del> | <del>4.7</del> | <del>5%</del> | <del>1/4W</del> |
| R739            | 1-249-437-11            | CARBON             | 47K            | 5%            | 1/6W            |
| R740            | 1-249-437-11            | CARBON             | 47K            | 5%            | 1/6W            |
| R741            | 1-247-883-00            | CARBON             | 150K           | 5%            | 1/6W            |
| R742            | 1-247-883-00            | CARBON             | 150K           | 5%            | 1/6W            |
| R743            | 1-249-417-11            | CARBON             | 1K             | 5%            | 1/6W            |
| R744            | 1-249-433-11            | CARBON             | 22K            | 5%            | 1/6W            |
| R745            | 1-249-433-11            | CARBON             | 22K            | 5%            | 1/6W            |
| R746            | 1-249-433-11            | CARBON             | 22K            | 5%            | 1/6W            |
| R747            | 1-249-433-11            | CARBON             | 22K            | 5%            | 1/6W            |
| R748            | 1-249-417-11            | CARBON             | 1K             | 5%            | 1/6W            |
| R749            | 1-249-417-11            | CARBON             | 1K             | 5%            | 1/6W            |
| R750            | 1-249-430-11            | CARBON             | 12K            | 5%            | 1/6W            |
| R751            | 1-249-430-11            | CARBON             | 12K            | 5%            | 1/6W            |
| R752            | 1-249-433-11            | CARBON             | 22K            | 5%            | 1/6W            |
| R753            | 1-249-433-11            | CARBON             | 22K            | 5%            | 1/6W            |
| R754            | 1-249-433-11            | CARBON             | 22K            | 5%            | 1/6W            |
| R755            | 1-249-433-11            | CARBON             | 22K            | 5%            | 1/6W            |
| R756            | 1-249-433-11            | CARBON             | 22K            | 5%            | 1/6W            |
| R757            | 1-249-433-11            | CARBON             | 22K            | 5%            | 1/6W            |
| R758            | 1-249-433-11            | CARBON             | 22K            | 5%            | 1/6W            |
| R759            | 1-249-441-11            | CARBON             | 100K           | 5%            | 1/6W            |
| R760            | 1-249-429-11            | CARBON             | 10K            | 5%            | 1/6W            |
| R761            | 1-249-413-11            | CARBON             | 470            | 5%            | 1/6W            |
| R762            | 1-249-413-11            | CARBON             | 470            | 5%            | 1/6W            |
| R763            | 1-249-413-11            | CARBON             | 470            | 5%            | 1/6W            |
| R764            | 1-249-413-11            | CARBON             | 470            | 5%            | 1/6W            |
| R765            | 1-249-409-11            | CARBON             | 220            | 5%            | 1/6W            |
| R766            | 1-249-413-11            | CARBON             | 470            | 5%            | 1/6W            |

The components identified by shading and mark **A** are critical for safety. Replace only with part number specified.

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

## ELECTRICAL PARTS

| Ref.No. | Part No.     | Description                                    |
|---------|--------------|------------------------------------------------|
| R767    | 1-249-410-11 | CARBON 270 5% 1/6W                             |
| R768    | 1-249-417-11 | CARBON 1K 5% 1/6W                              |
| R769    | 1-249-417-11 | CARBON 1K 5% 1/6W                              |
| R770    | 1-249-432-11 | (US,Canadian)...CARBON 18K 5% 1/6W             |
| R771    | 1-249-430-11 | (US,Canadian)...CARBON 12K 5% 1/6W             |
| R772    | 1-249-433-11 | (US,Canadian)...CARBON 22K 5% 1/6W             |
| R773    | 1-249-422-11 | (US,Canadian)...CARBON 2.7K 5% 1/6W            |
| R774    | 1-215-493-00 | (US,Canadian)...CARBON 1M 5% 1/6W              |
| R775    | 1-249-433-11 | (US,Canadian)...CARBON 22K 5% 1/6W             |
| R776    | 1-249-429-11 | (US,Canadian)...CARBON 10K 5% 1/6W             |
| R777    | 1-247-849-00 | (US,Canadian)...CARBON 5.6K 5% 1/6W            |
| R778    | 1-249-430-11 | CARBON 12K 5% 1/6W                             |
| R779    | 1-249-433-11 | (US,Canadian)...CARBON 22K 5% 1/6W             |
| R780    | 1-249-431-11 | (US,Canadian)...CARBON 15K 5% 1/6W             |
| R781    | 1-249-430-11 | CARBON 12K 5% 1/6W                             |
| R782    | 1-247-849-00 | CARBON 5.6K 5% 1/6W                            |
| R783    | 1-249-429-11 | CARBON 10K 5% 1/6W                             |
| R784    | 1-249-433-11 | CARBON 22K 5% 1/6W                             |
| R785    | 1-249-431-11 | CARBON 15K 5% 1/6W                             |
| R786    | 1-249-433-11 | CARBON 22K 5% 1/6W                             |
| R787    | 1-249-458-11 | CARBON 8.2 5% 1/4W                             |
| R788    | 1-247-747-11 | CARBON 470 5% 1/2W                             |
| R789    | 1-249-429-11 | CARBON 10K 5% 1/6W                             |
| R790    | 1-247-694-11 | CARBON 33 5% 1/4W                              |
| R799    | 1-247-747-11 | CARBON 470 5% 1/2W                             |
| R801    | 1-247-713-11 | CARBON 1K 5% 1/4W                              |
| R802    | 1-247-721-11 | CARBON 4.7K 5% 1/4W                            |
| R803    | 1-249-437-11 | CARBON 47K 5% 1/6W                             |
| R804    | 1-212-951-01 | FUSIBLE 15 5% 1/4W F                           |
| R901    | 1-216-198-00 | METAL CHIP 1K 5% 1/8W                          |
| R902    | 1-216-198-00 | METAL CHIP 1K 5% 1/8W                          |
| R903    | 1-216-238-00 | METAL CHIP 47K 5% 1/8W                         |
| R904    | 1-216-198-00 | METAL CHIP 1K 5% 1/8W                          |
| R905    | 1-216-224-00 | METAL CHIP 12K 5% 1/8W                         |
| R906    | 1-216-217-00 | METAL CHIP 6.2K 5% 1/8W                        |
| R907    | 1-216-242-00 | METAL CHIP 68K 5% 1/8W                         |
| R908    | 1-216-246-00 | METAL CHIP 100K 5% 1/8W                        |
| R909    | 1-216-246-00 | METAL CHIP 100K 5% 1/8W                        |
| R910    | 1-216-238-00 | METAL CHIP 47K 5% 1/8W                         |
| R911    | 1-216-182-00 | METAL CHIP 220 5% 1/8W                         |
| R912    | 1-216-182-00 | METAL CHIP 220 5% 1/8W                         |
| R913    | 1-216-150-00 | METAL CHIP 10 5% 1/8W                          |
| R914    | 1-216-150-00 | METAL CHIP 10 5% 1/8W                          |
| R915    | 1-216-150-00 | METAL CHIP 10 5% 1/8W                          |
| RV101   | 1-224-251-XX | RES, ADJ, METAL GLAZE 4.7K                     |
| RV102   | 1-224-251-XX | RES, ADJ, METAL GLAZE 4.7K                     |
| RV103   | 1-230-630-11 | RES, ADJ, CARBON 10K                           |
| RV201   | 1-224-251-XX | RES, ADJ, METAL GLAZE 4.7K                     |
| RV202   | 1-224-251-XX | RES, ADJ, METAL GLAZE 4.7K                     |
| RV203   | 1-230-630-11 | RES, ADJ, CARBON 10K                           |
| RV301   | 1-230-344-11 | RES, VAR, CARBON 20K/20K (REC LEVEL)           |
| RV302   | 1-237-389-11 | RES, VAR, CARBON 5K/5K (REC LEVEL CALIBRATION) |
| RV303   | 1-237-388-11 | RES, VAR, CARBON 20K/20K (PHONE LEVEL)         |

## ELECTRICAL PARTS

| Ref.No. | Part No.     | Description                               |
|---------|--------------|-------------------------------------------|
| RV304   | 1-226-560-00 | RES, VAR, CARBON 5K (BIAS CALIBRATION)    |
| RV305   | 1-230-504-11 | RES, ADJ, CARBON 220                      |
| RV701   | 1-228-990-00 | RES, ADJ, CARBON 1K                       |
| RY301   | 1-515-519-00 | RELAY                                     |
| S301    | 1-554-338-00 | SWITCH, LEVER SLIDE (MONITOR)             |
| S303    | 1-571-092-11 | SWITCH, PUSH (4 KEY)(DOLBY NR/MPX FILTER) |
| S701    | 1-554-303-21 | SWITCH, KEY BOARD (■)                     |
| S702    | 1-554-303-21 | SWITCH, KEY BOARD (◀◀)                    |
| S703    | 1-554-303-21 | SWITCH, KEY BOARD (▶▶)                    |
| S704    | 1-554-303-21 | SWITCH, KEY BOARD (REC ●)                 |
| S705    | 1-554-303-21 | SWITCH, KEY BOARD (▶)                     |
| S706    | 1-554-303-21 | SWITCH, KEY BOARD (PAUSE ■■)              |
| S707    | 1-554-303-21 | SWITCH, KEY BOARD (REC MUTE ●)            |
| S708    | 1-554-303-21 | SWITCH, KEY BOARD (RESET)                 |
| S709    | 1-554-303-21 | SWITCH, KEY BOARD (MEMORY)                |
| S710    | 1-570-781-11 | SWITCH, ROTARY (TIMER)                    |
| S801    | 1-553-318-00 | SWITCH, PUSH (AC POWER)(1 KEY)            |
| S802    | 1-570-307-11 | (E)...SWITCH, VOLTAGE CHANGE              |
| S1001   | 1-554-205-00 | SWITCH, PUSH (ERASE PREVENTION)           |
| S1002   | 1-554-205-00 | SWITCH, PUSH (CASSETTE HALF DETECT)       |
| S1003   | 1-554-205-00 | SWITCH, PUSH (HOLDER LOCK DETECT)         |
| S1004   | 1-554-205-00 | SWITCH, PUSH (METAL)                      |
| S1005   | 1-554-205-00 | SWITCH, PUSH (CrO2)                       |
| TH301   | 1-800-200-00 | THERMISTOR S-3K                           |
| TH302   | 1-202-856-00 | SOLID 22 1/4W F                           |
| X701    | 1-567-160-00 | OSCILLATOR, CERAMIC                       |
| X702    | 1-527-532-00 | (US,Canadian)...OSCILLATOR, CERAMIC       |
| X703    | 1-567-731-11 | VIBRATOR, CRYSTAL                         |

## ACCESSORY &amp; PACKING MATERIAL

| Part No.      | Description                                        |
|---------------|----------------------------------------------------|
| 1-551-734-11  | CORD, CONNECTION (RK-74A)                          |
| 3-318-668-01  | CUSHION                                            |
| 3-318-671-01  | (US,Canadian,AEP,G-AEP,UK)<br>...INDIVIDUAL CARTON |
| 3-318-671-11  | (E)...INDIVIDUAL CARTON                            |
| 3-701-630-00  | BAG, POLYETHYLENE                                  |
| *3-710-964-01 | SHEET, PROTECTION                                  |
| 3-769-165-11  | MANUAL, INSTRUCTION                                |
| 3-769-165-41  | (AEP,G-AEP)...MANUAL, INSTRUCTION                  |
| 3-793-481-13  | INSTRUCTION                                        |
| 3-703-450-01  | (US)...INSTRUCTION                                 |

The components identified by shading and mark  $\Delta$  are critical for safety. Replace only with part number specified.

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

# TROUBLESHOOTING

The following checks will help you correct the most common problems encountered with cassette decks. Should the problem persist after you have made these checks, consult your nearest Sony service facility.

Before proceeding, first check these basic points:

- The power cord is firmly connected.
- Amplifier connections are properly established.
- Heads, capstans, pinch rollers are clean.
- Amplifier controls and switches are set correctly.

|                        | Symptom                                                      | Cause                                                                                     | Remedy                                                         |
|------------------------|--------------------------------------------------------------|-------------------------------------------------------------------------------------------|----------------------------------------------------------------|
| General operation      | Function buttons do not activate.                            | Button pressed immediately after power was turned on (during 3-seconds standby interval). | Wait until blinking of <b>II</b> indicator stops.              |
|                        |                                                              | Cassette holder is not fully closed.                                                      | Close the holder completely.                                   |
|                        |                                                              | Cassette is not properly inserted.                                                        | Insert cassette correctly.                                     |
|                        | Recording or playback starts when power is turned on.        | TIMER switch is set to REC or PLAY.                                                       | Set TIMER switch to OFF when timer function is not to be used. |
| Tape transport         | ● button does not activate.                                  | Tab of cassette is removed.                                                               | Cover the slot with adhesive tape.                             |
|                        | Tape does not run.                                           | <b>II</b> button is pressed.                                                              | Press <b>II</b> once more to release pause mode.               |
|                        | Loud transport noise is heard during rewind or fast-forward. | This depends on the cassette used and is not a problem.                                   | —                                                              |
|                        |                                                              | COUNTER MEMORY button set to ON.                                                          | Press button once more to set the memory function to OFF.      |
| Recording and playback | Recording or playback not possible.                          | Cassette shell is deformed or defect.                                                     | —                                                              |
|                        |                                                              | MONITOR switch is set to SOURCE during playback.                                          | Set switch to TAPE.                                            |
|                        |                                                              | Heads are dirty.                                                                          | Clean heads.                                                   |
|                        |                                                              | Connections are not made properly.                                                        | Establish correct connections.                                 |
|                        | Sound level is low or unstable, dropouts occur.              | Amplifier switches are not set properly.                                                  | Set amplifier controls to appropriate positions.               |
|                        |                                                              | Heads, capstans, pinch rollers are dirty.                                                 | Clean these parts.                                             |
|                        |                                                              | Heads are magnetized.                                                                     | Demagnetize heads.                                             |
|                        | Incomplete erasure.                                          | Erase head is dirty.                                                                      | Clean erase head.                                              |
| Noise                  | Improper sound balance.                                      | DOLBY NR switches not set to the correct position.                                        | Select same positions for recording and playback.              |
|                        |                                                              | BIAS or REC LEVEL CALIBRATION controls not adjusted correctly.                            | Perform calibration before recording                           |
|                        | Hum noise is heard.                                          | Unit is placed too close to a power amplifier.                                            | Move the unit away from the power amplifier.                   |