


# TC-H201

## SERVICE MANUAL

West Germany Model  
E Model



TC-H201 is the cassette deck  
section in FH-E727CD, MHC-2300.

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



|                                    |             |
|------------------------------------|-------------|
| Model Name Using Similar Mechanism | TC-717/717M |
| Tape Transport Mechanism Type      | TCM-170RB16 |

### SPECIFICATIONS

|                                   |  |
|-----------------------------------|--|
| Recording system                  | 4-track 2-channel stereo   |
| Frequency response (DOLBY NR OFF) | 60 – 13,000 Hz ( $\pm 3$ dB),<br>using TYPE I cassette<br>(Sony HF-S)<br>60 – 14,000 Hz ( $\pm 3$ dB),<br>using TYPE II cassette<br>40 – 15,000 Hz ( $\pm 3$ dB)<br>using TYPE IV cassette |
| Wow and flutter                   | 0.1% WRMS $\pm 0.3\%$ (DIN)  |
| Dimensions                        | Approx. 225 x 118 x 235 mm<br>(w/h/d)<br>(9 x 4 $\frac{3}{4}$ x 9 $\frac{3}{8}$ inches)  |
| Weight                            | Approx. 2.5 kg (5 lb 8 oz)   |

Design and specifications subject to change  
without notice.

### SAFETY-RELATED COMPONENT WARNING!!

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

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

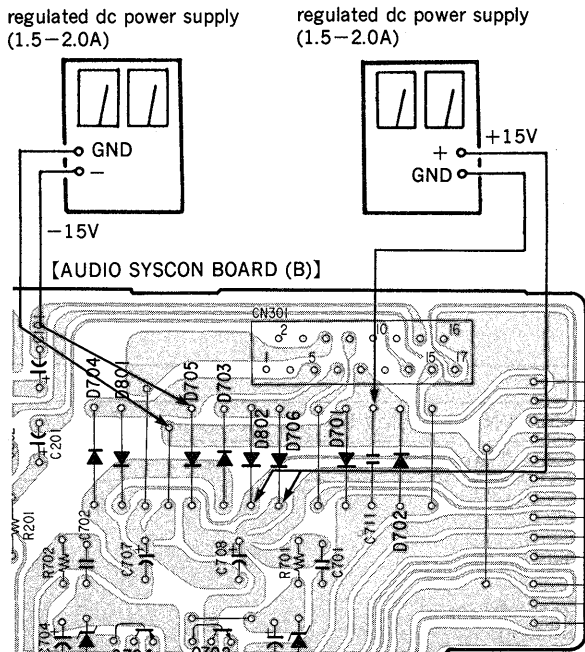
# SERVICING NOTES

# SECTION 1 GENERAL

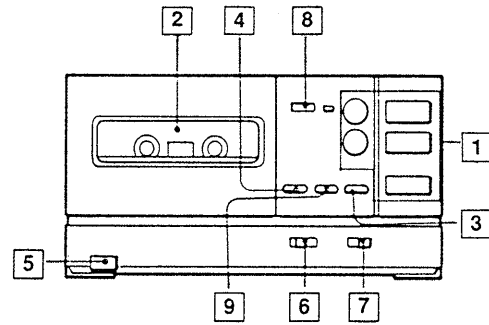
## REPAIRING PRECAUTION

### [To apply B+ voltage]

The power of this unit is fed from amplifier. Because of this, connect the regulated power supply as illustrated below when this unit alone operates.



## PARTS IDENTIFICATION



- 1 Tape operation buttons
  - ◀ / ▶: Fast winding
  - : Stop
  - ◁: Reverse play
  - ▷: Forward play
- 2 Cassette holders
- 3 REC ● (recording) button
- 4 PAUSE button
- 5 EJECT buttons
- 6 DIRECTION MODE selector
- 7 DOLBY NR selector
- 8 TAPE COUNTER and RESET button
- 9 ◯ Record muting button

## SECTION 2 MECHANICAL ADJUSTMENTS

### PRECAUTION

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

|                      |              |
|----------------------|--------------|
| record/playback head | pinch roller |
| erase head           | rubber belts |
| capstan              | idler        |
2. Demagnetize the record/playback 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.
6. Switch position  
 DOLBY NR : OFF  
 DIRECTION MODE : ⇌

### Torque Measurement

| Torque              | Torque Meter | Meter Reading                           |
|---------------------|--------------|---|
| FWD                 | CQ-102C      | 27 to 75g•cm<br>(0.378 to 1.05 oz•inch) |
| FWD<br>Back tension | CQ-102C      | 1 to 10g•cm<br>(0.014 to 0.14 oz•inch)  |
| REV                 | CQ-102RC     | 27 to 75g•cm<br>(0.378 to 1.05 oz•inch) |
| REV Back Tension    | CQ-102RC     | 1 to 10g•cm<br>(0.014 to 0.14 oz•inch)  |
| FF, REW             | CQ-102B      | 95 to 165g•cm<br>(1.33 to 2.31 oz•inch) |

## SECTION 3 ELECTRICAL ADJUSTMENTS

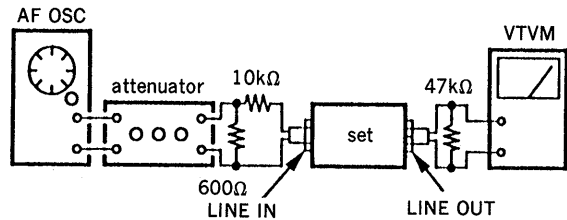
**Note:** The adjustment should be performed in the order given in the service manual.

The adjustment should be performed for both L-CH and R-CH.

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

|                       |       |
|-----------------------|-------|
| DOLBY NR switch       | : OFF |
| DIRECTION MODE switch | : ⇌   |
- Standard Record :  
 Deliver the standard input signal level to the input jack and set the REC LEVEL control to obtain the standard output signal level.

—Record Mode—



### Standard Input Level

|                  | LINE IN       |
|------------------|---------------|
| source impedance | 10kΩ          |
| input level      | 0.25V (−10dB) |

### Standard Output Level

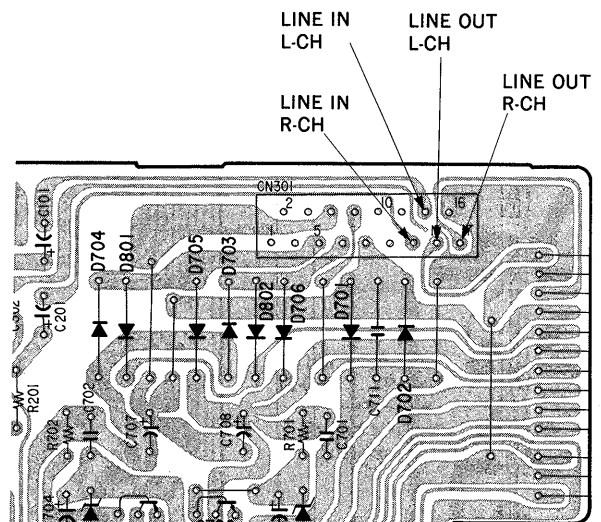
|                | LINE OUT     |
|----------------|--------------|
| load impedance | 47kΩ         |
| output level   | 0.44V (−5dB) |

### Test Tape

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

### Location of LIEN IN/OUT

AUDIO SYSCON Board (B) CN301

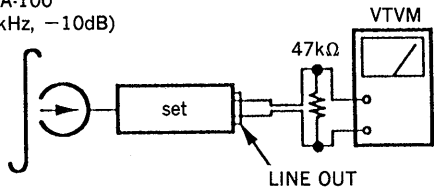


### Record/Playback Head Azimuth Adjustment

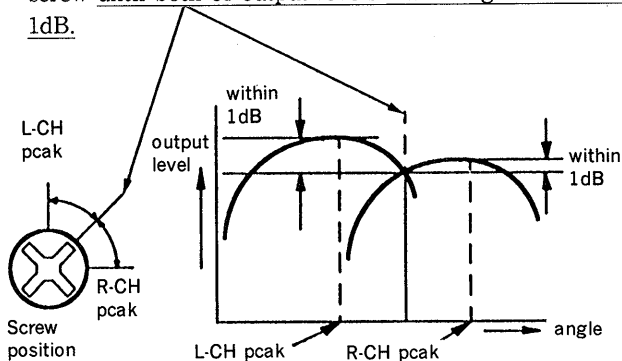
#### Procedure :

1. Mode : FWD playback

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

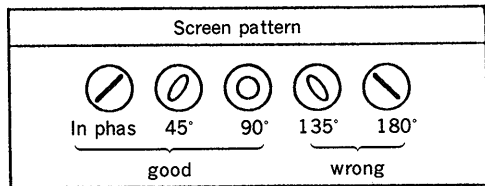
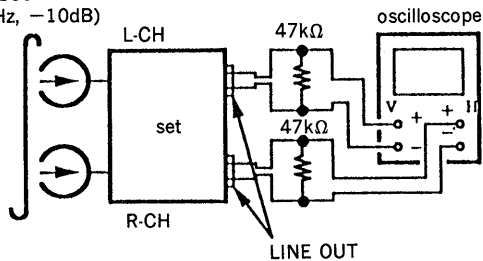


2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 1dB.



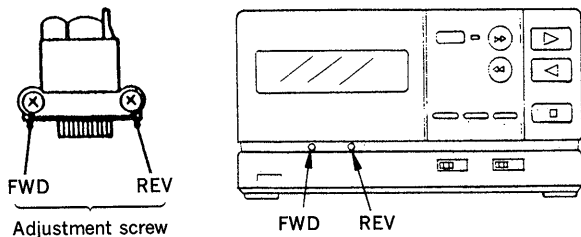
3. Phase Check  
Mode : playback

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



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

**Adjustment Location :** Record/Playback head  
(Adjustment without disassembly.)

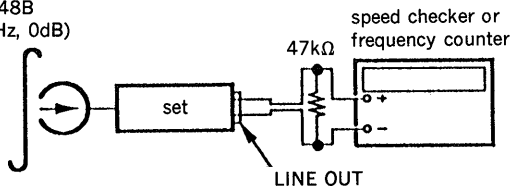


### Tape Speed Adjustment

#### Procedure :

Mode : FWD playback

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



#### Specifications :

| SPEED CHECKER | FREQUENCY COUNTER |
|---------------|-------------------|
| 1 to 0.3%     | 2,970 to 2,990Hz  |

Adjustment with the switch fixed variable resistor built in the motor so that the frequency difference between the beginning and the end of the tape should be within 1.5% (45Hz). Frequency difference between the beginning and the end of the tape should be within.

#### Adjustment Location :

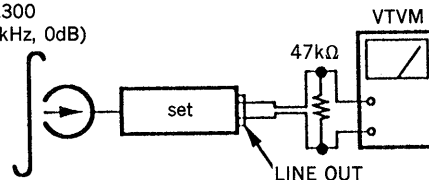
: motor (M901) rear side

### Playback Level Adjustment

#### Procedure :

Mode : playback

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



Adjust RV41 (L-CH), RV61 (R-CH), so that the reading on VTVM meets the specification below.

#### Specification :

LINE OUT level :  $-10 \pm 0.5\text{dB}$  (0.23 to 0.26V)

Level difference between channels : less than 0.5dB

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

**Adjustment Location :** MD-B board

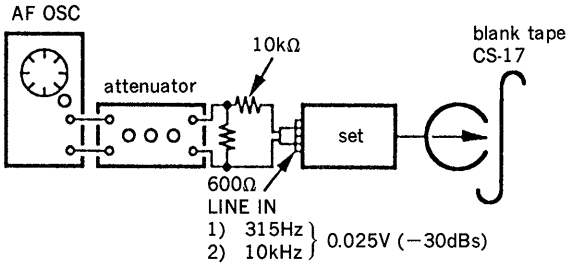
**Record Bias Adjustment**

**Setting :**

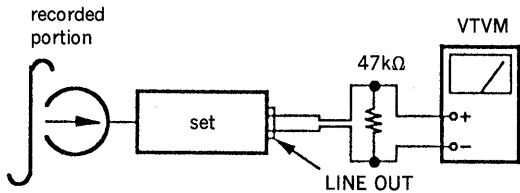
REC LEVEL control : standard record (See page 3.)

**Procedure :**

1. Mode : record



2. Mode : playback

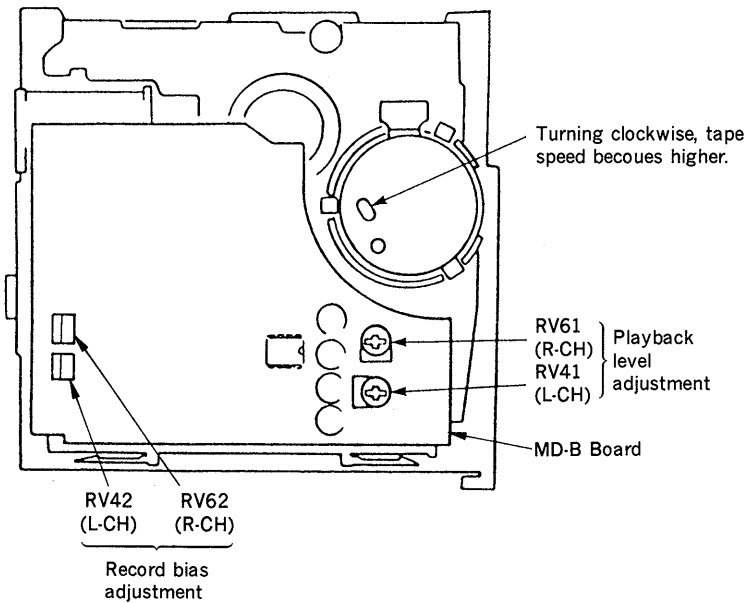


Confirm that the 10kHz playback output is  $0 \pm 0.5\text{dB}$  relative to the 315Hz output. If necessary, adjust RV42 (L-CH), RV62 (R-CH) and repeat the steps given above.

**Adjustment Location :** MD-B board

**ADJUSTING PARTS LOCATION DIAGRAM**

[MD-B Board] —Component Side—



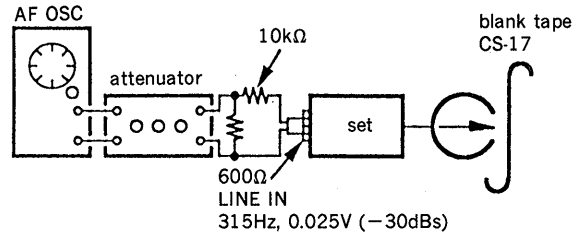
**Record Level Adjustment**

**Setting :**

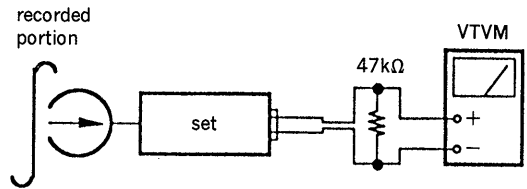
REC LEVEL control : standard record (See page 3.)

**Procedure :**

1. Mode : record



2. Mode : palyback

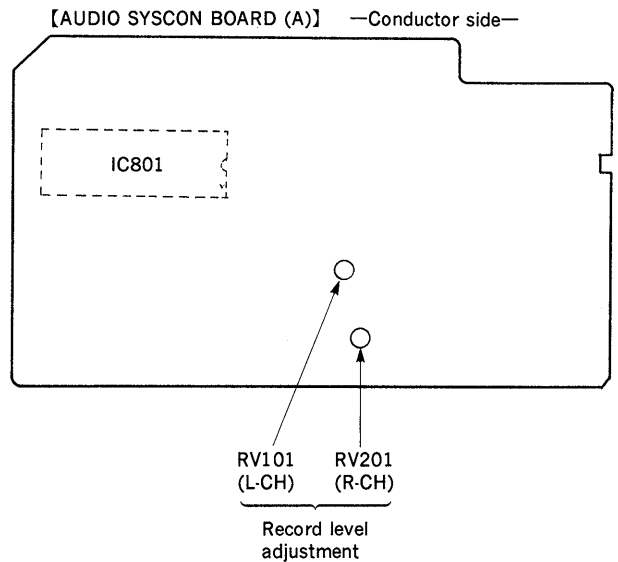


3. Playback the signal recorded in step 1.

Confirm that the signal level is within the specification below. If necessary, adjust RV101 (L-CH), RV201 (R-CH) and repeat the step 1 to 3.

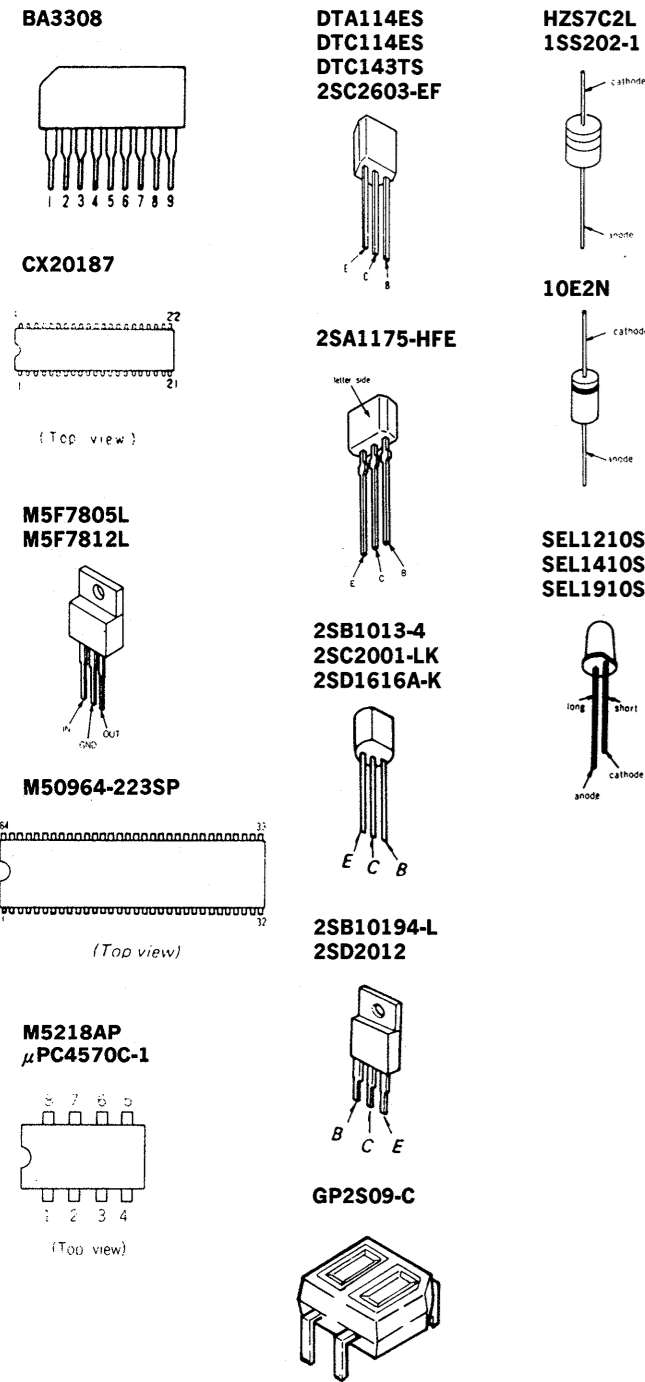
**Specification :** LINE OUT level :  $-30\text{dB} \pm 0.5\text{dBs}$  (0.023 to 0.026V)

**Adjustment Location :**



SECTION 3  
DIAGRAMS

3-1. SEMICONDUCTOR LEAD LAYOUTS

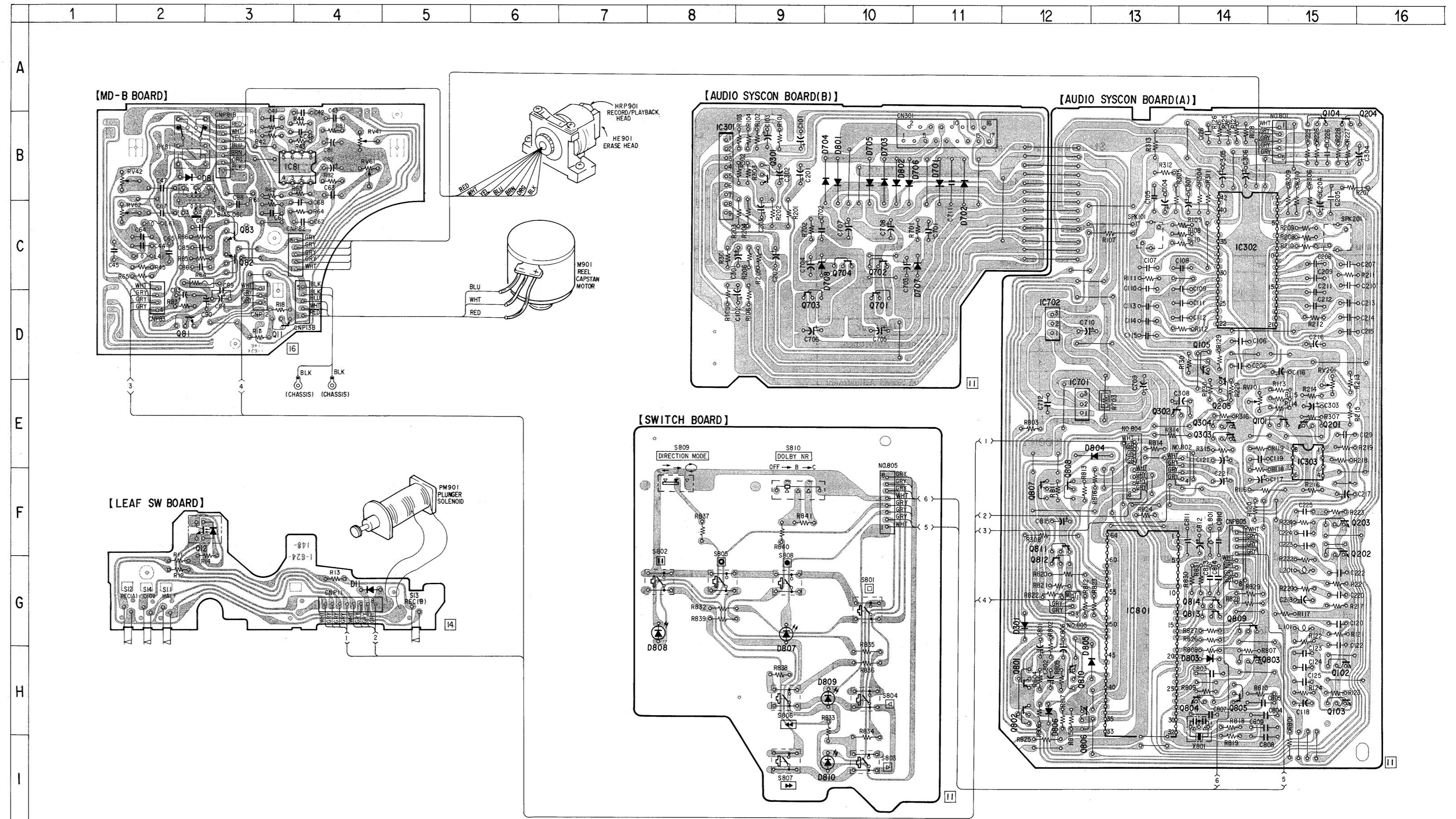


● Semiconductor Location

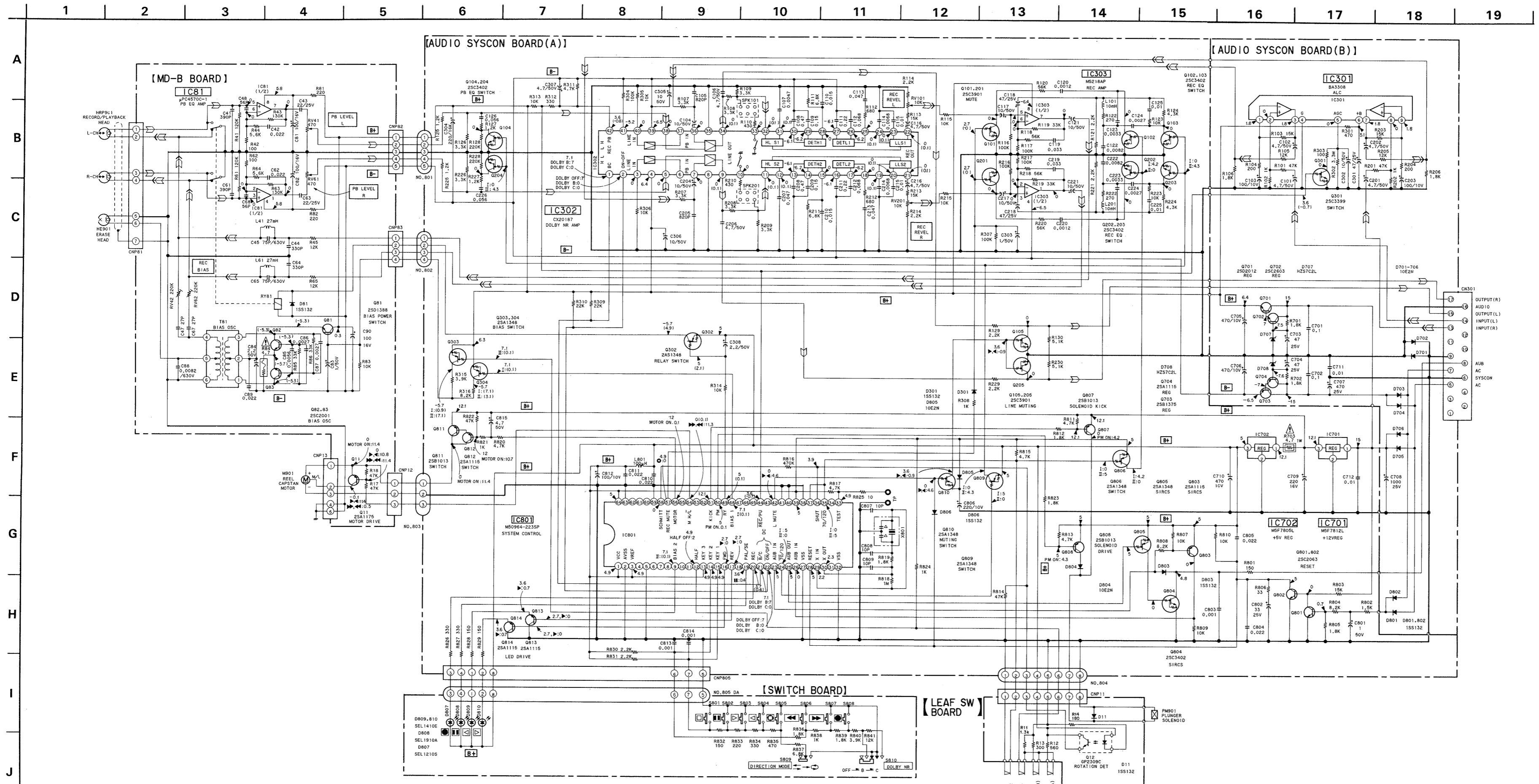
| Ref. No. | Location |
|----------|----------|
| D11      | G-4      |
| D81      | B-2      |
| D301     | G-12     |
| D701     | B-11     |
| D702     | B-11     |
| D703     | B-10     |
| D704     | B-10     |
| D705     | B-10     |
| D706     | B-11     |
| D707     | C-11     |
| D708     | C-10     |
| D801     | B-10     |
| D802     | B-10     |
| D803     | H-14     |
| D804     | E-13     |
| D805     | H-13     |
| D806     | H-12     |
| D807     | G-9      |
| D808     | G-8      |
| D809     | H-10     |
| D810     | I-10     |
| IC81     | B-4      |
| IC301    | B-8      |
| IC302    | C-14     |
| IC303    | I-15     |
| IC701    | E-12     |
| IC702    | D-12     |
| IC801    | G-13     |
| Q11      | D-3      |
| Q12      | F-2      |
| Q81      | D-2      |
| Q82      | C-3      |
| Q83      | C-3      |
| Q101     | E-15     |
| Q102     | H-15     |
| Q103     | H-15     |
| Q104     | B-15     |
| Q105     | D-15     |
| Q201     | E-15     |
| Q202     | F-15     |
| Q203     | F-15     |
| Q204     | B-16     |
| Q205     | E-15     |
| Q301     | B-9      |
| Q302     | E-13     |
| Q303     | E-14     |
| Q304     | E-14     |
| Q701     | D-10     |
| Q702     | C-10     |
| Q703     | D-9      |
| Q704     | C-10     |
| Q801     | H-12     |
| Q802     | H-12     |
| Q803     | H-14     |
| Q804     | H-14     |
| Q805     | H-14     |
| Q806     | H-12     |
| Q807     | F-12     |
| Q808     | F-12     |
| Q809     | G-14     |
| Q810     | H-12     |
| Q811     | F-12     |
| Q812     | G-12     |
| Q813     | G-14     |
| Q814     | G-14     |

Note:  
 ● ○ : parts extracted from the component side.  
 ○ ○ : parts extracted from the conductor side.

3-2. PRINTED WIRING BOARDS



3-3. SCHEMATIC DIAGRAM



**Note:**

- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF} = \mu\text{F} \times 10^{-6}$  or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $1/4\text{W}$  or less unless otherwise specified.
- : fusible resistor.

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

- : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
- no mark : STOP
- ( ) : REC
- I : TYPE
- II : TYPE
- : FWD    : REV    : PAUSE
- : FF    : REW    : REC MUTE
- Voltages are taken with a VOM (Input Impedance  $10\text{M}\Omega$ ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
- : PB
- : REC

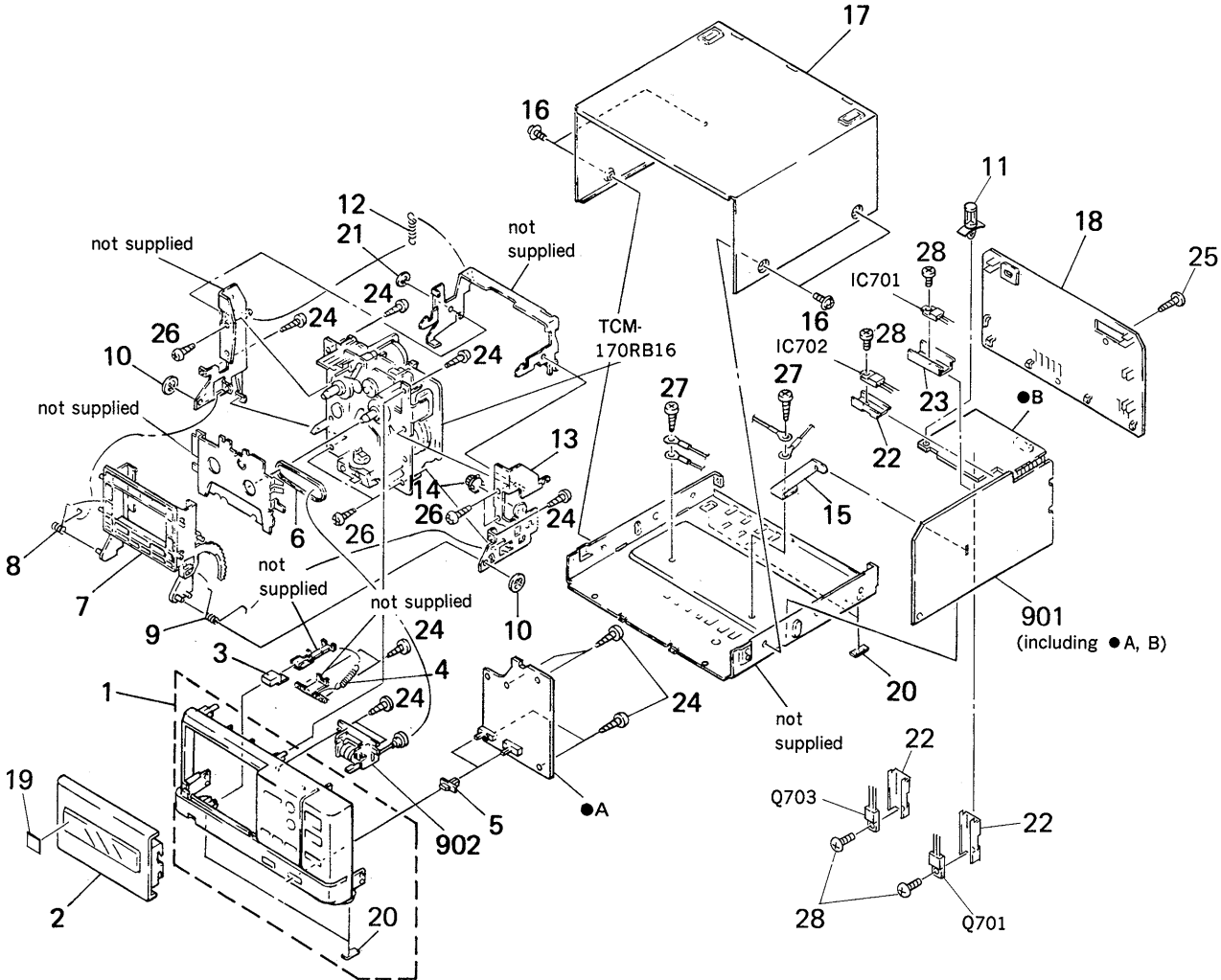
## SECTION 4 EXPLODED VIEWS

**NOTE:**

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

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

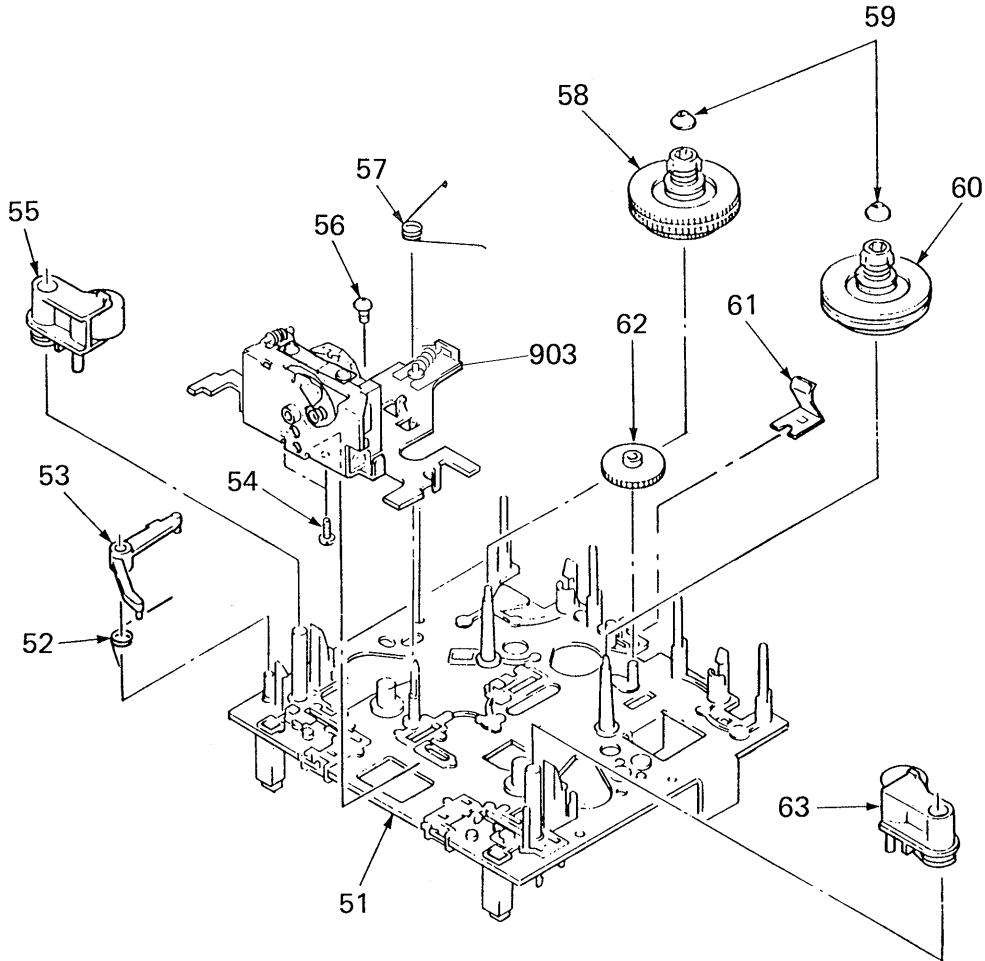
**4-1. CHASSIS SECTION**



| Ref.No | Part No.      | Description            | Remarks | Ref.No | Part No.      | Description                 | Remarks |
|--------|---------------|------------------------|---------|--------|---------------|-----------------------------|---------|
| 1      | X-3352-804-1  | PANEL ASSY, FRONT      |         | 18     | *3-354-982-12 | PANEL, BACK                 |         |
| 2      | X-3352-805-1  | LID ASSY, CASSETTE     | 20      | 19     | *3-703-710-41 | STICKER, SONY SYMBOL (12)   |         |
| 3      | 3-352-810-01  | BUTTON (EJECT)         |         | 20     | 4-930-336-01  | FOOT (FELT)                 |         |
| 4      | 3-446-154-XX  | SPRING, TENSION        |         | 21     | 7-624-105-04  | STOP RING 2.3, TYPE -E      |         |
| 5      | 3-352-811-01  | KNOB                   |         | 22     | *3-309-144-21 | HEAT SINK                   |         |
| 6      | 3-531-940-XX  | BELT, COUNTER          |         | 23     | *4-880-403-11 | HEAT SINK                   |         |
| 7      | X-3343-628-1  | HOLDER ASSY, CASSETTE  |         | 24     | 7-685-134-19  | SCREW +BTP 2.6X8 TYPE2 N-S  |         |
| 8      | 3-343-687-01  | SPRING (LOADING LEFT)  |         | 25     | 7-685-647-79  | SCREW +BVTP 3X10 TYPE2 N-S  |         |
| 9      | 3-343-688-01  | SPRING (LOADING RIGHT) |         | 26     | 7-621-770-87  | SCREW +BVTT 2.6X5 (S)       |         |
| 10     | 7-624-190-31  | STOP RING 4, TYPE-CS   |         | 27     | 7-682-547-04  | SCREW +BVTT 3X6 (S)         |         |
| 11     | *3-350-847-21 | HOLDER, PCB            |         | 28     | 7-682-548-04  | SCREW BVTT 3X8 (S)          |         |
| 12     | 3-343-689-01  | SPRING, TENSION        |         | 901    | A-2006-282-A  | MOUNTED PCB, AUDIO SYSCON   |         |
| 13     | *X-3343-627-1 | BRACKET (RB) ASSY      |         | 902    | 1-548-596-41  | COUNTER, TAPE (MIDDLE TYPE) |         |
| 14     | X-3332-464-1  | GEAR (DAMPER) ASSY     |         | IC701  | 8-759-604-33  | IC M5F7812L                 |         |
| 15     | *3-327-845-01 | BRACKET                |         | IC702  | 8-759-604-29  | IC M5F7805L                 |         |
| 16     | 3-704-366-01  | SCREW (CASE) (M3X8)    |         | Q701   | 8-729-209-15  | TRANSISTOR 2SD2012          |         |
| 17     | 4-932-841-21  | CASE                   |         | Q703   | 8-729-111-67  | TRANSISTOR 2SB1094-L        |         |

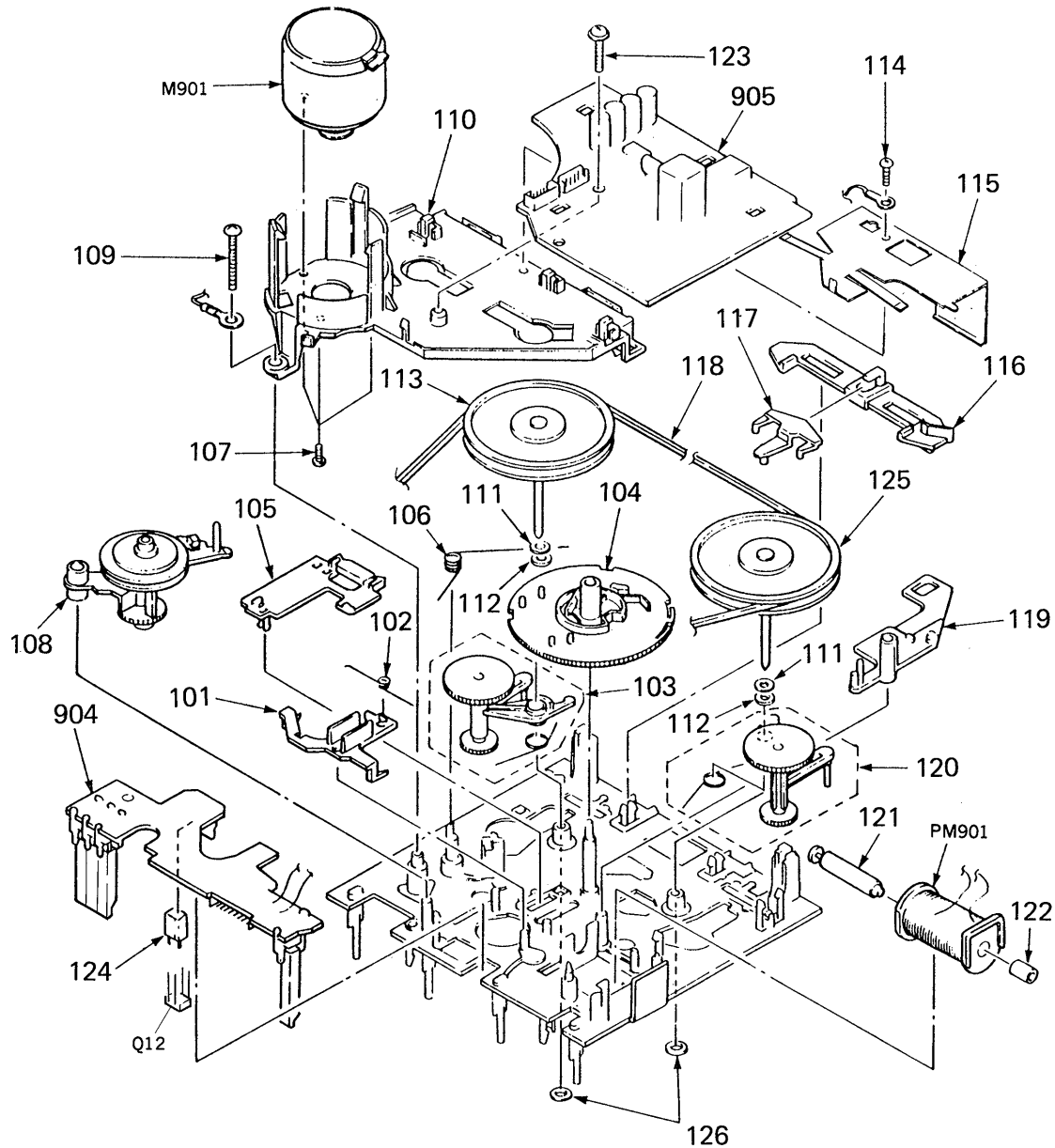


4-2. TAPE TRANSPORT MECHANISM SECTION-1  
(TCM-170RB16)



| Ref.No | Part No.     | Description                   | Remarks | Ref.No | Part No.     | Description                        | Remarks |
|--------|--------------|-------------------------------|---------|--------|--------------|------------------------------------|---------|
| 51     | X-3343-439-1 | CHASSIS ASSY, MECHANICAL      |         | 58     | X-3343-415-1 | TABEL (REV) ASSY, REEL             |         |
| 52     | 3-343-477-01 | SPRING, TORSION (EJECT SAFTY) |         | 59     | 3-343-439-01 | CAP (REEL TABLE)                   |         |
| 53     | 3-343-476-01 | LEVER (EJECT SAFETY LEVER)    |         | 60     | X-3343-401-1 | TABEL ASSY, REEL                   |         |
| 54     | 7-685-102-19 | SCREW +P 2X4 NON-SLIT TYPE 2  |         | 61     | 3-343-420-01 | SPRING, LEAF                       |         |
| 55     | X-3343-456-1 | LEVER (PINCH R) ASSY          |         | 62     | 3-343-411-01 | GEAR (FF GEAR)                     |         |
| 56     | 7-621-773-86 | SCREW +BVTT 2.6X4 (S)         |         | 63     | X-3343-455-1 | LEVER (PINCH F) ASSY               |         |
| 57     | 3-343-401-01 | SPRING, TORSION               |         | 903    | A-2108-130-C | CHASSIS ASSY, HEAD (HE901, HRP901) |         |

4-3. TAPE TRANSPORT MECHANISM SECTION-2  
(TCM-170RB16)



| Ref.No | Part No.      | Description                 | Remarks | Ref.No | Part No.      | Description                    | Remarks |
|--------|---------------|-----------------------------|---------|--------|---------------|--------------------------------|---------|
| 101    | 3-343-453-01  | SLIDER (BRAKE PLATE)        |         | 117    | 3-343-462-01  | LEVER                          |         |
| 102    | 3-343-429-01  | SPRING, TORSION             |         | 118    | 3-313-816-00  | BELT (CAPSTAN BELT SQUARE)     |         |
| 103    | X-3343-454-1  | LEVER (TU-R) ASSY           |         | 119    | 3-343-493-01  | LEVER (PM LEVER)               |         |
| 104    | 3-343-470-01  | GEAR (CAM GEAR)             |         | 120    | X-3343-453-1  | LEVER (TU-F) ASSY              |         |
| 105    | 3-343-461-01  | SLIDER                      |         | 121    | 3-343-425-01  | ARBOR(MOVABLE IRON ARBOR),IRON |         |
| 106    | 3-343-430-01  | SPRING, TORSION             |         | 122    | 3-343-424-01  | ARBOR (FIXED IRON ARBOR), IRON |         |
| 107    | 7-627-556-28  | SCREW +P 2.6X3.5            |         | 123    | 3-343-404-01  | SCREW (PTPWH 2X12)             |         |
| 108    | X-3343-414-1  | LAVER (FR ARM) ASSY         |         | 124    | 3-343-419-01  | HOLDER (S SENSER A)            |         |
| 109    | 3-355-801-01  | SCREW (BTP 2X18)            |         | 125    | X-3343-416-7  | FLYWHEEL (REV) COMPLETE ASSY   |         |
| 110    | *X-3343-407-1 | BASE (THRUST RETAINER) ASSY |         | 126    | 3-343-473-01  | WASHER, NYLON                  |         |
| 111    | 4-605-835-11  | WASHER (2.6), POLYSLIDER    |         | 904    | *1-624-148-11 | PC BOARD, LEAF SW              |         |
| 112    | 3-307-482-00  | WASHER, LUMILER             |         | 905    | *1-625-912-14 | PC BOARD, MD-B                 |         |
| 113    | X-3343-411-6  | FLYWHEEL COMPLETE ASSY      |         | M901   | X-3343-447-1  | MOTOR ASSY                     |         |
| 114    | 7-685-104-19  | SCREW +P 2X6 TYPE2 NON-SLIT |         | PM901  | 1-454-456-11  | SOLENOID, PLUNGER              |         |
| 115    | 3-343-480-01  | PLATE, SHIELD               |         | Q12    | 8-719-939-23  | PHOTO TRANSISTOR GP2S09-C      |         |
| 116    | 3-343-457-01  | SLIDER (REVERSE SLIDER)     |         |        |               |                                |         |

## SECTION 5 ELECTRICAL PARTS LIST

**NOTE:**

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

**CAPACITORS:**

MF:  $\mu$ F, PF:  $\mu$ μF.

**RESISTORS**

- All resistors are in ohms.
- F: nonflammable

**COILS**

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

**SEMICONDUCTORS**

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

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

| Ref.No           | Part No.      | Description                        |          |     |      |  |
|------------------|---------------|------------------------------------|----------|-----|------|--|
| 901              | A-2006-282-A  | MOUNTED PCB, AUDIO SYSCON          |          |     |      |  |
| 902              | 1-548-596-41  | COUNTER, TAPE (MIDDLE TYPE)        |          |     |      |  |
| 903              | A-2108-130-C  | CHASSIS ASSY, HEAD (HE901, HRP901) |          |     |      |  |
| 904              | *1-624-148-11 | PC BOARD, LEAF SW                  |          |     |      |  |
| 905              | *1-625-912-14 | PC BOARD, MD-B                     |          |     |      |  |
| <b>CAPACITOR</b> |               |                                    |          |     |      |  |
| C41              | 1-110-342-11  | MYLAR                              | 390PF    | 5%  | 50V  |  |
| C42              | 1-136-157-00  | FILM                               | 0.022MF  | 5%  | 50V  |  |
| C43              | 1-124-282-00  | ELECT                              | 22MF     | 20% | 25V  |  |
| C44              | 1-162-288-31  | CERAMIC                            | 330PF    | 10% | 50V  |  |
| C45              | 1-136-273-91  | FILM                               | 75PF     | 5%  | 630V |  |
| C47              | 1-162-209-31  | CERAMIC                            | 27PF     | 5%  | 50V  |  |
| C48              | 1-162-217-31  | CERAMIC                            | 56PF     | 5%  | 50V  |  |
| C61              | 1-110-342-11  | MYLAR                              | 390PF    | 5%  | 50V  |  |
| C62              | 1-136-157-00  | FILM                               | 0.022MF  | 5%  | 50V  |  |
| C63              | 1-124-282-00  | ELECT                              | 22MF     | 20% | 25V  |  |
| C64              | 1-162-288-31  | CERAMIC                            | 330PF    | 10% | 50V  |  |
| C65              | 1-136-273-91  | FILM                               | 75PF     | 5%  | 630V |  |
| C67              | 1-162-209-31  | CERAMIC                            | 27PF     | 5%  | 50V  |  |
| C68              | 1-162-217-31  | CERAMIC                            | 56PF     | 5%  | 50V  |  |
| C81              | 1-126-101-11  | ELECT                              | 100MF    | 20% | 16V  |  |
| C82              | 1-126-101-11  | ELECT                              | 100MF    | 20% | 16V  |  |
| C83              | 1-124-791-11  | ELECT                              | 1MF      | 20% | 50V  |  |
| C84              | 1-124-925-11  | ELECT                              | 2.2MF    | 20% | 50V  |  |
| C85              | 1-130-480-00  | MYLAR                              | 0.0056MF | 5%  | 50V  |  |
| C86              | 1-130-476-00  | MYLAR                              | 0.0027MF | 5%  | 50V  |  |
| C87              | 1-130-476-00  | MYLAR                              | 0.0027MF | 5%  | 50V  |  |
| C88              | 1-136-562-11  | FILM                               | 0.0082MF | 5%  | 630V |  |
| C89              | 1-161-494-00  | CERAMIC                            | 0.022MF  | 5%  | 25V  |  |
| C90              | 1-126-101-11  | ELECT                              | 100MF    | 20% | 16V  |  |
| C101             | 1-124-927-11  | ELECT                              | 4.7MF    | 20% | 50V  |  |
| C102             | 1-124-927-11  | ELECT                              | 4.7MF    | 20% | 50V  |  |
| C103             | 1-124-443-00  | ELECT                              | 100MF    | 20% | 10V  |  |
| C104             | 1-123-875-11  | ELECT                              | 10MF     | 20% | 50V  |  |
| C105             | 1-162-293-31  | CERAMIC                            | 820PF    | 10% | 50V  |  |
| C106             | 1-124-768-11  | ELECT                              | 4.7MF    | 20% | 50V  |  |
| C107             | 1-130-479-00  | MYLAR                              | 0.0047MF | 5%  | 50V  |  |
| C108             | 1-136-173-00  | FILM                               | 0.47MF   | 5%  | 50V  |  |
| C109             | 1-136-167-00  | FILM                               | 0.15MF   | 5%  | 50V  |  |
| C110             | 1-136-155-00  | FILM                               | 0.015MF  | 5%  | 50V  |  |
| C111             | 1-136-169-00  | FILM                               | 0.22MF   | 5%  | 50V  |  |
| C112             | 1-136-163-00  | FILM                               | 0.068MF  | 5%  | 50V  |  |
| C113             | 1-136-161-00  | FILM                               | 0.047MF  | 5%  | 50V  |  |
| C114             | 1-130-481-00  | MYLAR                              | 0.0068MF | 5%  | 50V  |  |
| C115             | 1-136-153-00  | FILM                               | 0.01MF   | 5%  | 50V  |  |
| C116             | 1-124-927-11  | ELECT                              | 4.7MF    | 20% | 50V  |  |
| C117             | 1-123-875-11  | ELECT                              | 10MF     | 20% | 50V  |  |
| C118             | 1-124-477-11  | ELECT                              | 47MF     | 20% | 25V  |  |
| C119             | 1-136-159-00  | FILM                               | 0.033MF  | 5%  | 50V  |  |
| C120             | 1-130-472-00  | MYLAR                              | 0.0012MF | 5%  | 50V  |  |
| C121             | 1-123-875-11  | ELECT                              | 10MF     | 20% | 50V  |  |
| C122             | 1-130-482-00  | MYLAR                              | 0.0082MF | 5%  | 50V  |  |
| C123             | 1-130-477-00  | MYLAR                              | 0.0033MF | 5%  | 50V  |  |
| C124             | 1-130-476-00  | MYLAR                              | 0.0027MF | 5%  | 50V  |  |

| Ref.No | Part No.     | Description |          |     |     |  |
|--------|--------------|-------------|----------|-----|-----|--|
| C125   | 1-136-153-00 | FILM        | 0.01MF   | 5%  | 50V |  |
| C126   | 1-136-162-00 | FILM        | 0.056MF  | 5%  | 50V |  |
| C201   | 1-124-927-11 | ELECT       | 4.7MF    | 20% | 50V |  |
| C202   | 1-124-927-11 | ELECT       | 4.7MF    | 20% | 50V |  |
| C203   | 1-124-443-00 | ELECT       | 100MF    | 20% | 10V |  |
| C204   | 1-123-875-11 | ELECT       | 10MF     | 20% | 50V |  |
| C205   | 1-162-293-31 | CERAMIC     | 820PF    | 10% | 50V |  |
| C206   | 1-124-768-11 | ELECT       | 4.7MF    | 20% | 50V |  |
| C207   | 1-130-479-00 | MYLAR       | 0.0047MF | 5%  | 50V |  |
| C208   | 1-136-173-00 | FILM        | 0.47MF   | 5%  | 50V |  |
| C209   | 1-136-167-00 | FILM        | 0.15MF   | 5%  | 50V |  |
| C210   | 1-136-155-00 | FILM        | 0.015MF  | 5%  | 50V |  |
| C211   | 1-136-169-00 | FILM        | 0.22MF   | 5%  | 50V |  |
| C212   | 1-136-163-00 | FILM        | 0.068MF  | 5%  | 50V |  |
| C213   | 1-136-161-00 | FILM        | 0.047MF  | 5%  | 50V |  |
| C214   | 1-130-481-00 | MYLAR       | 0.0068MF | 5%  | 50V |  |
| C215   | 1-136-153-00 | FILM        | 0.01MF   | 5%  | 50V |  |
| C216   | 1-124-927-11 | ELECT       | 4.7MF    | 20% | 50V |  |
| C217   | 1-123-875-11 | ELECT       | 10MF     | 20% | 50V |  |
| C218   | 1-124-477-11 | ELECT       | 47MF     | 20% | 25V |  |
| C219   | 1-136-159-00 | FILM        | 0.033MF  | 5%  | 50V |  |
| C220   | 1-130-472-00 | MYLAR       | 0.0012MF | 5%  | 50V |  |
| C221   | 1-123-875-11 | ELECT       | 10MF     | 20% | 50V |  |
| C222   | 1-130-482-00 | MYLAR       | 0.0082MF | 5%  | 50V |  |
| C223   | 1-130-477-00 | MYLAR       | 0.0033MF | 5%  | 50V |  |
| C224   | 1-130-476-00 | MYLAR       | 0.0027MF | 5%  | 50V |  |
| C225   | 1-136-153-00 | FILM        | 0.01MF   | 5%  | 50V |  |
| C226   | 1-136-162-00 | FILM        | 0.056MF  | 5%  | 50V |  |
| C301   | 1-124-477-11 | ELECT       | 47MF     | 20% | 25V |  |
| C302   | 1-123-875-11 | ELECT       | 10MF     | 20% | 50V |  |
| C303   | 1-124-791-11 | ELECT       | 1MF      | 20% | 50V |  |
| C304   | 1-124-120-11 | ELECT       | 220MF    | 20% | 16V |  |
| C305   | 1-123-875-11 | ELECT       | 10MF     | 20% | 50V |  |
| C306   | 1-123-875-11 | ELECT       | 10MF     | 20% | 50V |  |
| C307   | 1-124-927-11 | ELECT       | 4.7MF    | 20% | 50V |  |
| C308   | 1-124-925-11 | ELECT       | 2.2MF    | 20% | 50V |  |
| C701   | 1-136-165-00 | FILM        | 0.1MF    | 5%  | 50V |  |
| C702   | 1-136-165-00 | FILM        | 0.1MF    | 5%  | 50V |  |
| C703   | 1-124-477-11 | ELECT       | 47MF     | 20% | 25V |  |
| C704   | 1-124-477-11 | ELECT       | 47MF     | 20% | 25V |  |
| C705   | 1-124-472-11 | ELECT       | 470MF    | 20% | 10V |  |
| C706   | 1-124-472-11 | ELECT       | 470MF    | 20% | 10V |  |
| C707   | 1-124-480-11 | ELECT       | 470MF    | 20% | 25V |  |
| C708   | 1-124-557-11 | ELECT       | 1000MF   | 20% | 25V |  |
| C709   | 1-124-120-11 | ELECT       | 220MF    | 20% | 16V |  |
| C710   | 1-124-472-11 | ELECT       | 470MF    | 20% | 10V |  |
| C711   | 1-161-379-00 | CERAMIC     | 0.01MF   | 30% | 16V |  |
| C712   | 1-136-153-00 | FILM        | 0.01MF   | 5%  | 50V |  |
| C801   | 1-124-791-11 | ELECT       | 1MF      | 20% | 50V |  |
| C802   | 1-124-482-11 | ELECT       | 33MF     | 20% | 25V |  |
| C803   | 1-162-294-31 | CERAMIC     | 0.001MF  | 10% | 50V |  |
| C804   | 1-161-494-00 | CERAMIC     | 0.022MF  | 5%  | 25V |  |
| C805   | 1-161-494-00 | CERAMIC     | 0.022MF  | 5%  | 25V |  |
| C806   | 1-126-176-11 | ELECT       | 220MF    | 20% | 10V |  |
| C807   | 1-162-199-31 | CERAMIC     | 10PF     | 5%  | 50V |  |

| Ref.No | Part No.      | Description                    |         |     |     |
|--------|---------------|--------------------------------|---------|-----|-----|
| C808   | 1-162-199-31  | CERAMIC                        | 10PF    | 5%  | 50V |
| C809   | 1-162-199-31  | CERAMIC                        | 10PF    | 5%  | 50V |
| C810   | 1-161-494-00  | CERAMIC                        | 0.022MF |     | 25V |
| C811   | 1-161-494-00  | CERAMIC                        | 0.022MF |     | 25V |
| C812   | 1-124-443-00  | ELECT                          | 100MF   | 20% | 10V |
| C813   | 1-162-294-31  | CERAMIC                        | 0.001MF | 10% | 50V |
| C814   | 1-162-294-31  | CERAMIC                        | 0.001MF | 10% | 50V |
| C815   | 1-124-927-11  | ELECT                          | 4.7MF   | 20% | 50V |
| CN301  | *1-569-624-11 | SOCKET, CONNECTOR 17P          |         |     |     |
| CNP11  | 1-564-501-11  | PIN, CONNECTOR 8P              |         |     |     |
| CNP12  | *1-564-337-00 | PIN, CONNECTOR 3P              |         |     |     |
| CNP13  | *1-564-707-11 | PIN, CONNECTOR (SMALL TYPE) 5P |         |     |     |
| CNP81  | *1-564-709-11 | PIN, CONNECTOR (SMALL TYPE) 7P |         |     |     |
| CNP82  | *1-564-339-00 | PIN, CONNECTOR 5P              |         |     |     |
| CNP83  | *1-564-338-00 | PIN, CONNECTOR 4P              |         |     |     |
| CNP805 | *1-564-342-11 | PIN, CONNECTOR 8P              |         |     |     |
| D11    | 8-719-107-94  | DIODE 1SS202-1                 |         |     |     |
| D81    | 8-719-107-94  | DIODE 1SS202-1                 |         |     |     |
| D301   | 8-719-107-94  | DIODE 1SS202-1                 |         |     |     |
| D701   | 8-719-200-77  | DIODE 10E2N                    |         |     |     |
| D702   | 8-719-200-77  | DIODE 10E2N                    |         |     |     |
| D703   | 8-719-200-77  | DIODE 10E2N                    |         |     |     |
| D704   | 8-719-200-77  | DIODE 10E2N                    |         |     |     |
| D705   | 8-719-200-77  | DIODE 10E2N                    |         |     |     |
| D706   | 8-719-200-77  | DIODE 10E2N                    |         |     |     |
| D707   | 8-719-933-50  | DIODE HZS7C2L                  |         |     |     |
| D708   | 8-719-933-50  | DIODE HZS7C2L                  |         |     |     |
| D801   | 8-719-107-94  | DIODE 1SS202-1                 |         |     |     |
| D802   | 8-719-107-94  | DIODE 1SS202-1                 |         |     |     |
| D803   | 8-719-107-94  | DIODE 1SS202-1                 |         |     |     |
| D804   | 8-719-200-77  | DIODE 10E2N                    |         |     |     |
| D805   | 8-719-200-77  | DIODE 10E2N                    |         |     |     |
| D806   | 8-719-107-94  | DIODE 1SS202-1                 |         |     |     |
| D807   | 8-719-302-46  | DIODE SEL1210S-C               |         |     |     |
| D808   | 8-719-302-79  | DIODE SEL1910A-C               |         |     |     |
| D809   | 8-719-302-53  | DIODE SEL1410E-C               |         |     |     |
| D810   | 8-719-302-53  | DIODE SEL1410E-C               |         |     |     |
| IC81   | 8-759-111-44  | IC UPC4570C-1                  |         |     |     |
| IC301  | 8-759-939-73  | IC BA3308                      |         |     |     |
| IC302  | 8-752-018-70  | IC CX20187                     |         |     |     |
| IC303  | 8-759-634-51  | IC M5218AP                     |         |     |     |
| IC701  | 8-759-604-33  | IC M5F7812L                    |         |     |     |
| IC702  | 8-759-604-29  | IC M5F7805L                    |         |     |     |
| IC801  | 8-759-635-01  | IC M50964-223SP                |         |     |     |
| L41    | 1-410-780-11  | INDUCTOR 27MMH                 |         |     |     |
| L61    | 1-410-780-11  | INDUCTOR 27MMH                 |         |     |     |
| L101   | 1-410-775-21  | INDUCTOR 10MMH                 |         |     |     |
| L201   | 1-410-775-21  | INDUCTOR 10MMH                 |         |     |     |
| L801   | 1-410-521-11  | INDUCTOR 100UH                 |         |     |     |
| M901   | X-3343-447-1  | MOTOR ASSY                     |         |     |     |
| PM901  | 1-454-456-11  | SOLENOID, PLUNGER              |         |     |     |
| Q11    | 8-729-119-76  | TRANSISTOR 2SA1175-HFE         |         |     |     |
| Q12    | 8-719-939-23  | PHOTO TRANSISTOR GP2S09-C      |         |     |     |
| Q81    | 8-729-111-29  | TRANSISTOR 2SD1616A-K          |         |     |     |
| Q82    | 8-729-142-46  | TRANSISTOR 2SC2001-LK          |         |     |     |
| Q83    | 8-729-142-46  | TRANSISTOR 2SC2001-LK          |         |     |     |
| Q101   | 8-729-900-74  | TRANSISTOR DTC143TS            |         |     |     |
| Q102   | 8-729-900-80  | TRANSISTOR DTC114ES            |         |     |     |
| Q103   | 8-729-900-80  | TRANSISTOR DTC114ES            |         |     |     |
| Q104   | 8-729-900-80  | TRANSISTOR DTC114ES            |         |     |     |
| Q105   | 8-729-900-74  | TRANSISTOR DTC143TS            |         |     |     |

| Ref.No          | Part No.      | Description            |      |    |      |
|-----------------|---------------|------------------------|------|----|------|
| Q201            | 8-729-900-74  | TRANSISTOR DTC143TS    |      |    |      |
| Q202            | 8-729-900-80  | TRANSISTOR DTC114ES    |      |    |      |
| Q203            | 8-729-900-80  | TRANSISTOR DTC114ES    |      |    |      |
| Q204            | 8-729-900-80  | TRANSISTOR DTC114ES    |      |    |      |
| Q205            | 8-729-900-74  | TRANSISTOR DTC143TS    |      |    |      |
| Q301            | 8-729-900-89  | TRANSISTOR DTC144ES    |      |    |      |
| Q302            | 8-729-900-61  | TRANSISTOR DTA114ES    |      |    |      |
| Q303            | 8-729-900-61  | TRANSISTOR DTA114ES    |      |    |      |
| Q304            | 8-729-900-61  | TRANSISTOR DTA114ES    |      |    |      |
| Q701            | 8-729-209-15  | TRANSISTOR 2SD2012     |      |    |      |
| Q702            | 8-729-620-05  | TRANSISTOR 2SC2603-EF  |      |    |      |
| Q703            | 8-729-111-67  | TRANSISTOR 2SB1094-L   |      |    |      |
| Q704            | 8-729-119-76  | TRANSISTOR 2SA1175-HFE |      |    |      |
| Q801            | 8-729-620-05  | TRANSISTOR 2SC2603-EF  |      |    |      |
| Q802            | 8-729-620-05  | TRANSISTOR 2SC2603-EF  |      |    |      |
| Q803            | 8-729-119-76  | TRANSISTOR 2SA1175-HFE |      |    |      |
| Q804            | 8-729-900-80  | TRANSISTOR DTC114ES    |      |    |      |
| Q805            | 8-729-900-61  | TRANSISTOR DTA114ES    |      |    |      |
| Q806            | 8-729-900-61  | TRANSISTOR DTA114ES    |      |    |      |
| Q807            | 8-729-801-84  | TRANSISTOR 2SB1013-4   |      |    |      |
| Q808            | 8-729-801-84  | TRANSISTOR 2SB1013-4   |      |    |      |
| Q809            | 8-729-900-61  | TRANSISTOR DTA114ES    |      |    |      |
| Q810            | 8-729-900-61  | TRANSISTOR DTA114ES    |      |    |      |
| Q811            | 8-729-801-84  | TRANSISTOR 2SB1013-4   |      |    |      |
| Q812            | 8-729-119-76  | TRANSISTOR 2SA1175-HFE |      |    |      |
| Q813            | 8-729-119-76  | TRANSISTOR 2SA1175-HFE |      |    |      |
| Q814            | 8-729-119-76  | TRANSISTOR 2SA1175-HFE |      |    |      |
| <u>RESISTOR</u> |               |                        |      |    |      |
| R11             | 1-247-834-11  | CARBON                 | 1.3K | 5% | 1/4W |
| R12             | 1-249-414-11  | CARBON                 | 560  | 5% | 1/4W |
| R13             | 1-247-818-11  | CARBON                 | 300  | 5% | 1/4W |
| R14             | 1-249-408-11  | CARBON                 | 180  | 5% | 1/4W |
| R17             | 1-249-437-11  | CARBON                 | 47K  | 5% | 1/4W |
| R18             | 1-249-437-11  | CARBON                 | 47K  | 5% | 1/4W |
| R41             | 1-247-881-00  | CARBON                 | 120K | 5% | 1/4W |
| R42             | 1-249-405-11  | CARBON                 | 100  | 5% | 1/4W |
| R43             | 1-247-882-11  | CARBON                 | 130K | 5% | 1/4W |
| R44             | 1-249-426-11  | CARBON                 | 5.6K | 5% | 1/4W |
| R45             | 1-249-430-11  | CARBON                 | 12K  | 5% | 1/4W |
| R61             | 1-247-881-00  | CARBON                 | 120K | 5% | 1/4W |
| R62             | 1-249-405-11  | CARBON                 | 100  | 5% | 1/4W |
| R63             | 1-247-882-11  | CARBON                 | 130K | 5% | 1/4W |
| R64             | 1-249-426-11  | CARBON                 | 5.6K | 5% | 1/4W |
| R65             | 1-249-430-11  | CARBON                 | 12K  | 5% | 1/4W |
| R81             | 1-249-409-11  | CARBON                 | 220  | 5% | 1/4W |
| R82             | 1-249-409-11  | CARBON                 | 220  | 5% | 1/4W |
| R83             | 1-249-429-11  | CARBON                 | 10K  | 5% | 1/4W |
| R84             | △1-212-849-00 | FUSIBLE                | 4.7  | 5% | 1/4W |
| R85             | 1-249-435-11  | CARBON                 | 33K  | 5% | 1/4W |
| R86             | 1-249-435-11  | CARBON                 | 33K  | 5% | 1/4W |
| R101            | 1-249-437-11  | CARBON                 | 47K  | 5% | 1/4W |
| R102            | 1-249-417-11  | CARBON                 | 1K   | 5% | 1/4W |
| R103            | 1-249-431-11  | CARBON                 | 15K  | 5% | 1/4W |
| R104            | 1-247-814-11  | CARBON                 | 200  | 5% | 1/4W |
| R105            | 1-249-430-11  | CARBON                 | 12K  | 5% | 1/4W |
| R106            | 1-249-420-11  | CARBON                 | 1.8K | 5% | 1/4W |
| R107            | 1-249-423-11  | CARBON                 | 3.3K | 5% | 1/4W |
| R108            | 1-249-423-11  | CARBON                 | 3.3K | 5% | 1/4W |
| R109            | 1-249-423-11  | CARBON                 | 3.3K | 5% | 1/4W |
| R110            | 1-247-822-11  | CARBON                 | 430  | 5% | 1/4W |
| R111            | 1-249-427-11  | CARBON                 | 6.8K | 5% | 1/4W |
| R112            | 1-249-415-11  | CARBON                 | 680  | 5% | 1/4W |
| R113            | 1-249-431-11  | CARBON                 | 15K  | 5% | 1/4W |
| R114            | 1-249-421-11  | CARBON                 | 2.2K | 5% | 1/4W |

| Ref.No | Part No.     | Description                      |      |    |      |   |  |  |  |
|--------|--------------|----------------------------------|------|----|------|---|--|--|--|
| R115   | 1-249-429-11 | CARBON                           | 10K  | 5% | 1/4W |   |  |  |  |
| R116   | 1-249-441-11 | CARBON                           | 100K | 5% | 1/4W |   |  |  |  |
| R117   | 1-249-441-11 | CARBON                           | 100K | 5% | 1/4W |   |  |  |  |
| R118   | 1-249-438-11 | CARBON                           | 56K  | 5% | 1/4W |   |  |  |  |
| R119   | 1-249-435-11 | CARBON                           | 33K  | 5% | 1/4W |   |  |  |  |
| R120   | 1-249-438-11 | CARBON                           | 56K  | 5% | 1/4W |   |  |  |  |
| R121   | 1-249-421-11 | CARBON                           | 2.2K | 5% | 1/4W |   |  |  |  |
| R122   | 1-249-410-11 | CARBON                           | 270  | 5% | 1/4W |   |  |  |  |
| R123   | 1-249-429-11 | CARBON                           | 10K  | 5% | 1/4W |   |  |  |  |
| R124   | 1-247-846-11 | CARBON                           | 4.3K | 5% | 1/4W |   |  |  |  |
| R125   | 1-249-418-11 | CARBON                           | 1.2K | 5% | 1/4W |   |  |  |  |
| R126   | 1-249-423-11 | CARBON                           | 3.3K | 5% | 1/4W |   |  |  |  |
| R127   | 1-249-418-11 | CARBON                           | 1.2K | 5% | 1/4W |   |  |  |  |
| R128   | 1-247-887-00 | CARBON                           | 220K | 5% | 1/4W |   |  |  |  |
| R129   | 1-249-421-11 | CARBON                           | 2.2K | 5% | 1/4W |   |  |  |  |
| R130   | 1-247-848-11 | CARBON                           | 5.1K | 5% | 1/4W |   |  |  |  |
| R201   | 1-249-437-11 | CARBON                           | 47K  | 5% | 1/4W |   |  |  |  |
| R202   | 1-249-417-11 | CARBON                           | 1K   | 5% | 1/4W |   |  |  |  |
| R203   | 1-249-431-11 | CARBON                           | 15K  | 5% | 1/4W |   |  |  |  |
| R204   | 1-247-814-11 | CARBON                           | 200  | 5% | 1/4W |   |  |  |  |
| R205   | 1-249-430-11 | CARBON                           | 12K  | 5% | 1/4W |   |  |  |  |
| R206   | 1-249-420-11 | CARBON                           | 1.8K | 5% | 1/4W |   |  |  |  |
| R207   | 1-249-423-11 | CARBON                           | 3.3K | 5% | 1/4W |   |  |  |  |
| R208   | 1-249-423-11 | CARBON                           | 3.3K | 5% | 1/4W |   |  |  |  |
| R209   | 1-249-423-11 | CARBON                           | 3.3K | 5% | 1/4W |   |  |  |  |
| R210   | 1-247-822-11 | CARBON                           | 430  | 5% | 1/4W |   |  |  |  |
| R211   | 1-249-427-11 | CARBON                           | 6.8K | 5% | 1/4W |   |  |  |  |
| R212   | 1-249-415-11 | CARBON                           | 680  | 5% | 1/4W |   |  |  |  |
| R213   | 1-249-431-11 | CARBON                           | 15K  | 5% | 1/4W |   |  |  |  |
| R214   | 1-249-421-11 | CARBON                           | 2.2K | 5% | 1/4W |   |  |  |  |
| R215   | 1-249-429-11 | CARBON                           | 10K  | 5% | 1/4W |   |  |  |  |
| R216   | 1-249-441-11 | CARBON                           | 100K | 5% | 1/4W |   |  |  |  |
| R217   | 1-249-441-11 | CARBON                           | 100K | 5% | 1/4W |   |  |  |  |
| R218   | 1-249-438-11 | CARBON                           | 56K  | 5% | 1/4W |   |  |  |  |
| R219   | 1-249-435-11 | CARBON                           | 33K  | 5% | 1/4W |   |  |  |  |
| R220   | 1-249-438-11 | CARBON                           | 56K  | 5% | 1/4W |   |  |  |  |
| R221   | 1-249-421-11 | CARBON                           | 2.2K | 5% | 1/4W |   |  |  |  |
| R222   | 1-249-410-11 | CARBON                           | 270  | 5% | 1/4W |   |  |  |  |
| R223   | 1-249-429-11 | CARBON                           | 10K  | 5% | 1/4W |   |  |  |  |
| R224   | 1-247-846-11 | CARBON                           | 4.3K | 5% | 1/4W |   |  |  |  |
| R225   | 1-249-418-11 | CARBON                           | 1.2K | 5% | 1/4W |   |  |  |  |
| R226   | 1-249-423-11 | CARBON                           | 3.3K | 5% | 1/4W |   |  |  |  |
| R227   | 1-249-418-11 | CARBON                           | 1.2K | 5% | 1/4W |   |  |  |  |
| R228   | 1-247-887-00 | CARBON                           | 220K | 5% | 1/4W |   |  |  |  |
| R229   | 1-249-421-11 | CARBON                           | 2.2K | 5% | 1/4W |   |  |  |  |
| R230   | 1-247-848-11 | CARBON                           | 5.1K | 5% | 1/4W |   |  |  |  |
| R301   | 1-249-413-11 | CARBON                           | 470  | 5% | 1/4W |   |  |  |  |
| R302   | 1-259-882-11 | CARBON                           | 3.3M | 5% | 1/4W |   |  |  |  |
| R303   | 1-249-405-11 | CARBON                           | 100  | 5% | 1/4W |   |  |  |  |
| R304   | 1-215-469-00 | METAL                            | 100K | 1% | 1/6W |   |  |  |  |
| R305   | 1-249-429-11 | CARBON                           | 10K  | 5% | 1/4W |   |  |  |  |
| R306   | 1-249-429-11 | CARBON                           | 10K  | 5% | 1/4W |   |  |  |  |
| R307   | 1-249-441-11 | CARBON                           | 100K | 5% | 1/4W |   |  |  |  |
| R308   | 1-249-417-11 | CARBON                           | 1K   | 5% | 1/4W |   |  |  |  |
| R309   | 1-249-433-11 | CARBON                           | 22K  | 5% | 1/4W |   |  |  |  |
| R310   | 1-249-433-11 | CARBON                           | 22K  | 5% | 1/4W |   |  |  |  |
| R311   | 1-249-437-11 | CARBON                           | 47K  | 5% | 1/4W |   |  |  |  |
| R312   | 1-249-411-11 | CARBON                           | 330  | 5% | 1/4W |   |  |  |  |
| R313   | 1-249-429-11 | CARBON                           | 10K  | 5% | 1/4W |   |  |  |  |
| R314   | 1-249-429-11 | CARBON                           | 10K  | 5% | 1/4W |   |  |  |  |
| R315   | 1-249-424-11 | CARBON                           | 3.9K | 5% | 1/4W |   |  |  |  |
| R316   | 1-249-428-11 | CARBON                           | 8.2K | 5% | 1/4W |   |  |  |  |
| R701   | 1-249-420-11 | CARBON                           | 1.8K | 5% | 1/4W |   |  |  |  |
| R702   | 1-249-420-11 | CARBON                           | 1.8K | 5% | 1/4W |   |  |  |  |
| R703   | 1-216-357-00 | METAL OXIDE                      | 4.7  | 5% | 1W   | F |  |  |  |
| R801   | 1-249-407-11 | CARBON                           | 150  | 5% | 1/4W |   |  |  |  |
| R802   | 1-249-419-11 | CARBON                           | 1.5K | 5% | 1/4W |   |  |  |  |
| R803   | 1-249-431-11 | CARBON                           | 15K  | 5% | 1/4W |   |  |  |  |
| R804   | 1-249-428-11 | CARBON                           | 8.2K | 5% | 1/4W |   |  |  |  |
| R805   | 1-249-420-11 | CARBON                           | 1.8K | 5% | 1/4W |   |  |  |  |
| R806   | 1-249-399-11 | CARBON                           | 33   | 5% | 1/4W |   |  |  |  |
| R807   | 1-249-429-11 | CARBON                           | 10K  | 5% | 1/4W |   |  |  |  |
| R808   | 1-249-428-11 | CARBON                           | 8.2K | 5% | 1/4W |   |  |  |  |
| R809   | 1-249-429-11 | CARBON                           | 10K  | 5% | 1/4W |   |  |  |  |
| R810   | 1-249-429-11 | CARBON                           | 10K  | 5% | 1/4W |   |  |  |  |
| R811   | 1-249-425-11 | CARBON                           | 4.7K | 5% | 1/4W |   |  |  |  |
| R812   | 1-249-420-11 | CARBON                           | 1.8K | 5% | 1/4W |   |  |  |  |
| R813   | 1-249-425-11 | CARBON                           | 4.7K | 5% | 1/4W |   |  |  |  |
| R814   | 1-249-437-11 | CARBON                           | 47K  | 5% | 1/4W |   |  |  |  |
| R815   | 1-249-425-11 | CARBON                           | 4.7K | 5% | 1/4W |   |  |  |  |
| R816   | 1-247-895-00 | CARBON                           | 470K | 5% | 1/4W |   |  |  |  |
| R817   | 1-249-425-11 | CARBON                           | 4.7K | 5% | 1/4W |   |  |  |  |
| R818   | 1-247-903-00 | CARBON                           | 1M   | 5% | 1/4W |   |  |  |  |
| R819   | 1-249-420-11 | CARBON                           | 1.8K | 5% | 1/4W |   |  |  |  |
| R820   | 1-249-425-11 | CARBON                           | 4.7K | 5% | 1/4W |   |  |  |  |
| R821   | 1-249-417-11 | CARBON                           | 1K   | 5% | 1/4W |   |  |  |  |
| R822   | 1-249-437-11 | CARBON                           | 47K  | 5% | 1/4W |   |  |  |  |
| R823   | 1-249-420-11 | CARBON                           | 1.8K | 5% | 1/4W |   |  |  |  |
| R824   | 1-249-417-11 | CARBON                           | 1K   | 5% | 1/4W |   |  |  |  |
| R825   | 1-249-393-11 | CARBON                           | 10   | 5% | 1/4W |   |  |  |  |
| R826   | 1-249-411-11 | CARBON                           | 330  | 5% | 1/4W |   |  |  |  |
| R827   | 1-249-411-11 | CARBON                           | 330  | 5% | 1/4W |   |  |  |  |
| R828   | 1-249-407-11 | CARBON                           | 150  | 5% | 1/4W |   |  |  |  |
| R829   | 1-249-407-11 | CARBON                           | 150  | 5% | 1/4W |   |  |  |  |
| R830   | 1-249-421-11 | CARBON                           | 2.2K | 5% | 1/4W |   |  |  |  |
| R831   | 1-249-421-11 | CARBON                           | 2.2K | 5% | 1/4W |   |  |  |  |
| R832   | 1-249-407-11 | CARBON                           | 150  | 5% | 1/4W |   |  |  |  |
| R833   | 1-249-409-11 | CARBON                           | 220  | 5% | 1/4W |   |  |  |  |
| R834   | 1-249-411-11 | CARBON                           | 330  | 5% | 1/4W |   |  |  |  |
| R835   | 1-249-413-11 | CARBON                           | 470  | 5% | 1/4W |   |  |  |  |
| R836   | 1-249-420-11 | CARBON                           | 1.8K | 5% | 1/4W |   |  |  |  |
| R837   | 1-249-427-11 | CARBON                           | 6.8K | 5% | 1/4W |   |  |  |  |
| R838   | 1-249-417-11 | CARBON                           | 1K   | 5% | 1/4W |   |  |  |  |
| R839   | 1-249-420-11 | CARBON                           | 1.8K | 5% | 1/4W |   |  |  |  |
| R840   | 1-249-424-11 | CARBON                           | 3.9K | 5% | 1/4W |   |  |  |  |
| R841   | 1-249-430-11 | CARBON                           | 12K  | 5% | 1/4W |   |  |  |  |
| RV41   | 1-228-989-00 | RES, ADJ, CARBON 470             |      |    |      |   |  |  |  |
| RV42   | 1-230-500-11 | RES, ADJ, CARBON 220K            |      |    |      |   |  |  |  |
| RV61   | 1-228-989-00 | RES, ADJ, CARBON 470             |      |    |      |   |  |  |  |
| RV62   | 1-230-500-11 | RES, ADJ, CARBON 220K            |      |    |      |   |  |  |  |
| RV101  | 1-238-016-11 | RES, ADJ, CARBON 10K             |      |    |      |   |  |  |  |
| RV201  | 1-238-016-11 | RES, ADJ, CARBON 10K             |      |    |      |   |  |  |  |
| RY81   | 1-515-614-11 | RELAY                            |      |    |      |   |  |  |  |
| S11    | 1-571-281-21 | SWITCH, LEAF (HALF)              |      |    |      |   |  |  |  |
| S12    | 1-571-281-21 | SWITCH, LEAF (REC (A))           |      |    |      |   |  |  |  |
| S13    | 1-571-281-21 | SWITCH, LEAF (REC (B))           |      |    |      |   |  |  |  |
| S14    | 1-571-281-21 | SWITCH, LEAF (CrO <sub>2</sub> ) |      |    |      |   |  |  |  |
| S801   | 1-554-303-21 | SWITCH, KEY BOARD (□)            |      |    |      |   |  |  |  |
| S802   | 1-554-303-21 | SWITCH, KEY BOARD (▨)            |      |    |      |   |  |  |  |
| S803   | 1-554-303-21 | SWITCH, KEY BOARD (▷)            |      |    |      |   |  |  |  |
| S804   | 1-554-303-21 | SWITCH, KEY BOARD (◁)            |      |    |      |   |  |  |  |
| S805   | 1-554-303-21 | SWITCH, KEY BOARD (○)            |      |    |      |   |  |  |  |
| S806   | 1-554-303-21 | SWITCH, KEY BOARD (◀)            |      |    |      |   |  |  |  |
| S807   | 1-554-303-21 | SWITCH, KEY BOARD (▶▶)           |      |    |      |   |  |  |  |
| S808   | 1-554-303-21 | SWITCH, KEY BOARD (●)            |      |    |      |   |  |  |  |
| S809   | 1-570-157-21 | SWITCH, SLIDE (DIRECTION MODE)   |      |    |      |   |  |  |  |
| S810   | 1-571-908-11 | SWITCH, SLIDE (DOLBY NR)         |      |    |      |   |  |  |  |
| SPK101 | 1-235-186-00 | ENCAPSULATED COMPONENT           |      |    |      |   |  |  |  |

| <u>Ref.No</u> | <u>Part No.</u> | <u>Description</u>            |
|---------------|-----------------|-------------------------------|
| SPK201        | 1-235-186-00    | ENCAPSULATED COMPONENT        |
| T81           | 1-433-337-11    | TRANSFORMER, BIAS OSCILLATION |
| X801          | 1-577-358-21    | VIBRATOR, CERAMIC             |