

# CFS-828SMK2

## SERVICE MANUAL

*E Model*

Ver 1.0 2003.12



|                                    |             |
|------------------------------------|-------------|
| Model Name Using Similar Mechanism | CFS-828S    |
| Tape Transport Mechanism Type      | MF-W828-117 |

### SPECIFICATIONS

#### Frequency range

FM: 87.5 - 107 MHz  
MW: 530 - 1,605 kHz  
SW1: 2.3 - 7 MHz  
SW2: 7 - 22 MHz

#### IF

FM: 10.7 MHz  
MW/SW: 455 kHz

#### Antennas

FM/SW: Telescopic  
MW: Built-in ferrite bar

#### Recording system

4-track, 2-channel stereo

#### Frequency response

80 - 12,500 Hz

#### Speakers

Full range: 10 cm (4 inches) dia., 6  $\Omega$ , cone type/  
Tweeter: 2 cm (13/16 inches) dia.

#### Output

Headphones jack (stereo minijack), for 16 - 68  $\Omega$   
impedance headphones

#### Maximum Power output

9W

#### Battery life

FM Recording: Sony R20P: Approx. 9 hours/  
Sony LR20 alkaline: Approx. 23 hours  
Playback: Sony R20P: Approx. 3 hours/  
Sony LR20 alkaline: Approx. 8 hours

#### Power requirements

110 - 120 V/220 - 240 V AC selectable, 50/60 Hz  
9 V DC, six R20 (size D) batteries  
DC IN 12V jack

#### Power consumption

AC 18 W

#### Dimensions

Approx. 679  $\times$  263.5  $\times$  239.5 mm (w/h/d)  
(26 6/8  $\times$  10 3/8  $\times$  9 4/9 inches) incl. projecting parts  
and controls, not incl. handle

#### Mass

Approx. 7.3 kg (16 lb 1 oz) incl. batteries

#### Supplied accessory

AC power cord (1)

Design and specifications are subject to change without  
notice.

## RADIO CASSETTE-CORDER

9-961-447-01

2003L04-1

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**Sony Corporation**

Personal Audio Company

Published by Sony Engineering Corporation

# SONY®

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## ● UNLEADED SOLDER

Boards requiring use of unleaded solder are printed with the lead-free mark (LF) indicating the solder contains no lead.

(Caution: Some printed circuit boards may not come printed with the lead free mark due to their particular size.)



## : LEAD FREE MARK

Unleaded solder has the following characteristics.

- Unleaded solder melts at a temperature about 40°C higher than ordinary solder.

Ordinary soldering irons can be used but the iron tip has to be applied to the solder joint for a slightly longer time.

Soldering irons using a temperature regulator should be set to about 350°C.

Caution: The printed pattern (copper foil) may peel away if the heated tip is applied for too long, so be careful!

- Strong viscosity

Unleaded solder is more viscous (sticky, less prone to flow) than ordinary solder so use caution not to let solder bridges occur such as on IC pins, etc.

- Usable with ordinary solder

It is best to use only unleaded solder but unleaded solder may also be added to ordinary solder.

**Notes on Chip Component Replacement**

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

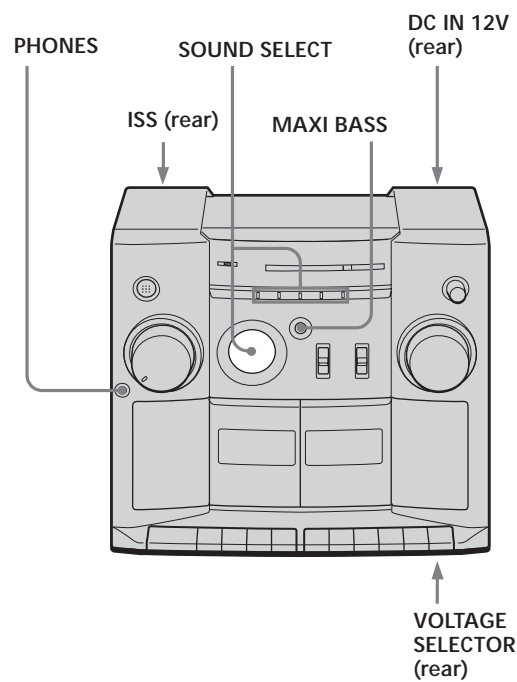
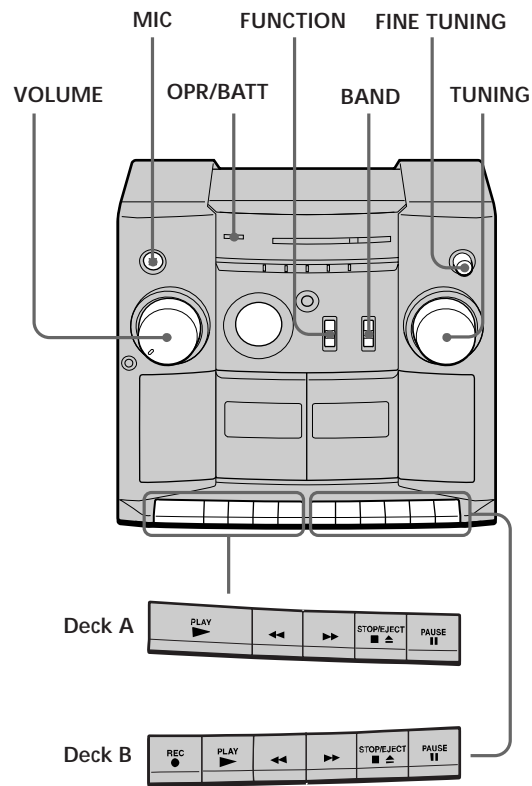
**SAFETY-RELATED COMPONENT WARNING!!**

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

# SECTION 1 GENERAL

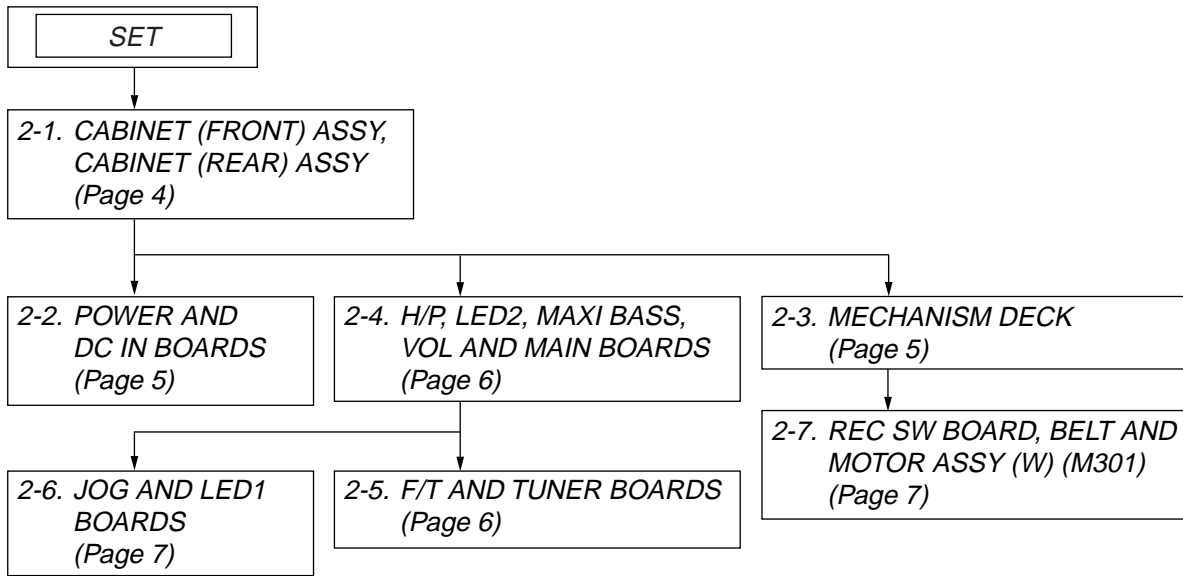
This section is extracted from instruction manual.

## Location of controls



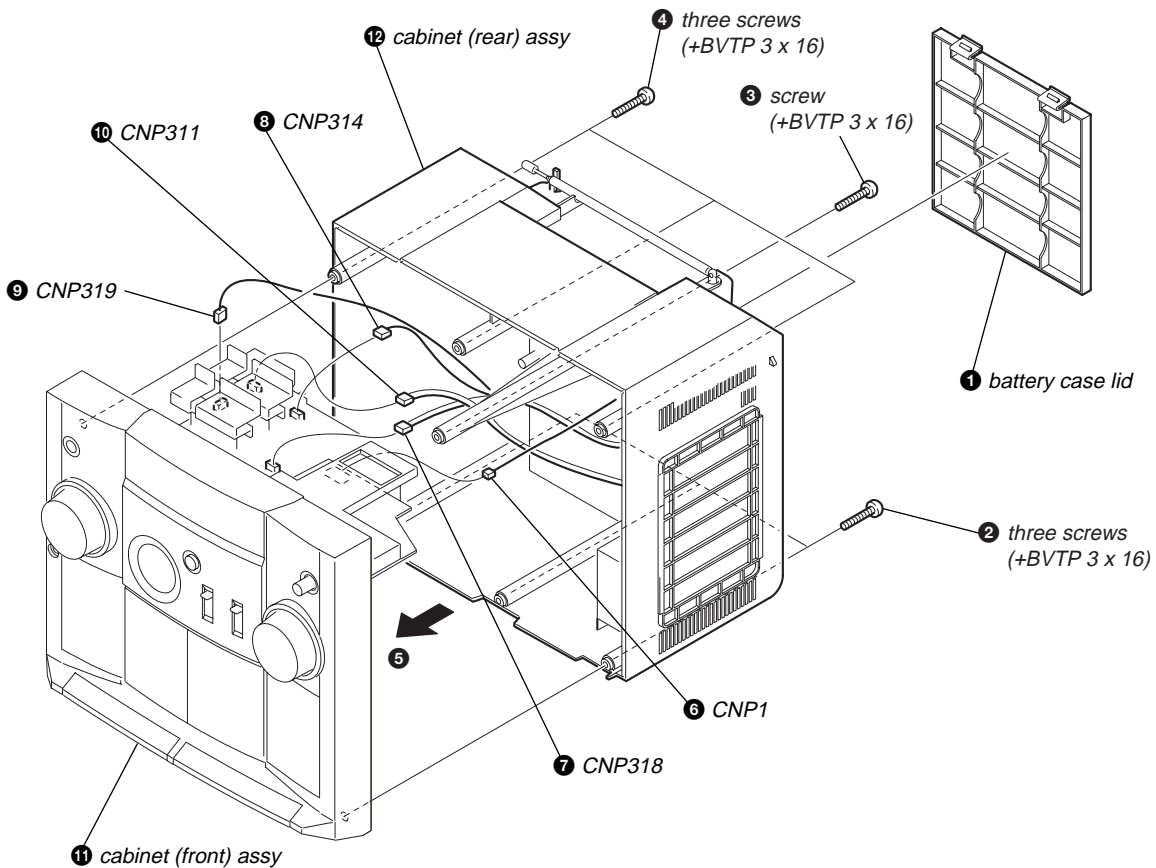
## SECTION 2 DISASSEMBLY

- The equipment can be removed using the following procedure.

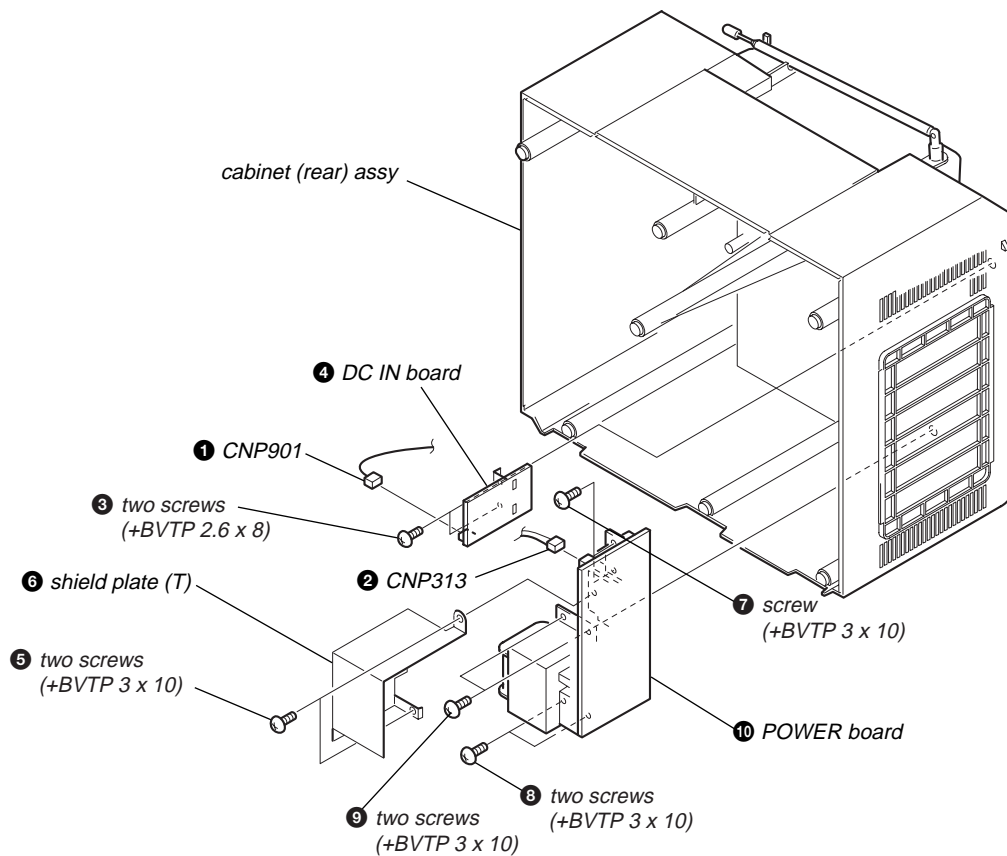


**Note :** Follow the disassembly procedure in the numerical order given.

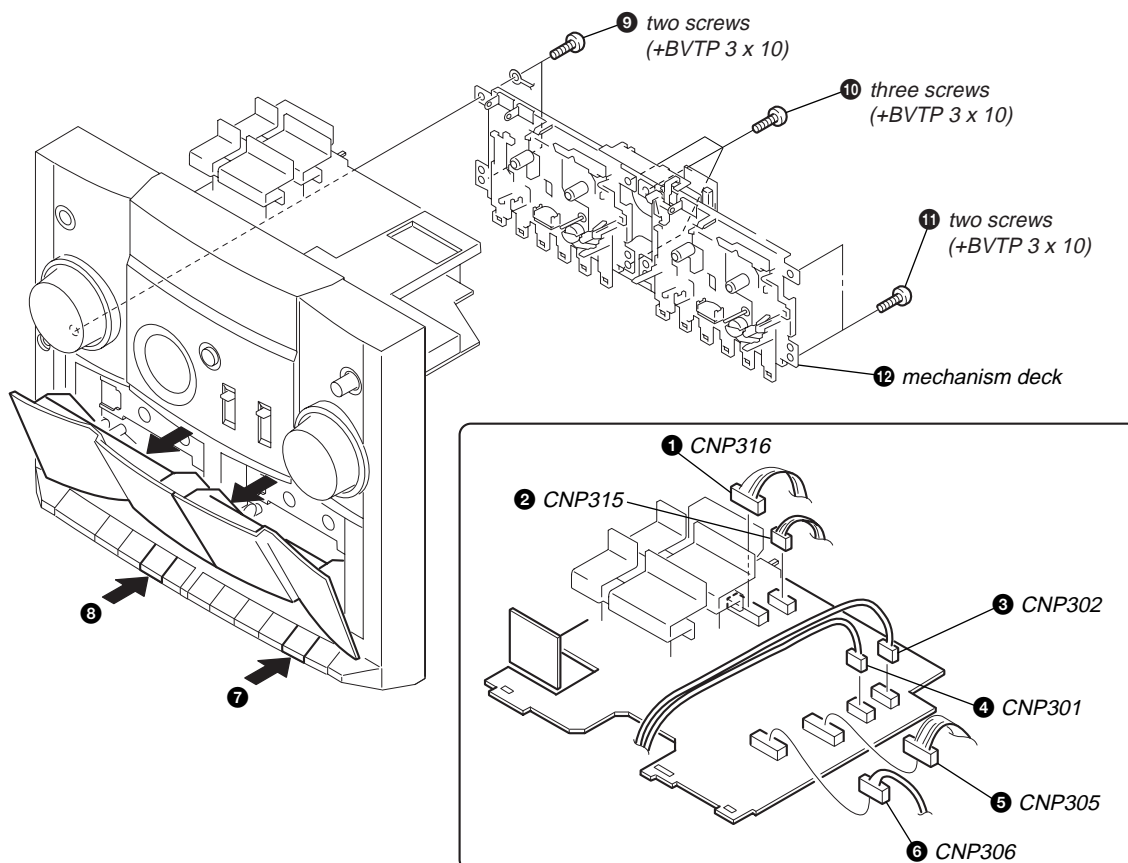
### 2-1. CABINET (FRONT) ASSY, CABINET (REAR) ASSY



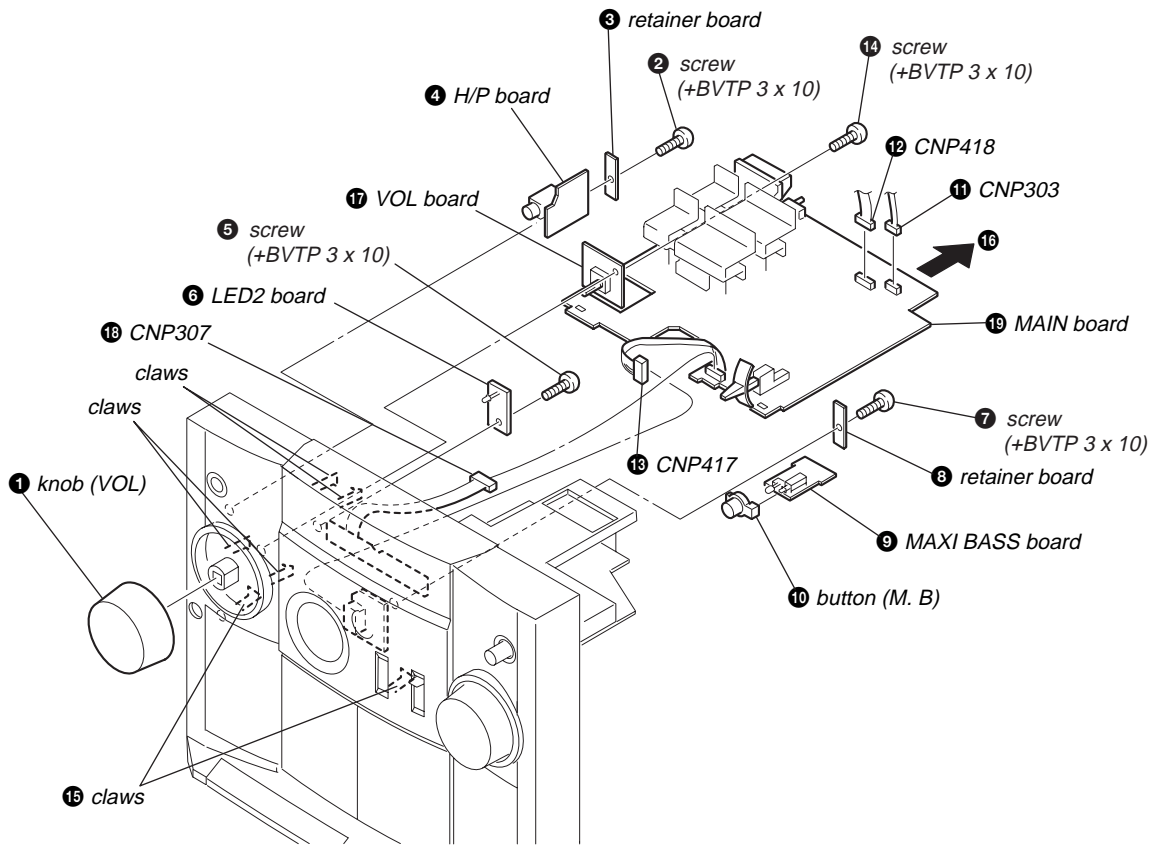
2-2. POWER AND DC IN BOARDS



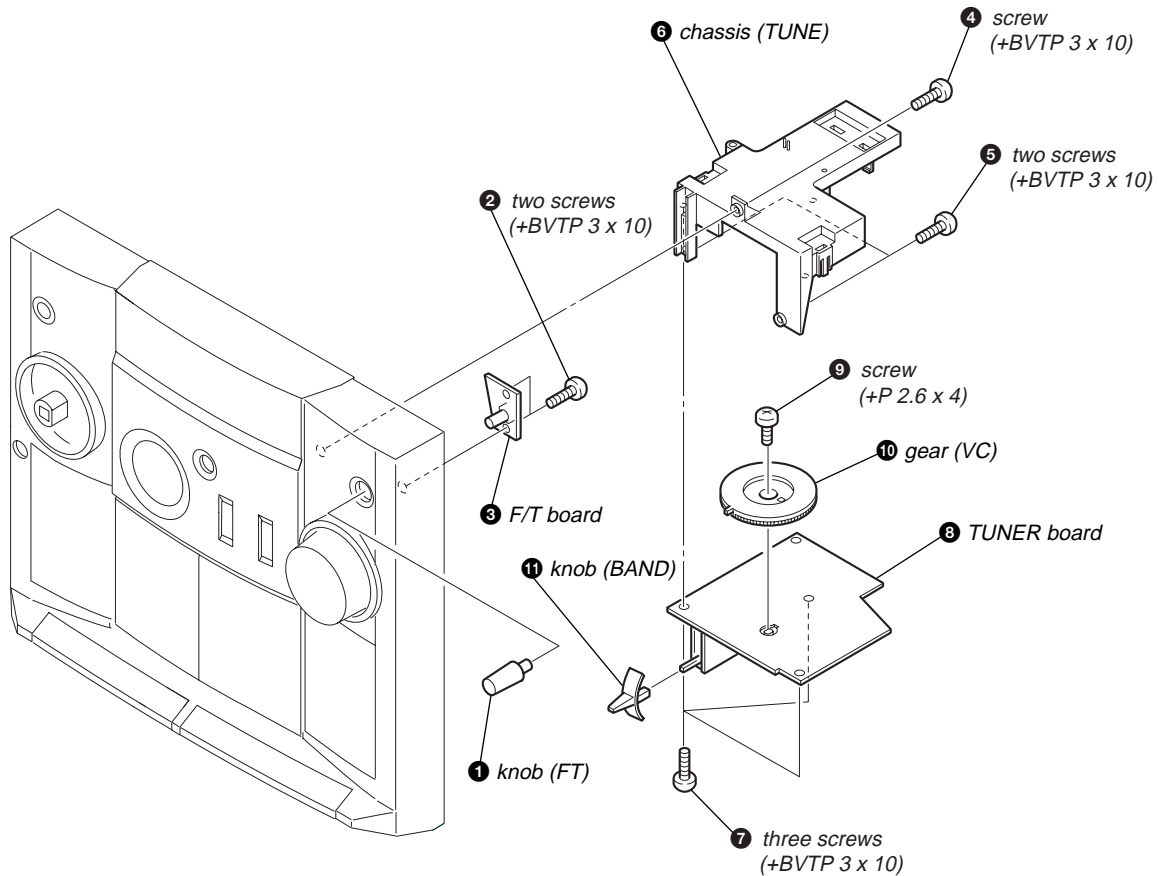
2-3. MECHANISM DECK



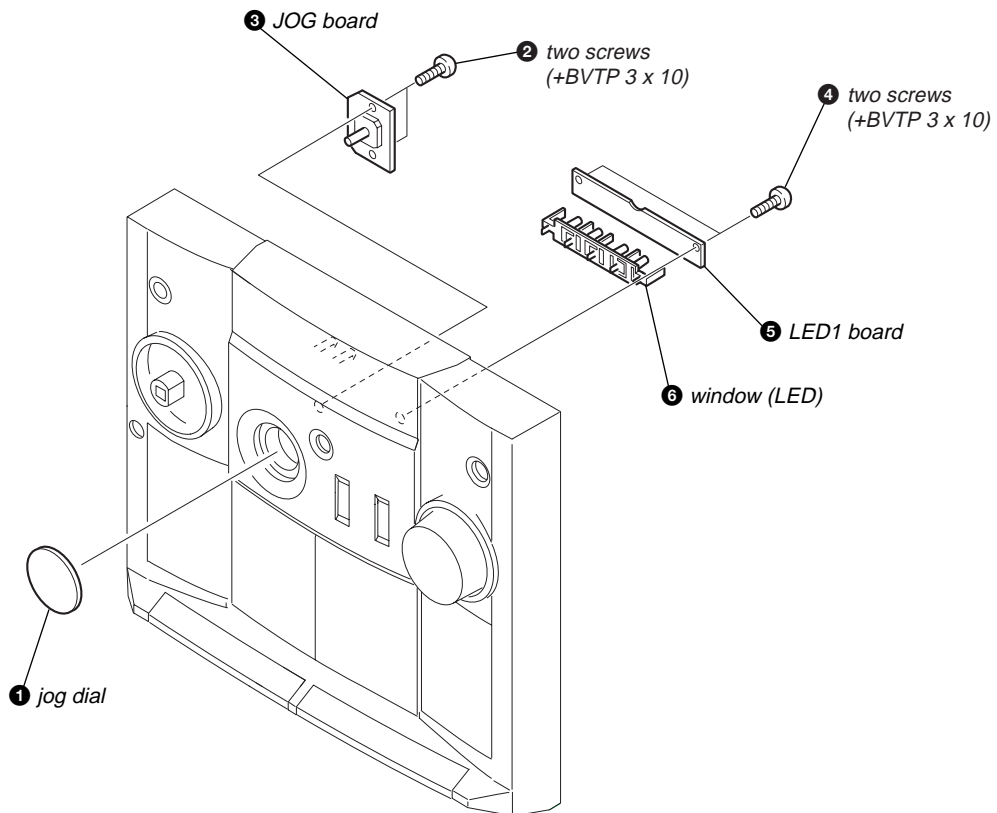
2-4. H/P, LED2, MAXI BASS, VOL AND MAIN BOARDS



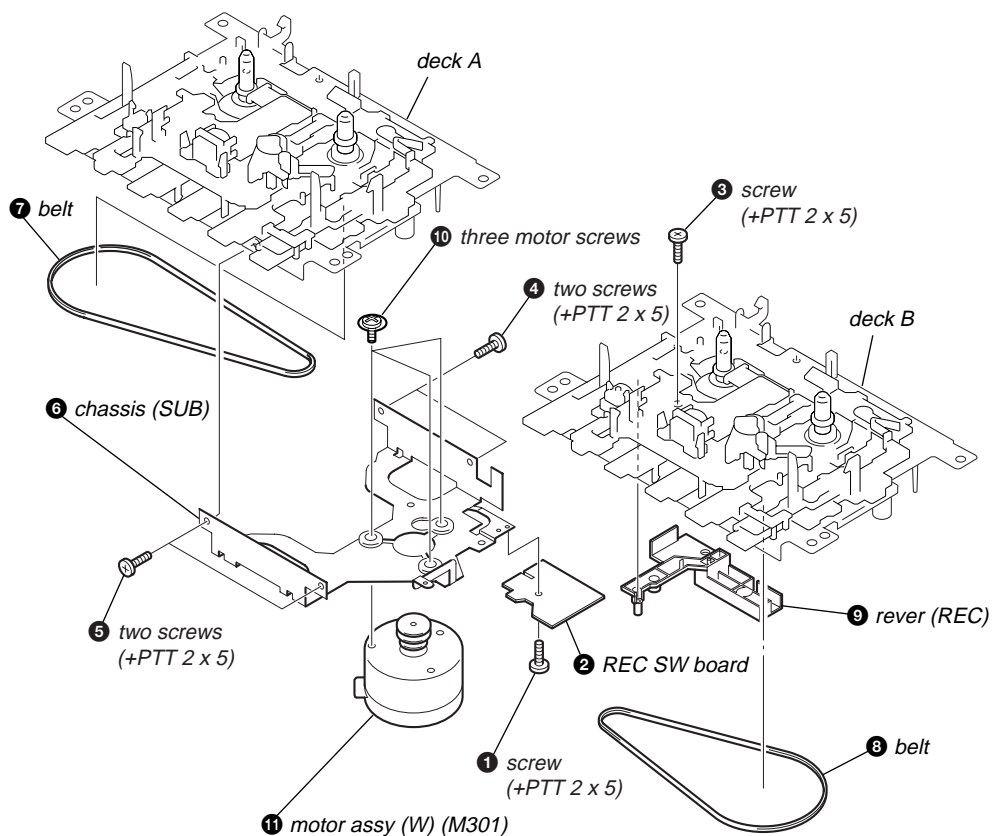
2-5. F/T AND TUNER BOARDS



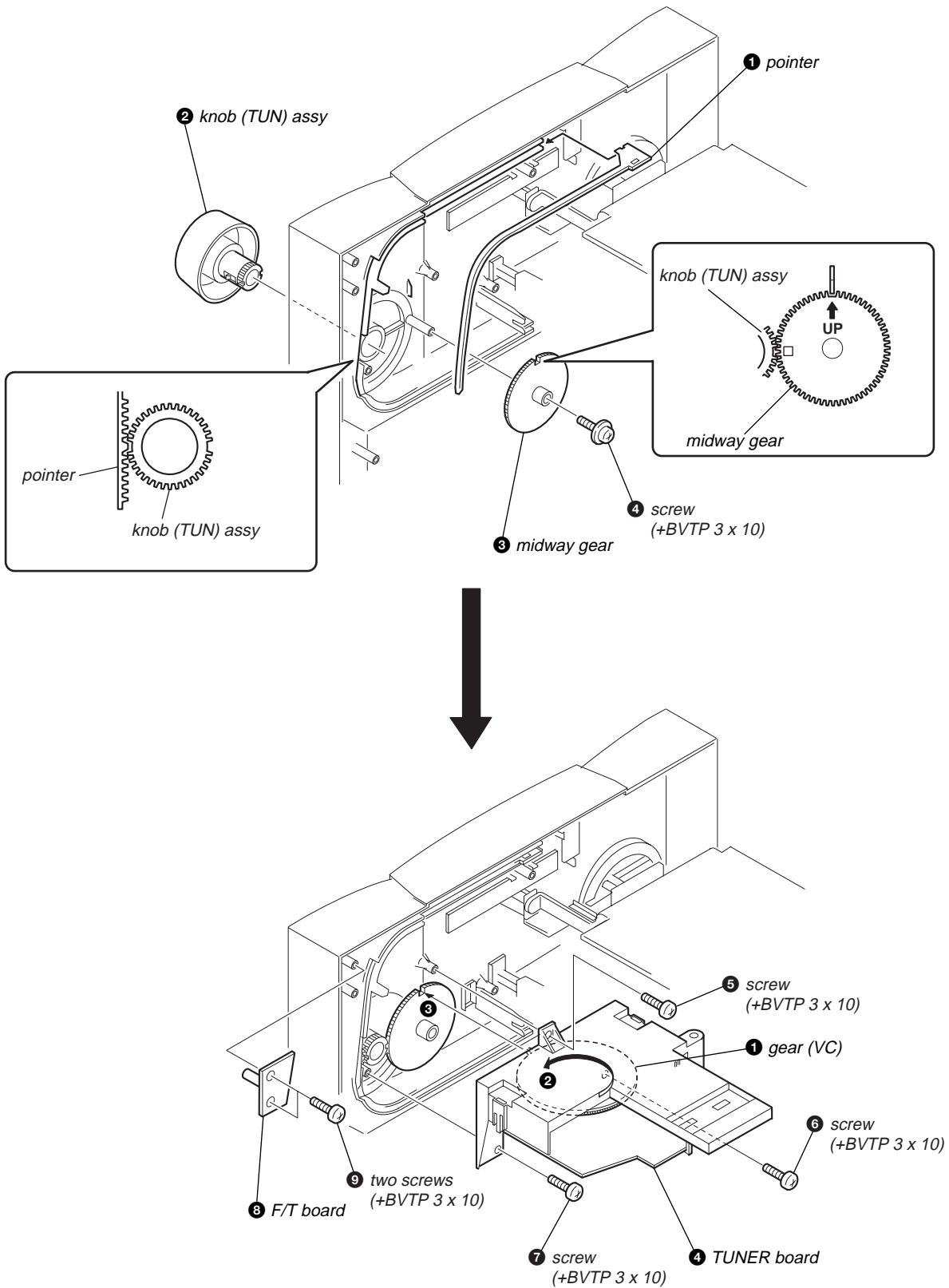
2-6. JOG AND LED1 BOARDS



2-7. REC SW BOARD, BELT AND MOTOR ASSY (W) (M301)



### SECTION 3 DIAL POINTER SETTING





## SECTION 4 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 head with a head demagnetizer. (Do not bring the head demagnetizer close to the erase head.)
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. Power supply voltage: 9 V dc.

### Torque Measurement DECK A DECK B

| Mode                          | Torque meter | Meter reading  |
|-------------------------------|--------------|--|
| Forward                       | CQ-102C      | 2.21 to 5.39 mN • m<br>22.5 to 55 g • cm<br>(0.31 to 0.76 oz • inch) |
| Forward<br>back tension       | CQ-102C      | 0.20 to 0.49 mN • m<br>2 to 5 g • cm<br>(0.03 to 0.07 oz • inch)     |
| Fast Forward<br>and<br>Rewind | CQ-201B      | 5.89 to 11.76 mN • m<br>60 to 120 g • cm<br>(0.83 to 1.67 oz • inch) |

### Tape Tension Measurement DECK A DECK B

| Mode    | Tension meter | Meter reading                          |
|---------|---------------|--|
| Forward | CQ-403A       | more than 150 g<br>(more than 5.29 oz) |

## SECTION 5 ELECTRICAL ADJUSTMENTS

**TAPE SECTION**    **0 dB = 0.775 V**

### Standard Output Level

| Output terminal     | SP OUT         | PHONES OUT      |
|---------------------|----------------|-----------------|
| load impedance      | 6 Ω            | 32 Ω            |
| output signal level | 0.775 V (0 dB) | 0.25 V (-10 dB) |

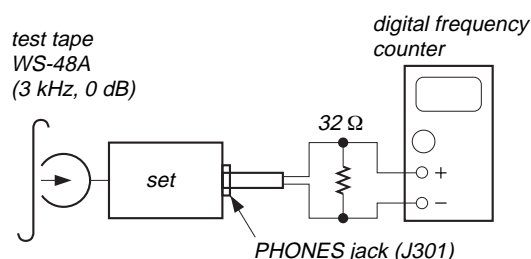
### Test Tape

| Tape   | Signal      | Used for              |
|--------|-------------|-----------------------|
| WS-48A | 3 kHz, 0 dB | tape speed adjustment |

### Tape Speed Adjustment DECK A DECK B

#### Procedure:

- Perform normal speed adjustment before high speed check.
- Mode: playback (deck A)  
record (deck B)



Adjust RV301 so that reading on digital frequency counter becomes 3,000 Hz.

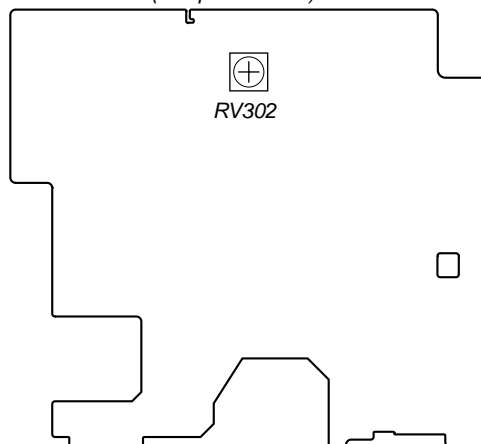
### Specification Value:

| Deck | Tape speed                  | Adjustment point | Frequency counter |
|------|-----------------------------|------------------|-------------------|
| A    | Normal (playback)           | RV302            | 2,910 to 3,090 Hz |
| A    | HI-SPEED DUBBING (playback) | (confirmation)   | 5,820 to 6,180 Hz |
| B    | HI-SPEED DUBBING (record)   | —                | —                 |

Frequency difference between the beginning and the end of the tape should be within ± 1.0% (both Normal and Hi-speed).

**Adjustment Location:** – main board (component side) –

– MAIN board (component side) –



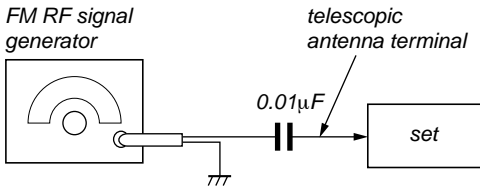
**TUNER SECTION** 0 dB = 1  $\mu$ V

**Common Setting:**

SOUND SELECT control: FLAT  
 VOLUME control: MAX  
 MAXI BASS switch: OFF

• **FM Section**

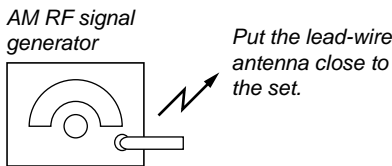
BAND switch: FM



75kHz frequency deviation  
 by 1kHz signal  
 Output level: as low as possible

• **MW Section**

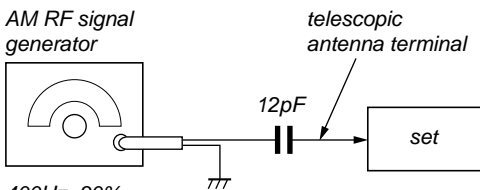
BAND switch: MW  
 FINE TUNING (RV2): mechanical center



400Hz, 30%  
 AM modulation  
 Output level: as low as possible

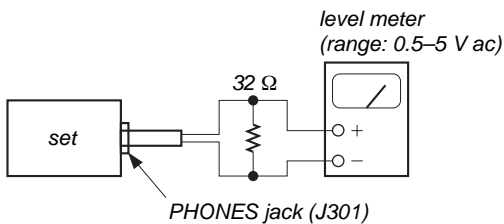
• **SW1/SW2 Section**

BAND switch: SW1 or SW2  
 FINE TUNING (RV2): mechanical center



400Hz, 30%  
 AM modulation  
 Output level: as low as possible

• **Common Connecting Level Meter**



• Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

| FM IF ADJUSTMENT                             |          |
|--|----------|
| Adjust for a maximum reading on level meter. |          |
| L9   | 10.7 MHz |

| FM FREQUENCY COVERAGE ADJUSTMENT             |           |
|--|-----------|
| Adjust for a maximum reading on level meter. |           |
| L2   | 86.5 MHz  |
| CT2  | 109.5 MHz |

| FM TRACKING ADJUSTMENT                       |           |
|--|-----------|
| Adjust for a maximum reading on level meter. |           |
| L1   | 86.5 MHz  |
| CT1  | 109.5 MHz |

| MW IF ADJUSTMENT                             |         |
|--|---------|
| Adjust for a maximum reading on level meter. |         |
| T1   | 455 kHz |

| MW FREQUENCY COVERAGE ADJUSTMENT             |           |
|--|-----------|
| Adjust for a maximum reading on level meter. |           |
| L4   | 520 kHz   |
| CT4  | 1,680 kHz |

| MW TRACKING ADJUSTMENT                       |           |
|--|-----------|
| Adjust for a maximum reading on level meter. |           |
| L3   | 600 kHz   |
| CT3  | 1,400 kHz |

| SW1 FREQUENCY COVERAGE ADJUSTMENT            |         |
|--|---------|
| Adjust for a maximum reading on level meter. |         |
| L6   | 2.2 MHz |
| CT6  | 7.3 MHz |

| SW1 TRACKING ADJUSTMENT                      |         |
|--|---------|
| Adjust for a maximum reading on level meter. |         |
| L5   | 2.2 MHz |
| < confirmation >                             | 7.3 MHz |

| SW2 FREQUENCY COVERAGE ADJUSTMENT            |          |
|--|----------|
| Adjust for a maximum reading on level meter. |          |
| L8   | 6.8 MHz  |
| CT8  | 22.5 MHz |

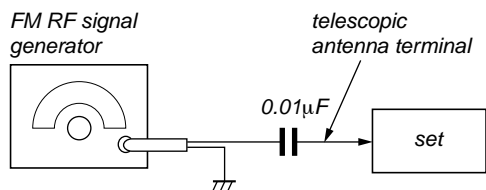
| SW2 TRACKING ADJUSTMENT                      |          |
|--|----------|
| Adjust for a maximum reading on level meter. |          |
| L7   | 6.8 MHz  |
| < confirmation >                             | 22.5 MHz |

Adjustment Location: See page 11

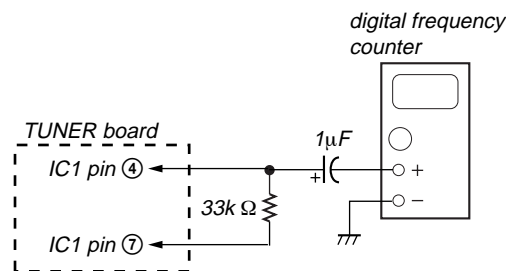
**FM VCO Adjustment**

**Setting:**

BAND switch: FM



98MHz frequency deviation  
by 1kHz signal  
Output level: 0.1V (100dB)

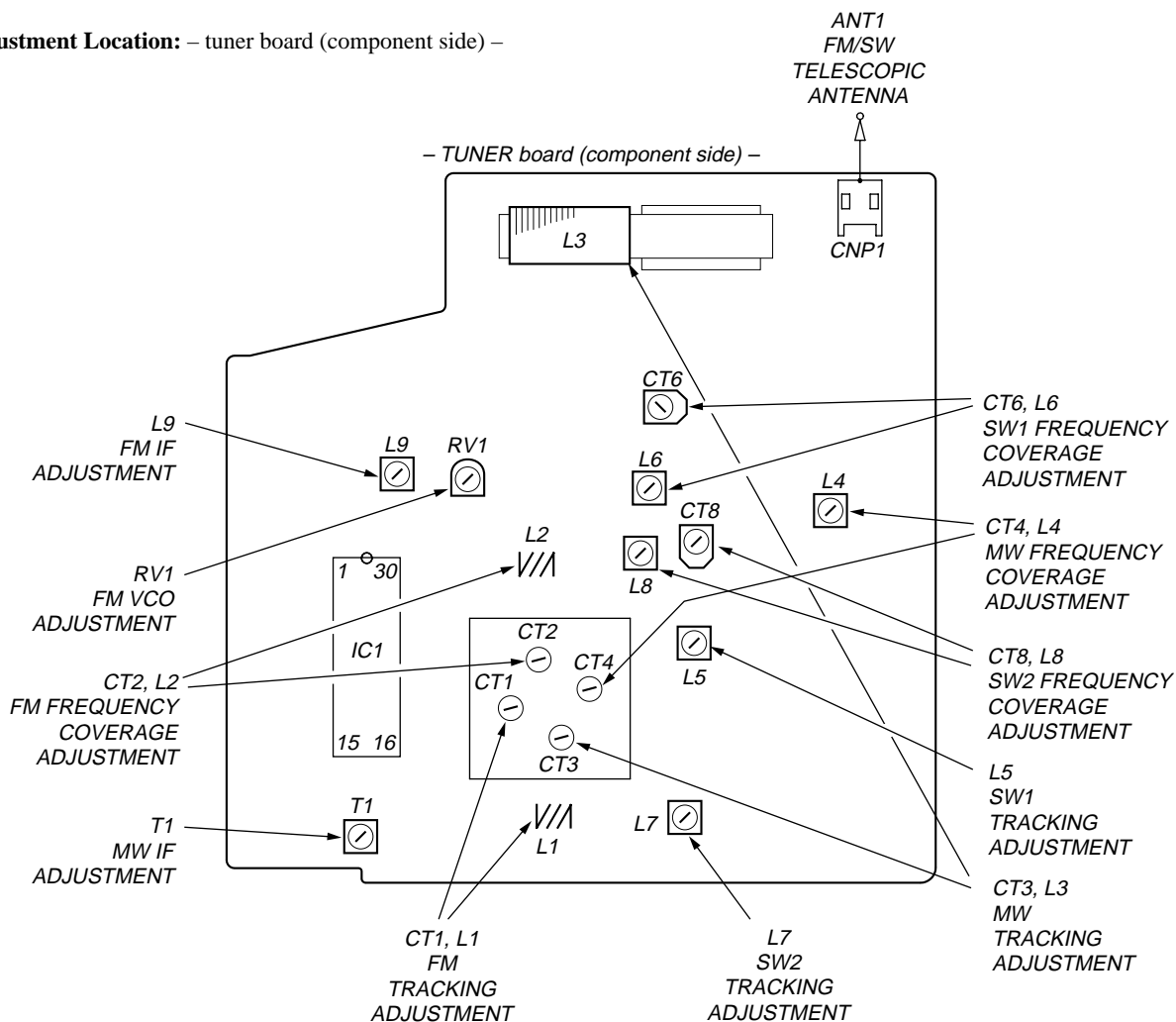


**Procedure:**

1. Connect the frequency counter to pins ④ and ⑦ of IC1 as shown the figure.
2. Tune the set to 98 MHz.
3. Adjust RV1 for 76 kHz reading on the frequency counter.

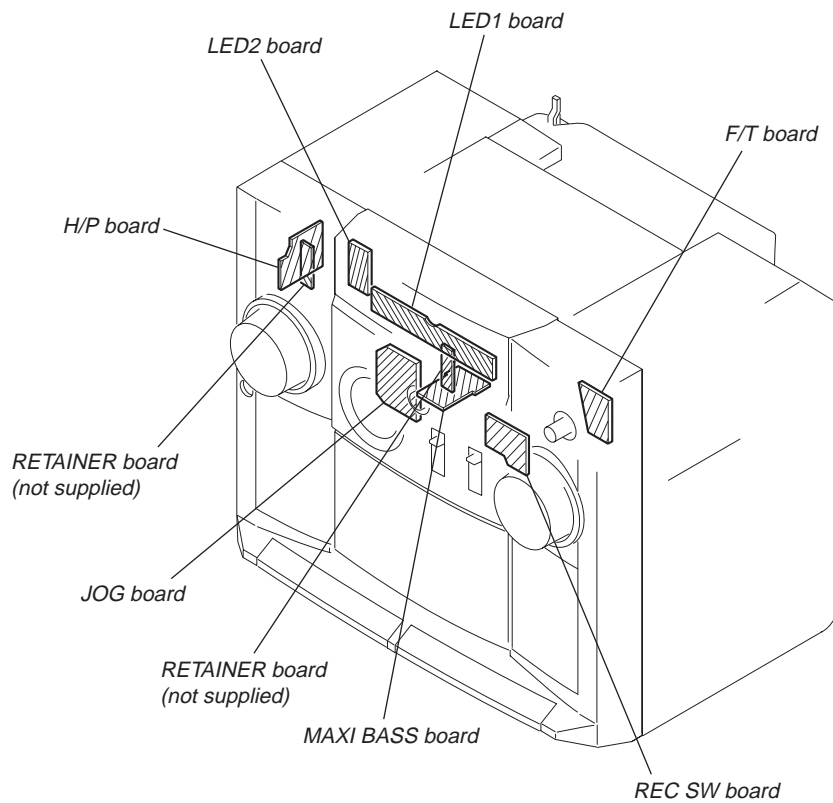
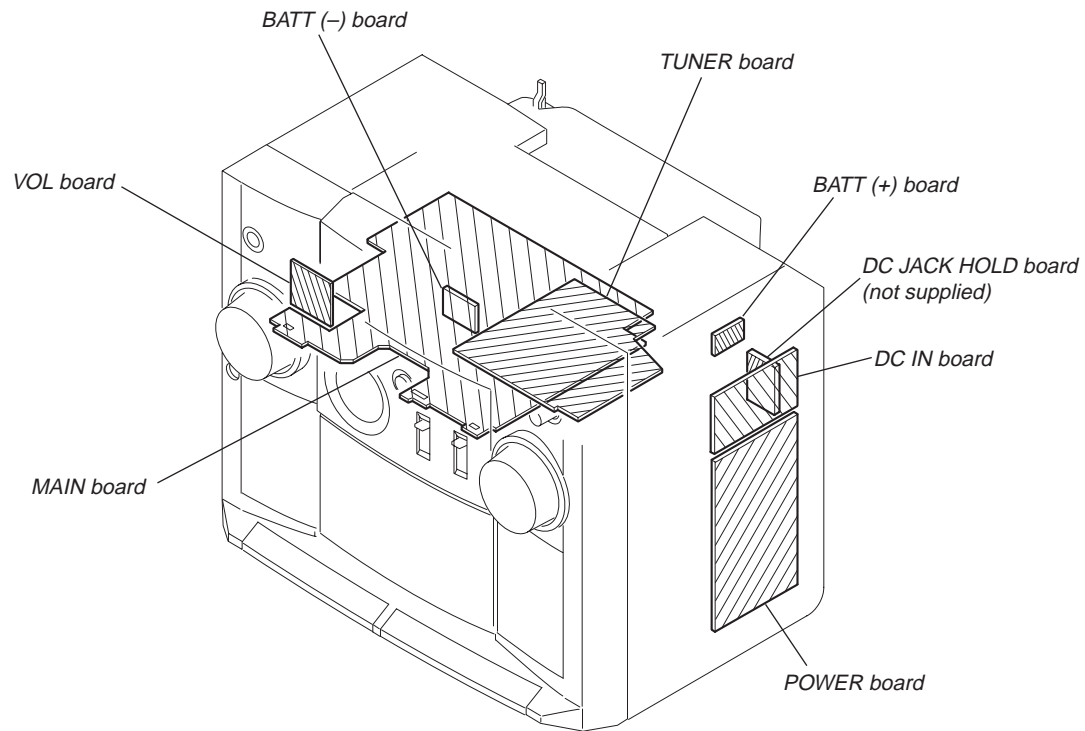
Specification Value: 75.95 to 76.05 kHz.

**Adjustment Location:** – tuner board (component side) –

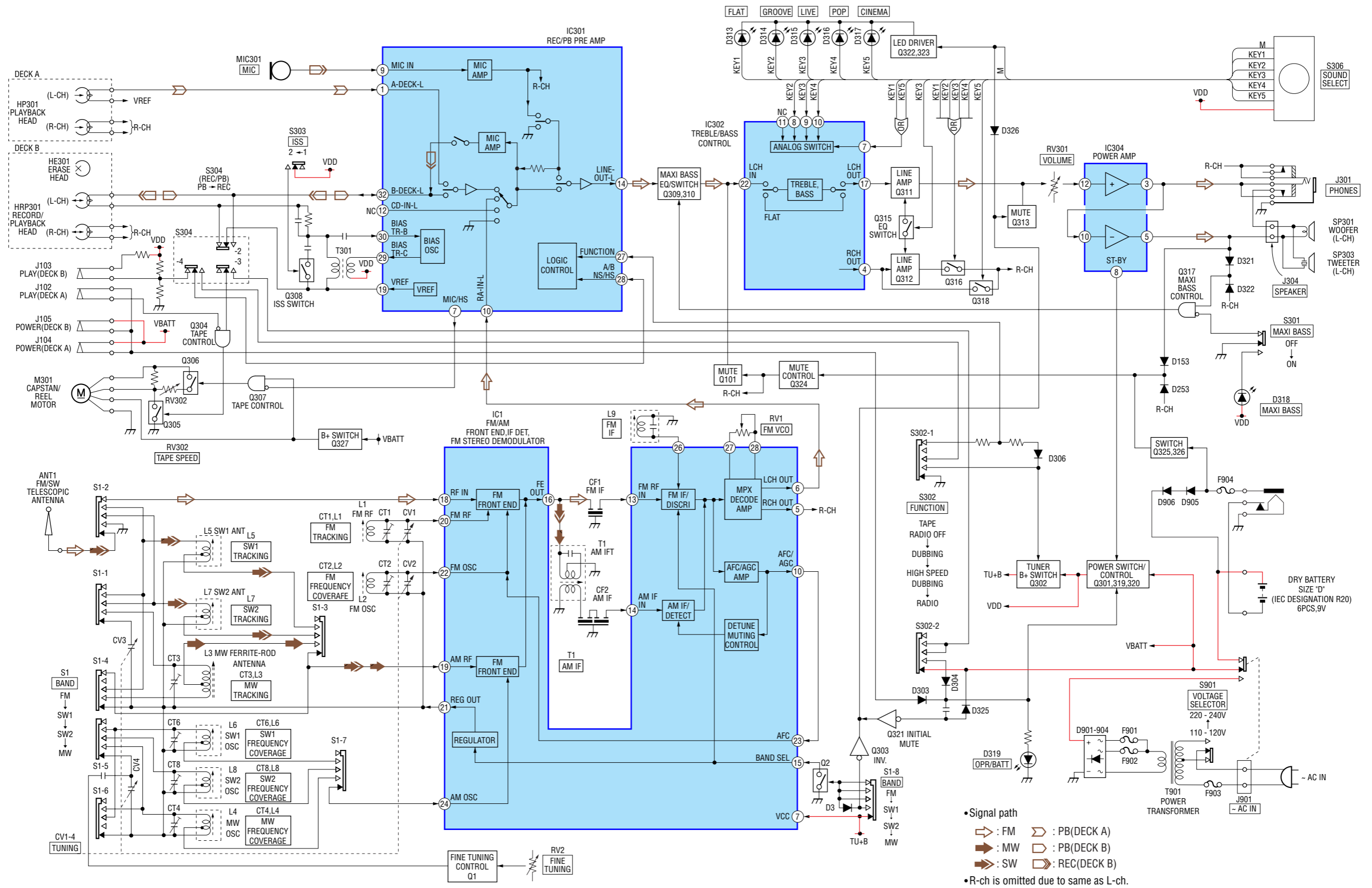


# SECTION 6 DIAGRAMS

## 6-1. CIRCUIT BOARDS LOCATION



6-2. BLOCK DIAGRAM




- Signal path
- : FM
- : PB (DECK A)
- : MW
- : PB (DECK B)
- : SW
- : REC (DECK B)
- R-ch is omitted due to same as L-ch.

6-3. PRINTED WIRING BOARDS — TUNER SECTION — • Refer to page 12 for Circuit Boards Location.



 : Uses unleaded solder.

**THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.**  
(In addition to this, the necessary note is printed in each block.)

**Common Note on Schematic Diagrams:**

- All capacitors are in  $\mu\text{F}$  unless otherwise noted. pF:  $\mu\text{pF}$  50 WV 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.
- $\Delta$  : internal component.
-  : panel designation.

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

-  : B+ Line.
-  : adjustment for repair.
- Total current is measured with no cassette installed.
- Power voltage is dc 9V and fed with regulated dc power supply from battery terminal.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.

**TUNER SECTION**

- no mark : FM
- ( ) : MW
- < : SW

**MAIN SECTION**

- no mark : FM
- ( ) : PB
- < : REC
- [ ] : DUBBING





- Voltages are taken with a VOM (Input impedance 10 M $\Omega$ ). Voltage variations may be noted due to normal production tolerances.

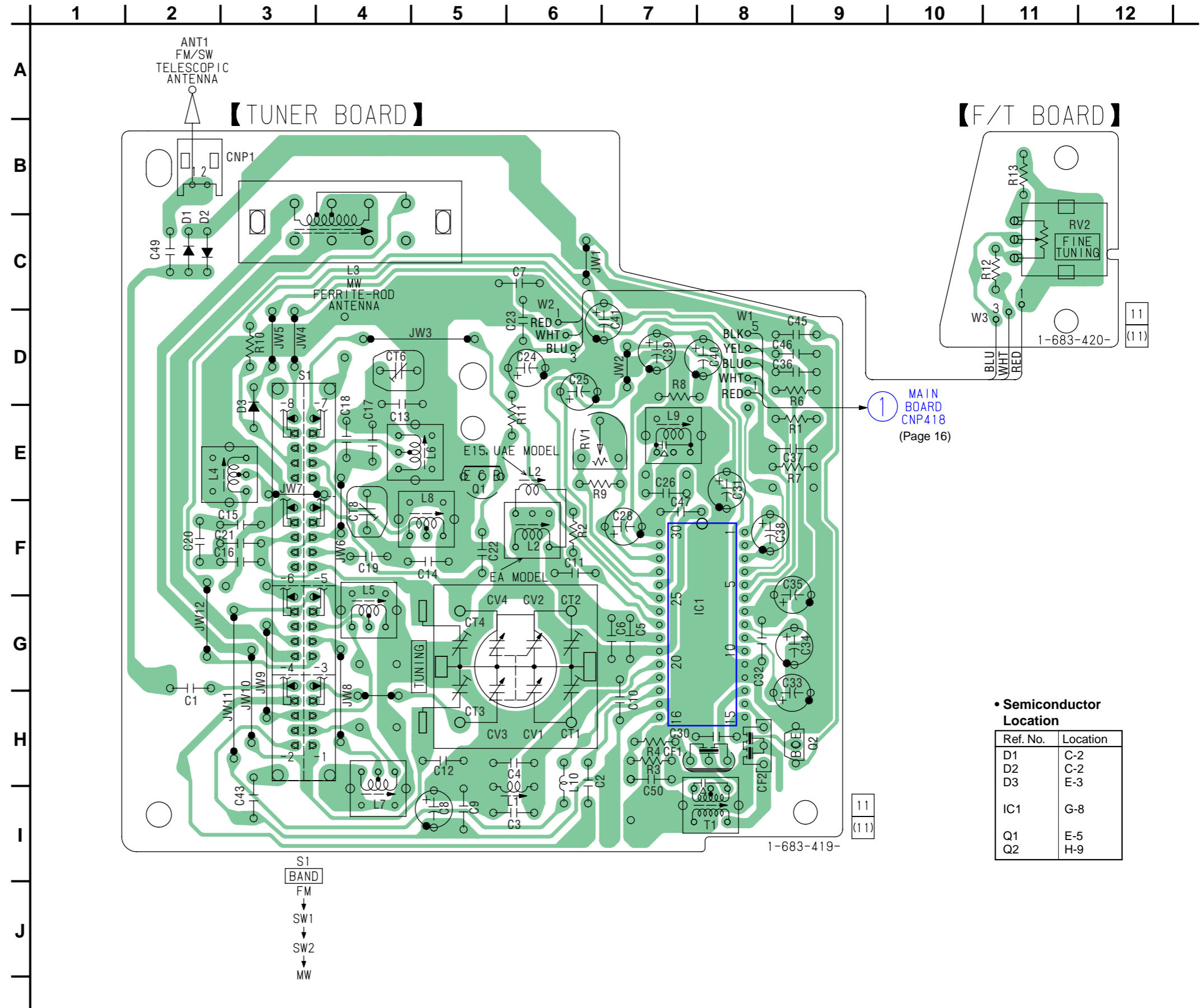
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.

**Signal path.**

-  : FM
-  : MW
-  : SW
-  : PB (DECK A)
-  : PB (DECK B)
-  : REC (DECK B)

**Common Note on Printed Wiring Boards:**

-  : parts extracted from the component side.
-  : parts extracted from the conductor side.
-  : parts mounted on the conductor side.
- $\Delta$  : internal component.
-  : Pattern from the side which enables seeing.



**• Semiconductor Location**

| Ref. No. | Location |
|----------|----------|
| D1       | C-2      |
| D2       | C-2      |
| D3       | E-3      |
| IC1      | G-8      |
| Q1       | E-5      |
| Q2       | H-9      |

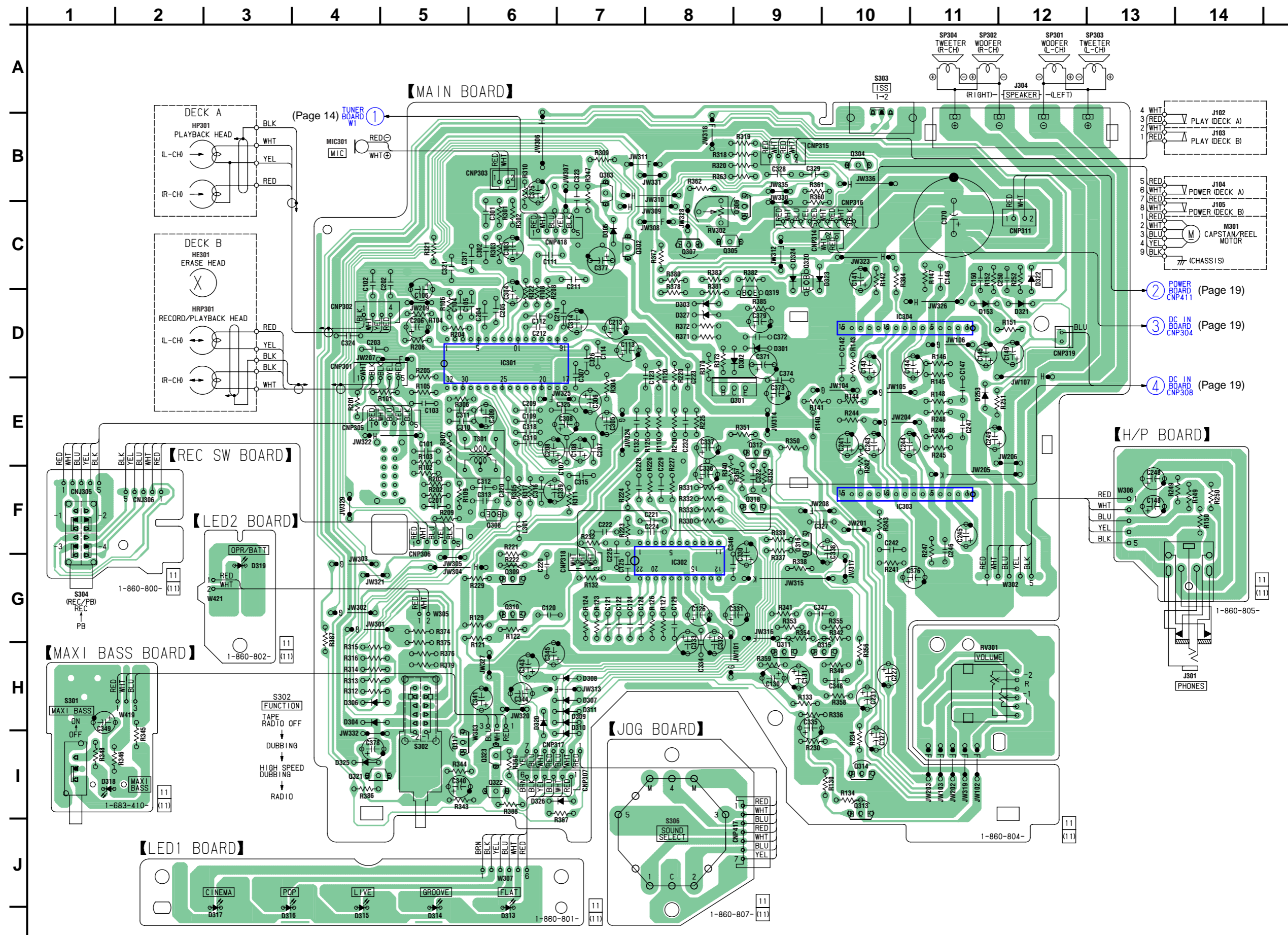




6-5. PRINTED WIRING BOARDS — MAIN SECTION — • Refer to page 12 for Circuit Boards Location and page 14 for Common Note on Printed Wiring Boards.  : Uses unleaded solder.

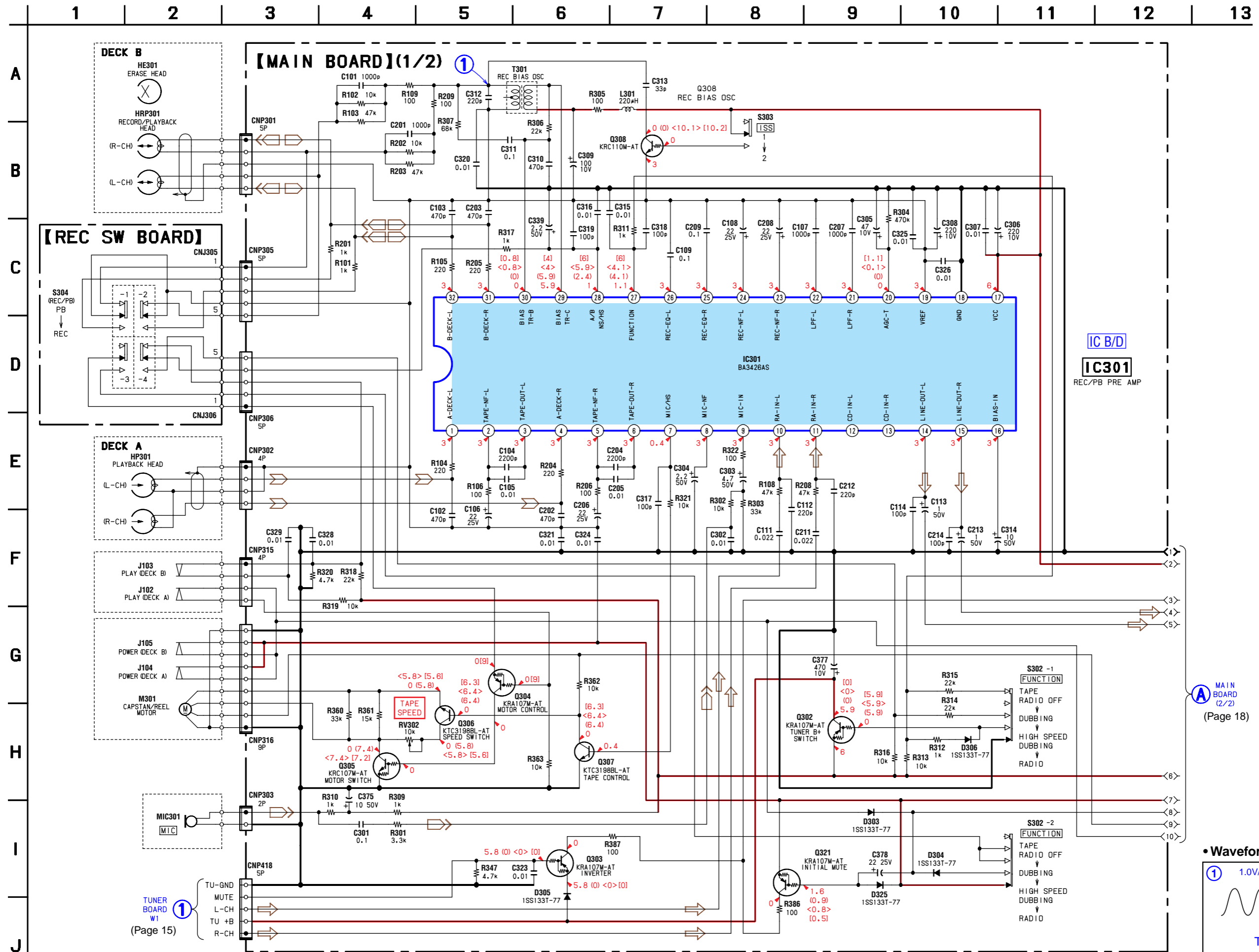
• Semiconductor Location

| Ref. No. | Location |
|----------|----------|
| D153     | C-11     |
| D253     | E-11     |
| D301     | D-9      |
| D302     | D-9      |
| D303     | D-8      |
| D304     | H-4      |
| D305     | C-7      |
| D306     | H-4      |
| D307     | H-7      |
| D308     | H-7      |
| D309     | H-7      |
| D310     | H-7      |
| D311     | H-7      |
| D313     | J-6      |
| D314     | J-5      |
| D315     | J-4      |
| D316     | J-3      |
| D317     | J-3      |
| D318     | I-1      |
| D319     | G-3      |
| D320     | H-6      |
| D321     | D-12     |
| D322     | C-12     |
| D323     | C-10     |
| D324     | C-9      |
| D325     | I-4      |
| D326     | I-6      |
| D327     | D-8      |
| IC301    | D-6      |
| IC302    | F-10     |
| IC303    | F-10     |
| IC304    | D-10     |
| Q301     | E-9      |
| Q302     | C-7      |
| Q303     | B-7      |
| Q304     | B-10     |
| Q305     | C-8      |
| Q306     | C-9      |
| Q307     | C-8      |
| Q308     | F-6      |
| Q309     | G-6      |
| Q310     | G-6      |
| Q311     | H-9      |
| Q312     | E-9      |
| Q313     | I-10     |
| Q314     | I-10     |
| Q315     | H-10     |
| Q316     | F-9      |
| Q317     | I-5      |
| Q318     | F-9      |
| Q319     | D-9      |
| Q320     | C-9      |
| Q321     | I-4      |
| Q322     | I-6      |
| Q323     | I-6      |

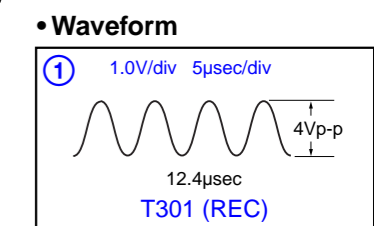




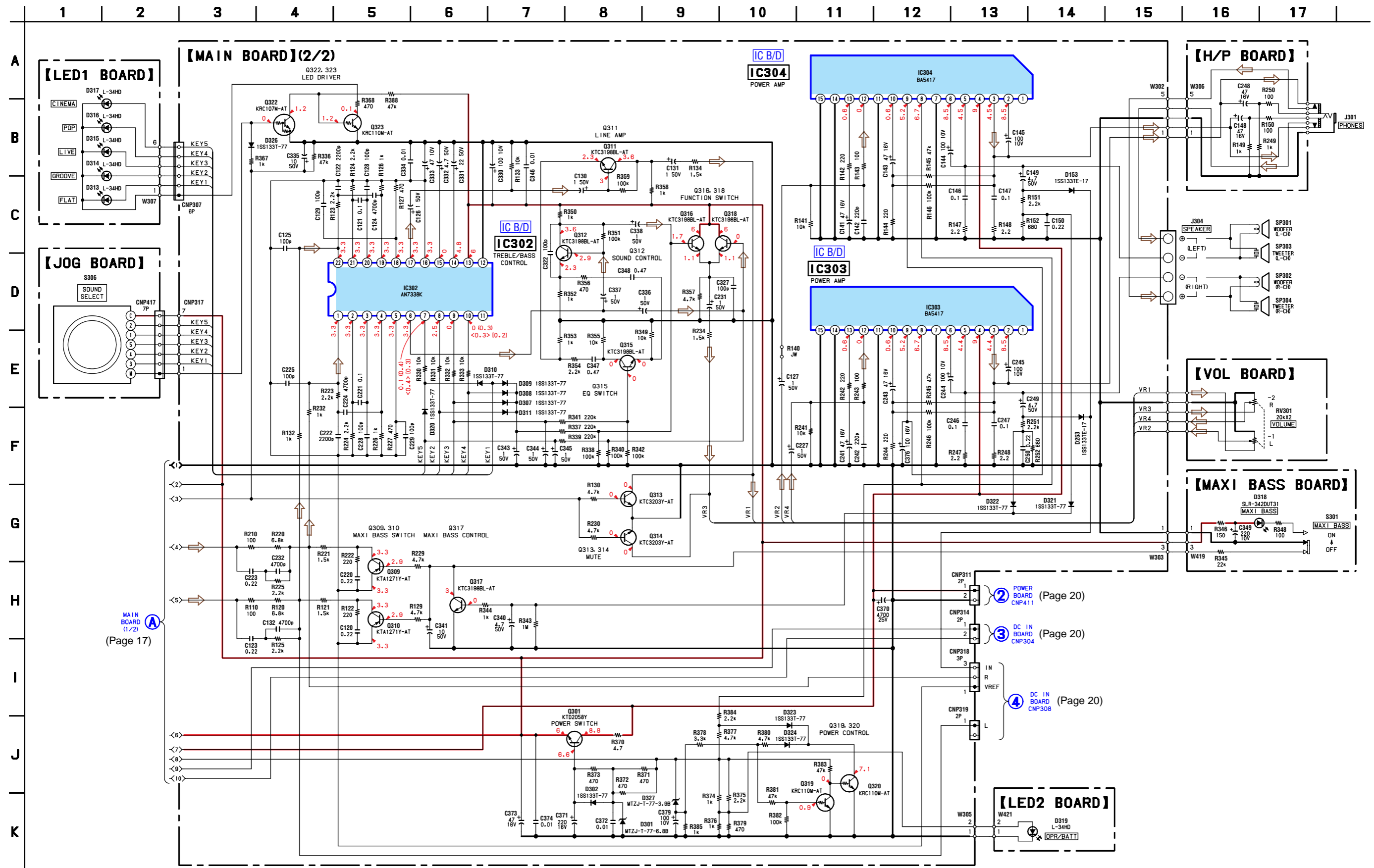
6-6. SCHEMATIC DIAGRAM — MAIN SECTION (1/2) — • Refer to page 14 for Common Note on Schematic Diagrams and page 21 for IC Block Diagrams.



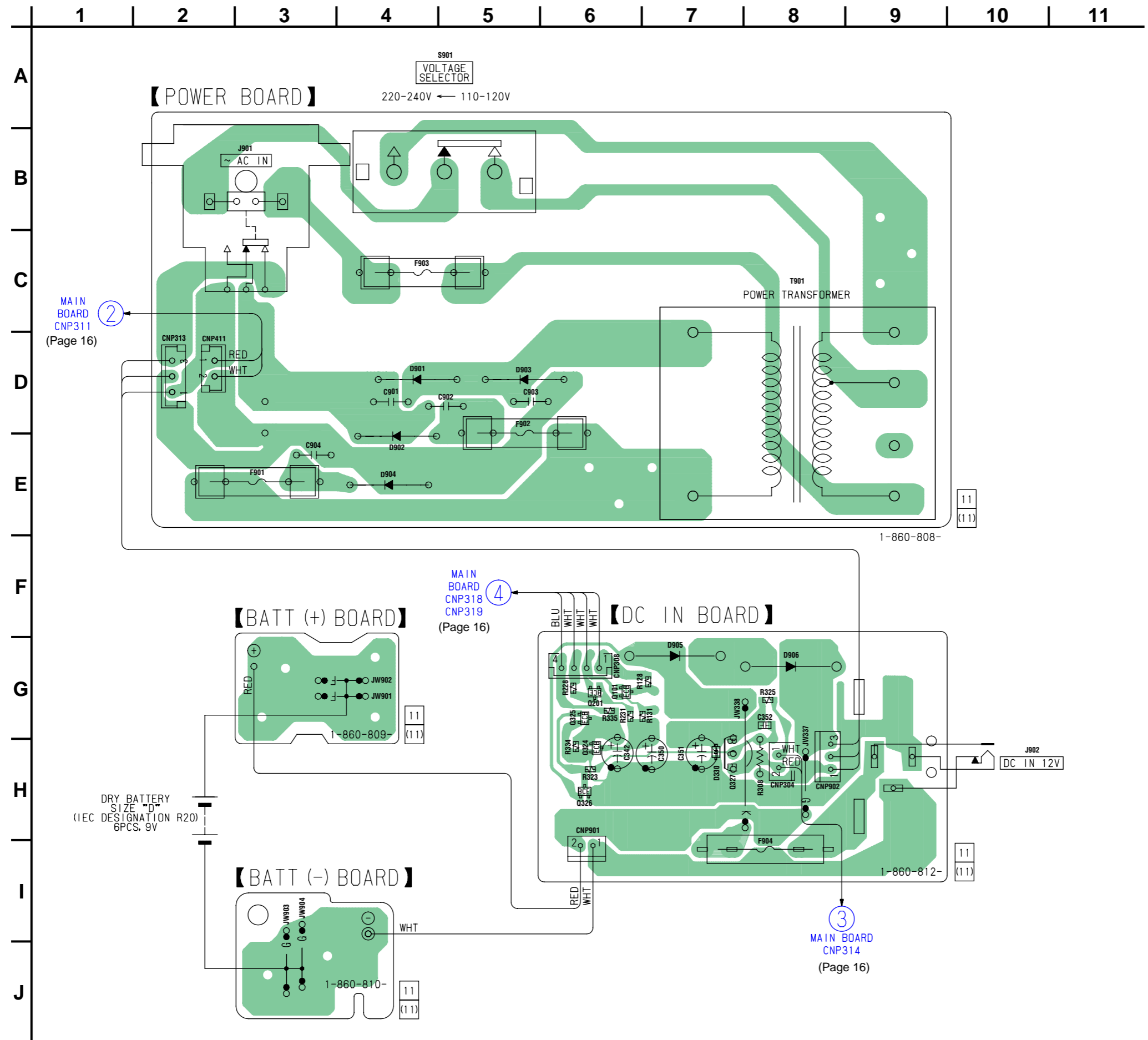
MAIN BOARD (2/2) (Page 18)



6-7. SCHEMATIC DIAGRAM — MAIN SECTION (2/2) — • Refer to page 14 for Common Note on Schematic Diagrams and page 22 for IC Block Diagrams.



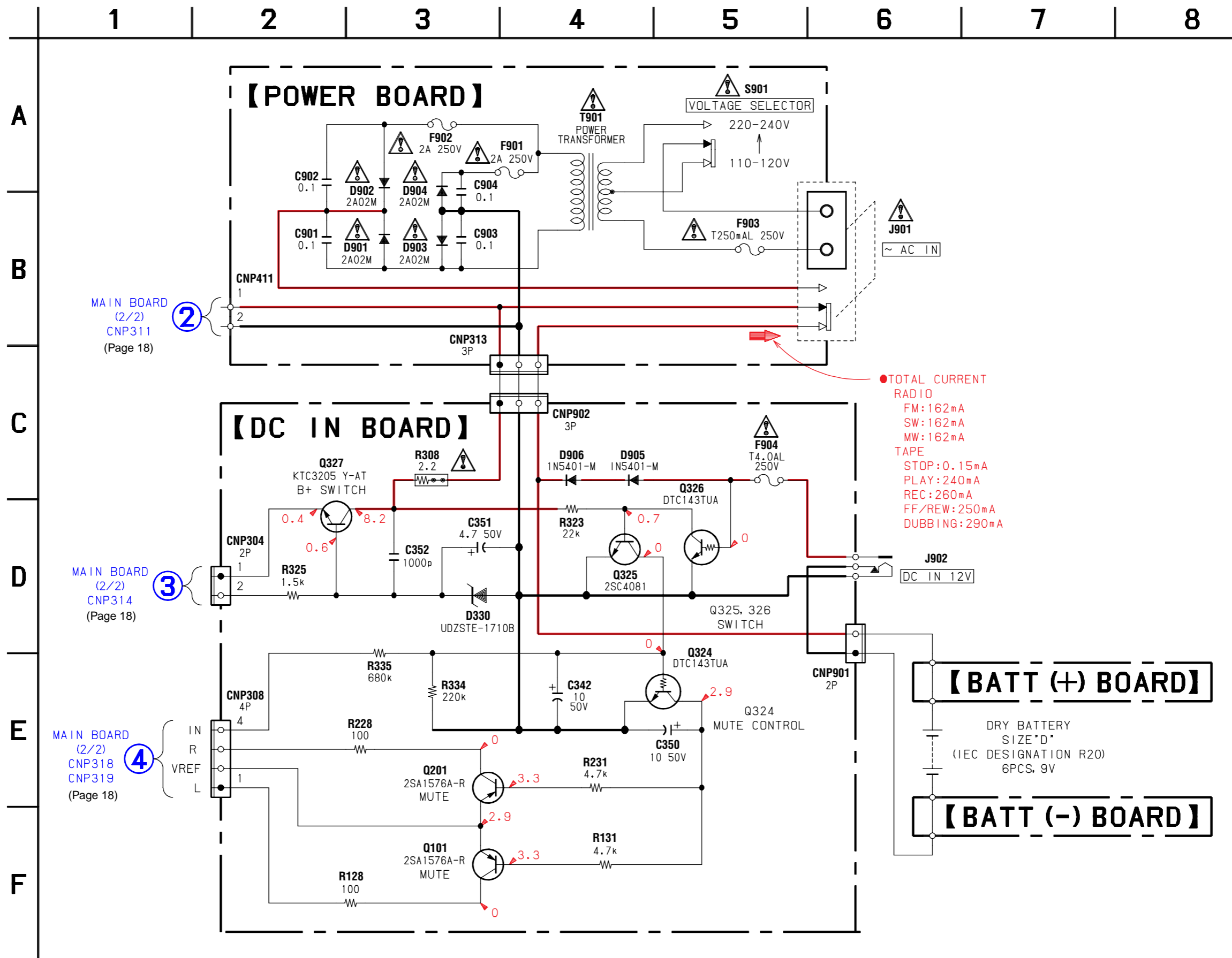
6-6. PRINTED WIRING BOARDS — POWER SECTION — • Refer to page 12 for Circuit Boards Location and page 14 for Common Note on Printed Wiring Boards.  : Uses unleaded solder.



• Semiconductor Location

| Ref. No. | Location |
|----------|----------|
| D330     | H-7      |
| D901     | D-4      |
| D902     | E-4      |
| D903     | D-5      |
| D904     | E-4      |
| D905     | G-7      |
| D906     | G-8      |
| Q101     | G-6      |
| Q201     | G-6      |
| Q324     | H-6      |
| Q325     | G-6      |
| Q326     | H-6      |
| Q327     | H-7      |

6-9. SCHEMATIC DIAGRAM — POWER SECTION — • Refer to page 14 for Common Note on Schematic Diagrams.



MAIN BOARD (2/2)  
CNP311  
(Page 18)

MAIN BOARD (2/2)  
CNP314  
(Page 18)

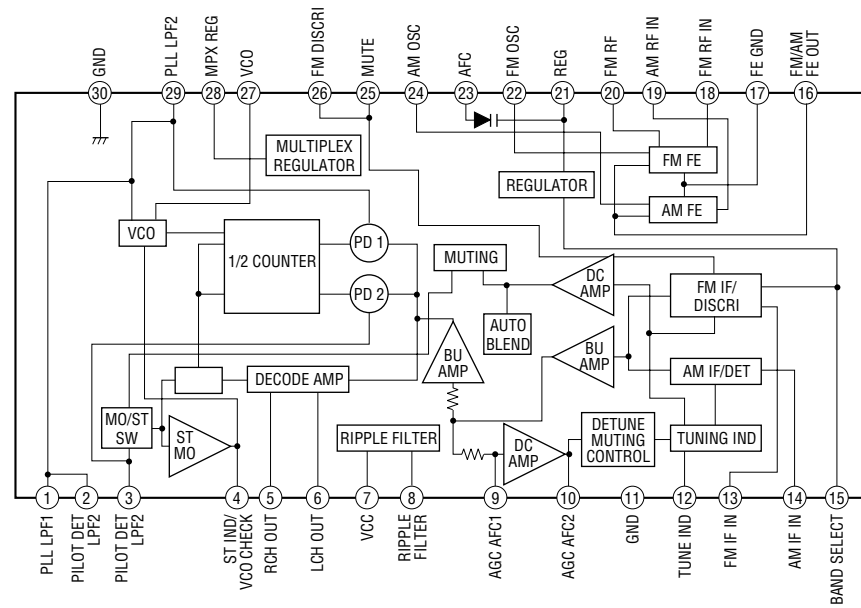
MAIN BOARD (2/2)  
CNP318  
CNP319  
(Page 18)

- TOTAL CURRENT RADIO
- FM: 162mA
- SW: 162mA
- MW: 162mA
- TAPE
- STOP: 0.15mA
- PLAY: 240mA
- REC: 260mA
- FF/REW: 250mA
- DUBBING: 290mA

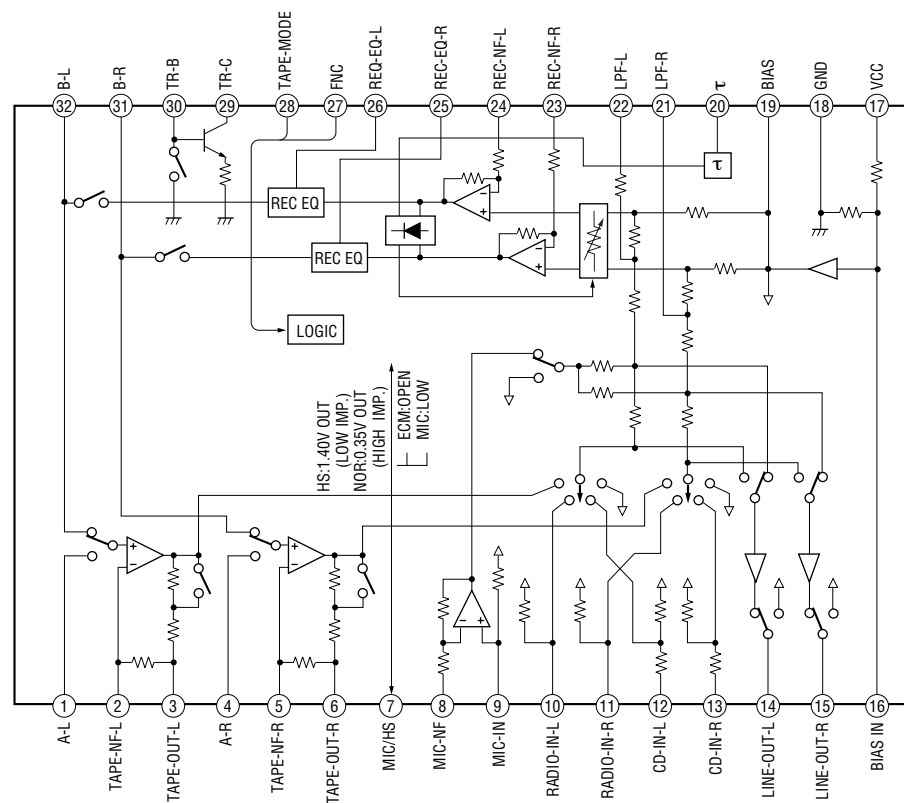
**Note:** The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety. Replace only with part number specified.

• IC Block Diagrams

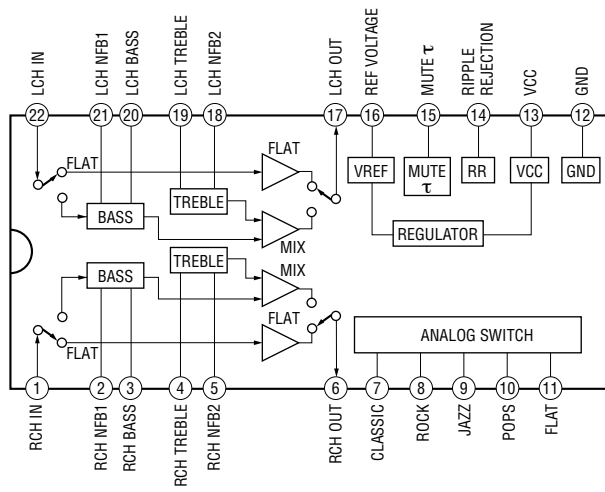
IC1 CXA1538S



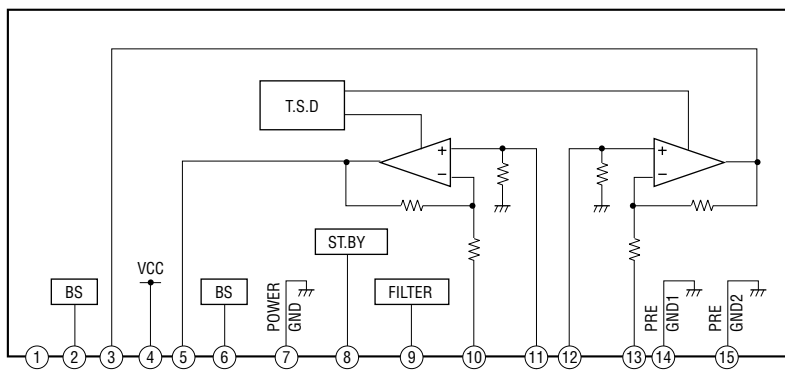
IC301 BA3426AS



IC302 AN7338K



IC303, 304 BA5417



## SECTION 7 EXPLODED VIEWS

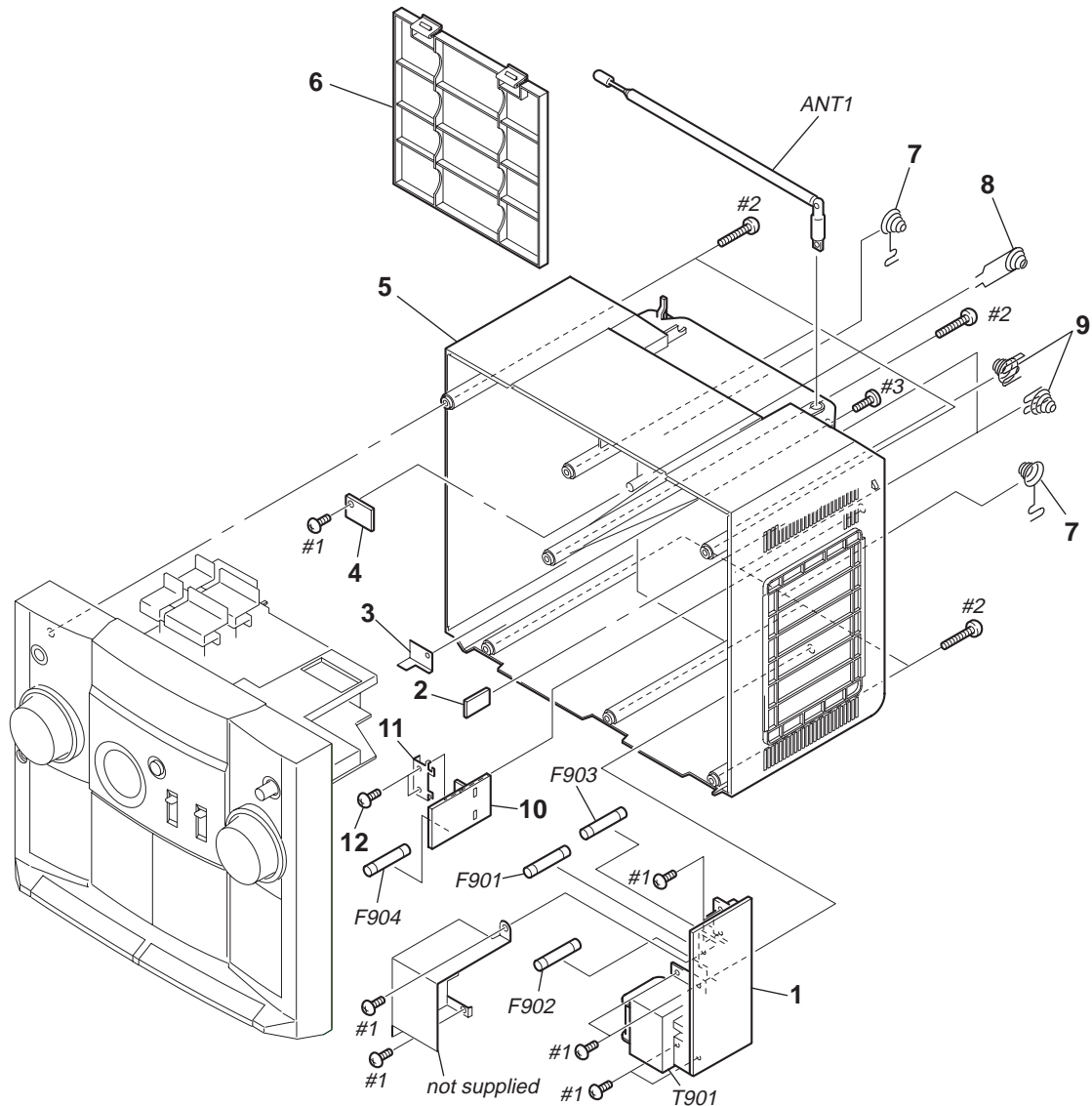
**NOTE:**

- 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.

- Color Indication of Appearance Parts  
Example :  
    ↑                    ↑  
    KNOB, BALANCE (WHITE) ... (RED)  
                    Parts Color Cabinet's Color
- Accessories list is given in the last of this parts list.

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

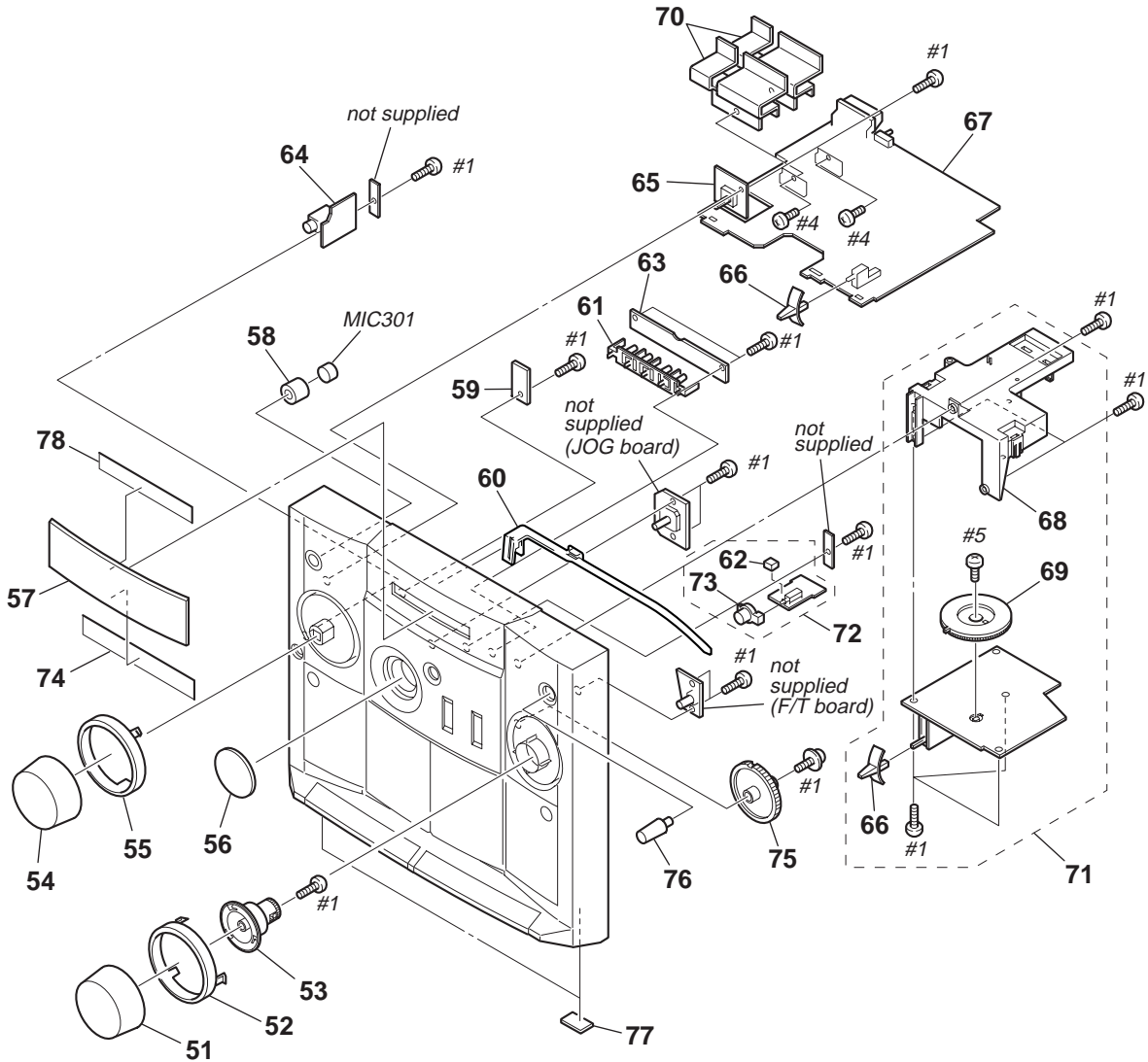
### 7-1. CABINET (REAR) SECTION



| Ref. No. | Part No.     | Description                | Remark | Ref. No.         | Part No.     | Description                           | Remark |
|----------|--------------|----------------------------|--------|------------------|--------------|---------------------------------------|--------|
| * 1      | 1-860-808-11 | POWER BOARD                |        | 12               | 4-951-620-01 | SCREW (2.6X8), +BVTP                  |        |
| * 2      | 1-860-809-11 | BATT (+) BOARD             |        | ANT1             | 1-501-820-11 | ANTENNA, TELESCOPIC (FM/SW)           |        |
| 3        | 3-236-183-01 | TERMINAL (ANT)             |        | $\triangle$ F901 | 1-533-468-12 | FUSE, GLASS TUBE (DIA.5) (2A/250V)    |        |
| * 4      | 1-860-810-11 | BATT (-) BOARD             |        | $\triangle$ F902 | 1-533-468-12 | FUSE, GLASS TUBE (DIA.5) (2A/250V)    |        |
| 5        | 3-236-150-41 | CABINET (REAR)             |        | $\triangle$ F903 | 1-533-459-12 | FUSE, GLASS TUBE (DIA.5) (0.25A/250V) |        |
| 6        | 3-236-149-01 | LID, BATTERY CASE          |        | $\triangle$ F904 | 1-533-471-12 | FUSE, GLASS TUBE (DIA.5) (4A/250V)    |        |
| 7        | 3-236-194-03 | TERMINAL (+-) (B), BATTERY |        | $\triangle$ T901 | 1-437-570-21 | TRANSFORMER, POWER                    |        |
| 8        | 3-236-207-03 | TERMINAL (-), BATTERY      |        | #1               | 7-685-647-79 | SCREW +BVTP 3X10 TYPE2 N-S            |        |
| 9        | 3-236-193-03 | TERMINAL (+-) (A), BATTERY |        | #2               | 7-685-650-79 | SCREW +BVTP 3X16 TYPE2 N-S            |        |
| * 10     | A-4541-738-A | DC IN BOARD, COMPLETE      |        | #3               | 7-682-148-13 | SCREW +P 3X8                          |        |
| 11       | 3-261-339-01 | CHASSIS DC JACK            |        |                  |              |                                       |        |



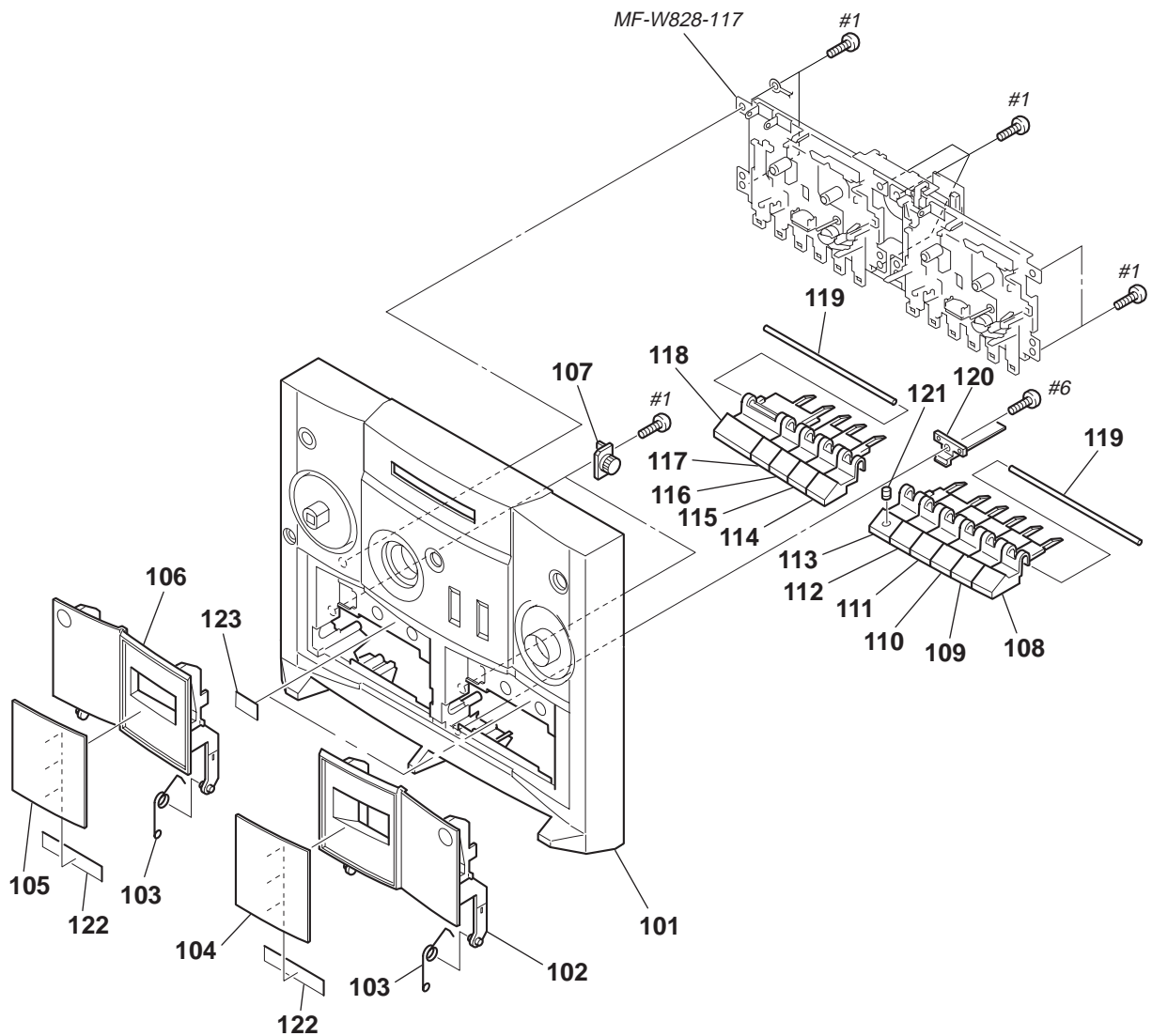
7-2. CABINET (FRONT) SECTION-1



| Ref. No. | Part No.     | Description         | Remark | Ref. No. | Part No.     | Description                    | Remark |
|----------|--------------|---------------------|--------|----------|--------------|--------------------------------|--------|
| 51       | 3-236-130-02 | KNOB (TUNE)         |        | * 67     | A-4541-741-A | MAIN BOARD, COMPLETE           |        |
| 52       | 3-236-151-01 | RING (KNOB)         |        | 68       | 3-236-140-02 | CHASSIS (TUNE)                 |        |
| 53       | 3-236-132-02 | GEAR (TUNE)         |        | 69       | 3-236-148-01 | GEAR (VC)                      |        |
| 54       | 3-236-131-02 | KNOB (VOL)          |        | 70       | 3-259-212-01 | HEAT SINK                      |        |
| 55       | 3-236-159-01 | RING (VOL)          |        | * 71     | A-3021-630-A | TUNER BOARD, COMPLETE          |        |
| 56       | 3-046-526-11 | DIAL, JOG           |        | * 72     | A-4541-740-A | MAXI BASS BOARD, COMPLETE      |        |
| 57       | 3-236-128-01 | WINDOW, SCALE       |        | 73       | 3-236-142-01 | BUTTON (M.B)                   |        |
| 58       | 3-918-516-02 | CUSHION, MICROPHONE |        | 74       | 3-241-390-01 | SHEET (S2), ADHESIVE           |        |
| * 59     | 1-860-802-11 | LED2 BOARD          |        | 75       | 3-236-147-01 | GEAR, MIDWAY                   |        |
| 60       | 3-236-129-02 | POINTER             |        | 76       | 3-236-145-01 | KNOB (FT)                      |        |
| 61       | 3-236-141-01 | WINDOW (LED)        |        | 77       | 3-039-471-02 | FOOT                           |        |
| 62       | 3-239-048-01 | HOLDER (LED)        |        | 78       | 3-236-189-01 | SHEET (S), ADHESIVE            |        |
| * 63     | 1-860-801-11 | LED1 BOARD          |        | MIC301   | 1-542-527-11 | MICROPHONE, ELECTRET CAP (MIC) |        |
| * 64     | 1-860-805-11 | H/P BOARD           |        | #1       | 7-685-647-79 | SCREW +BVTP 3X10 TYPE2 N-S     |        |
| * 65     | 1-860-806-11 | VOL BOARD           |        | #4       | 7-685-645-79 | SCREW +BVTP 3X6 TYPE2 N-S      |        |
| 66       | 3-236-143-01 | KNOB (BAND)         |        | #5       | 7-621-259-25 | SCREW +P 2.6X4                 |        |

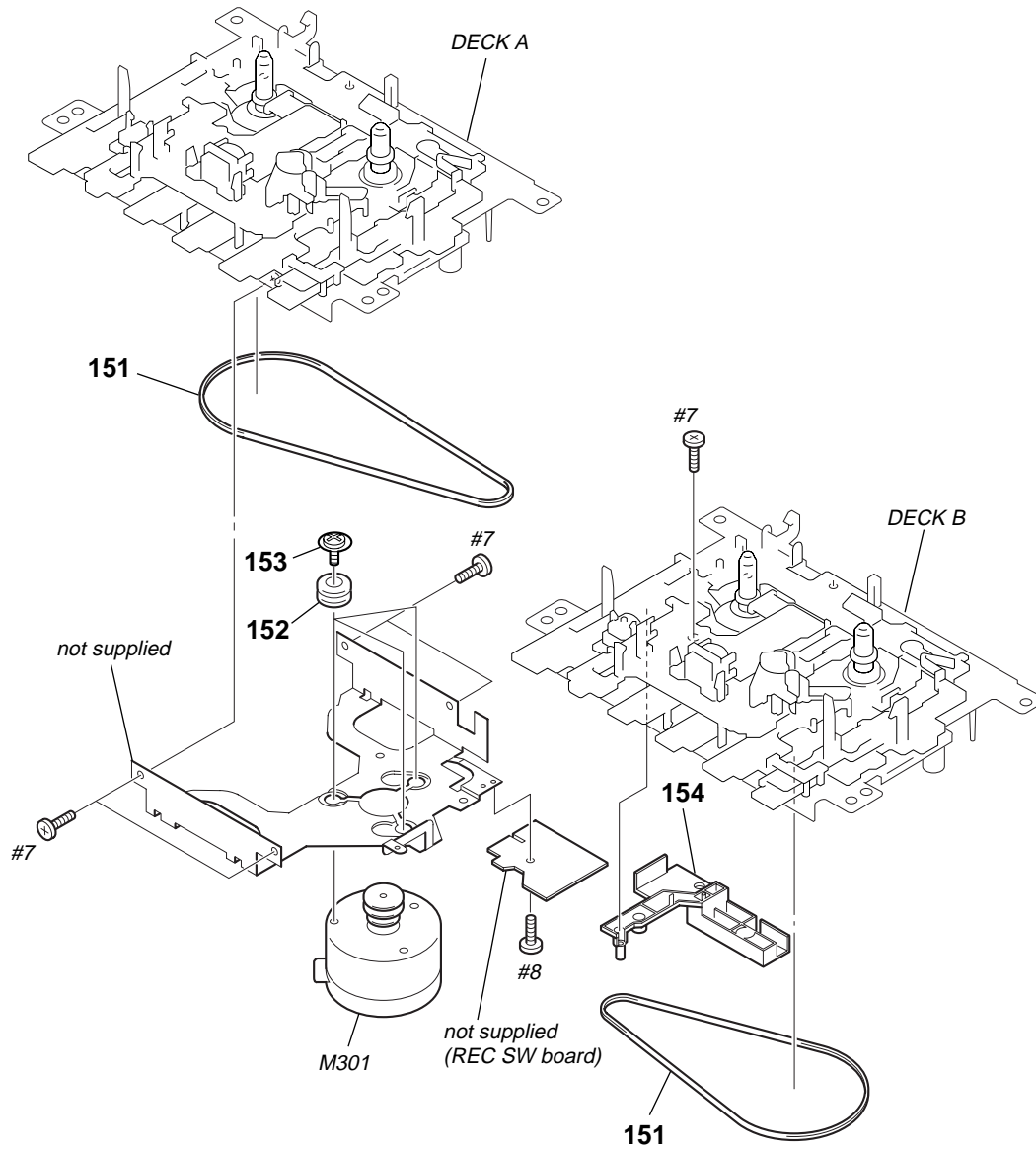


7-3. CABINET (FRONT) SECTION-2



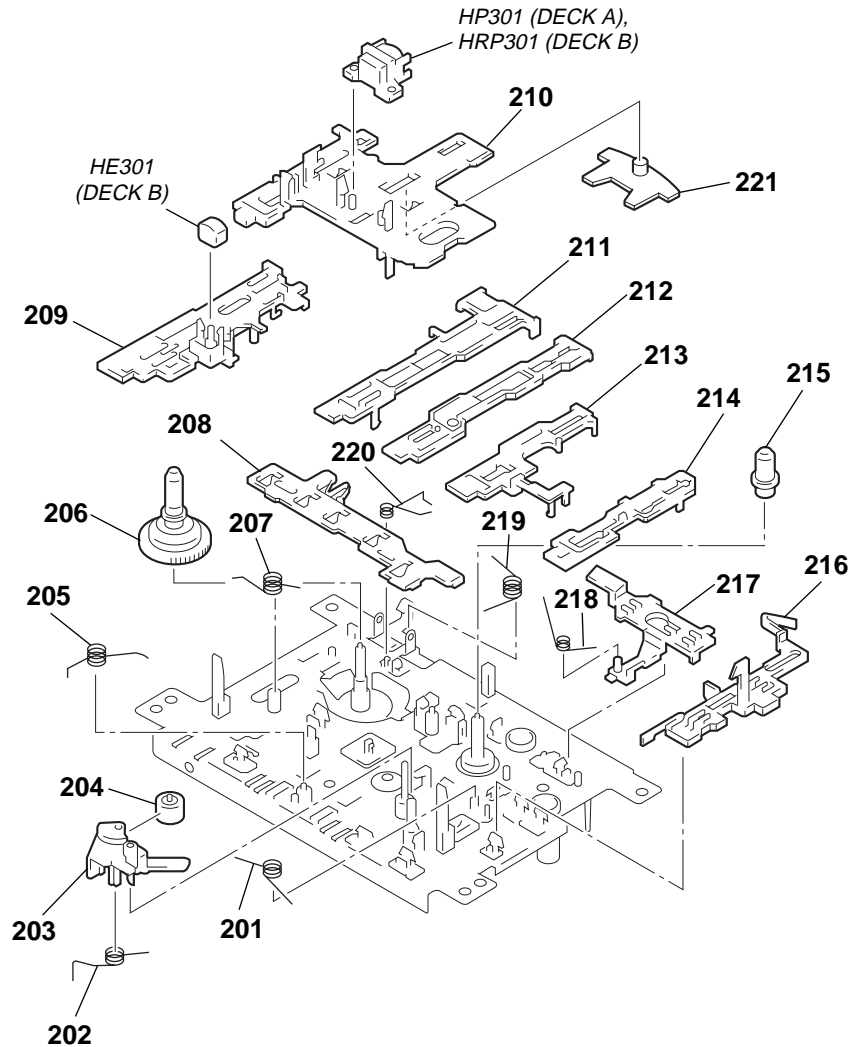
| Ref. No. | Part No.     | Description        | Remark | Ref. No. | Part No.     | Description                | Remark |
|----------|--------------|--------------------|--------|----------|--------------|----------------------------|--------|
| 101      | 3-236-125-21 | CABINET (FRONT)    |        | 114      | 3-243-766-01 | BUTTON (PAUSE) (A)         |        |
| 102      | 3-236-127-01 | LID (B), CASSETTE  |        | 115      | 3-243-765-01 | BUTTON (S/E) (A)           |        |
| 103      | 3-236-188-02 | SPRING (CAS)       |        | 116      | 3-243-764-01 | BUTTON (FF) (A)            |        |
| 104      | 3-236-185-01 | WINDOW (B)         |        | 117      | 3-243-763-01 | BUTTON (REW) (A)           |        |
| 105      | 3-236-184-01 | WINDOW (A)         |        | 118      | 3-243-762-01 | BUTTON (PLAY) (A)          |        |
| 106      | 3-236-126-01 | LID (A), CASSETTE  |        | 119      | 3-236-192-01 | SHAFT (MD)                 |        |
| 107      | 3-047-468-21 | DAMPER             |        | 120      | 3-236-139-01 | BRACKET (MD)               |        |
| 108      | 3-243-772-01 | BUTTON (PAUSE) (B) |        | 121      | 3-223-488-01 | MARKER (REC)               |        |
| 109      | 3-243-771-01 | BUTTON (S/E) (B)   |        | 122      | 3-236-190-01 | SHEET (A), ADHESIVE        |        |
| 110      | 3-243-770-01 | BUTTON (FF) (B)    |        | 123      | 3-232-480-01 | PLATE, ORNAMENTAL          |        |
| 111      | 3-243-769-01 | BUTTON (REW) (B)   |        | #1       | 7-685-647-79 | SCREW +BVTP 3X10 TYPE2 N-S |        |
| 112      | 3-243-768-01 | BUTTON (PLAY) (B)  |        | #6       | 7-685-534-14 | SCREW +BTP 2.6X8 TYPE2 N-S |        |
| 113      | 3-243-767-01 | BUTTON (REC)       |        |          |              |                            |        |

7-4. MECHANISM DECK SECTION-1  
(MF-W828-117)



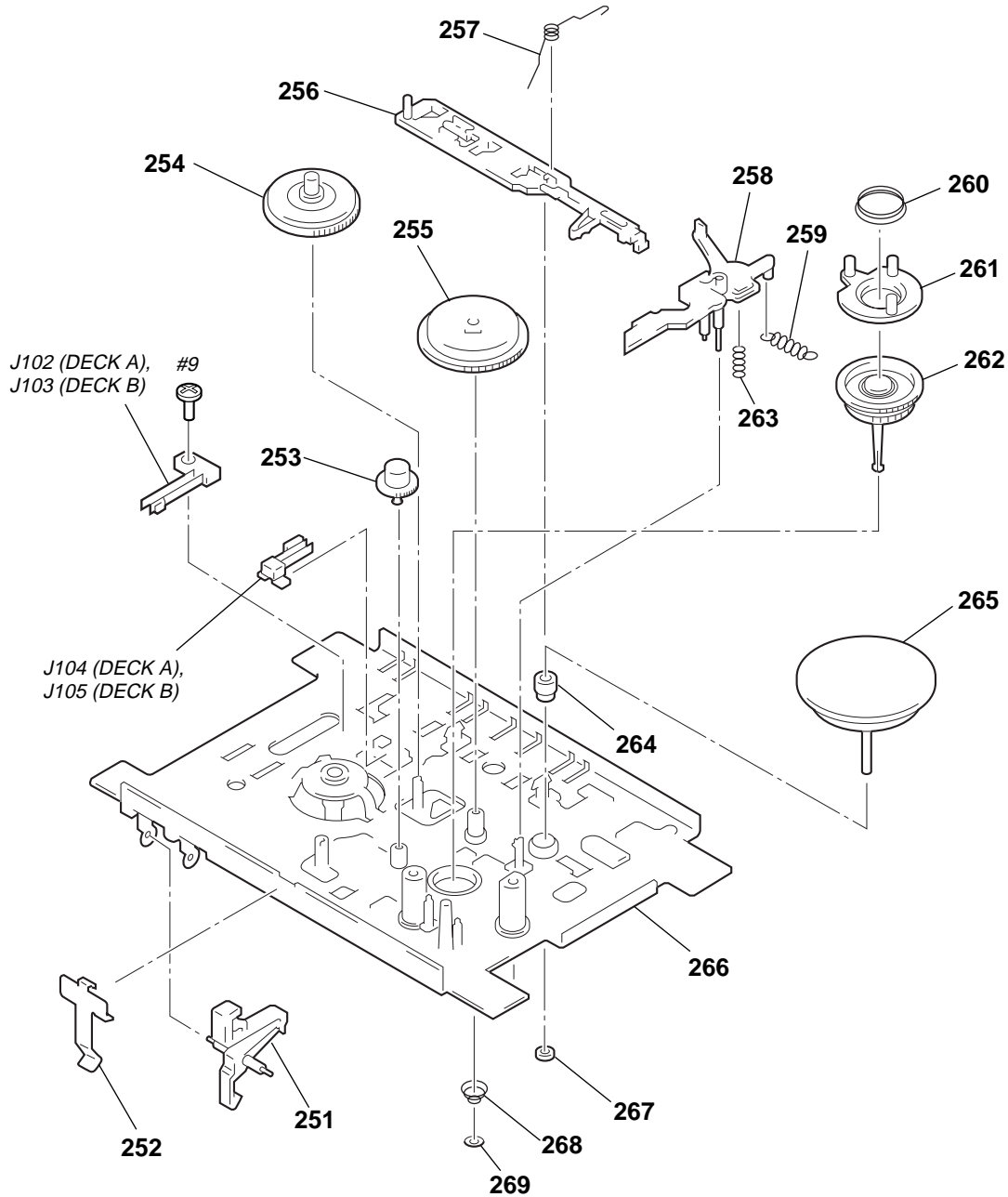
| Ref. No. | Part No.     | Description    | Remark | Ref. No. | Part No.     | Description                   | Remark |
|----------|--------------|----------------|--------|----------|--------------|-------------------------------|--------|
| 151      | 3-016-031-11 | BELT           |        | M301     | A-3174-238-A | MOTOR ASSY (W) (CAPSTAN/REEL) |        |
| 152      | 3-014-797-01 | CUSHION, MOTOR |        | #7       | 7-685-782-01 | SCREW +PTT 2X5 (S)            |        |
| 153      | 3-313-854-01 | SCREW, MOTOR   |        | #8       | 7-687-434-31 | SCREW, TOTSU PTT 2X6          |        |
| 154      | 3-025-846-01 | LEVER (REC)    |        |          |              |                               |        |

7-5. MECHANISM DECK SECTION-2  
(MF-W828-117)



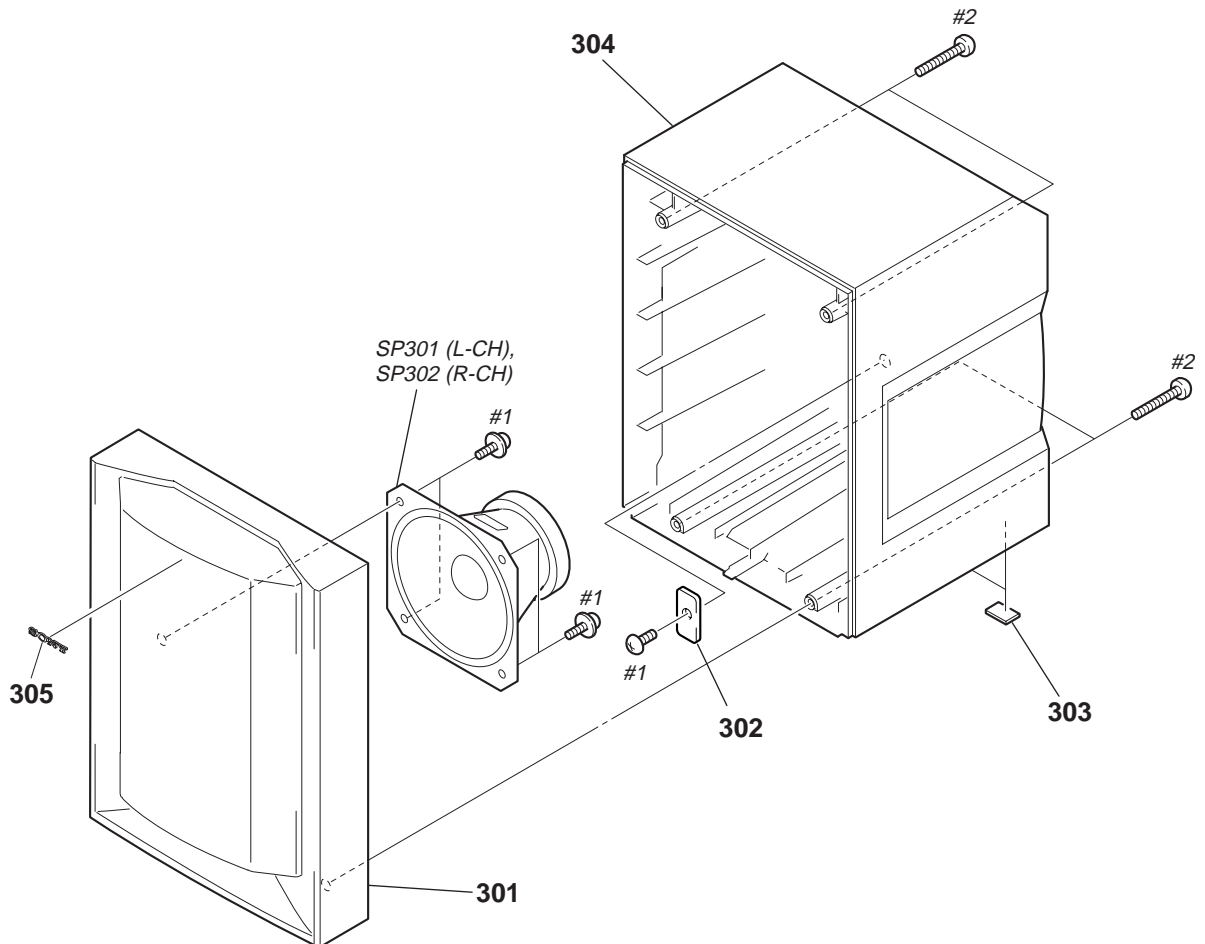
| Ref. No. | Part No.     | Description           | Remark | Ref. No. | Part No.     | Description                               | Remark |
|----------|--------------|-----------------------|--------|----------|--------------|---|--------|
| 201      | 3-933-010-01 | SPRING (S/P), TORSION |        | * 214    | 3-008-591-01 | SLIDER (PAUSE)                            |        |
| 202      | 3-933-025-01 | SPRING (P), TORSION   |        | 215      | 3-933-004-01 | CLAW, REEL                                |        |
| 203      | 3-040-857-01 | LEVER (P)             |        | * 216    | 3-933-006-01 | SLIDER (EJECT)                            |        |
| 204      | 3-933-024-01 | ROLLER, PINCH         |        | * 217    | 3-933-021-01 | SLIDER (FRP)                              |        |
| 205      | 3-933-019-01 | SPRING (F/R), TORSION |        | 218      | 3-934-833-01 | SPRING (FRP)                              |        |
| 206      | 3-933-016-01 | GEAR (S REEL)         |        | 219      | 3-023-780-01 | SPRING                                    |        |
| 207      | 3-933-028-01 | SPRING (FWD), TORSION |        | 220      | 3-022-794-02 | SPRING (BT)                               |        |
| 208      | 3-933-007-01 | PLATE, LOCK           |        | * 221    | 3-012-114-01 | LEVER (FR)                                |        |
| 209      | 3-008-590-01 | SLIDER (REC)          |        | HE301    | 1-543-876-11 | HEAD (ERASE) (DECK B)                     |        |
| 210      | 3-008-592-23 | BASE (H), HEAD        |        | HP301    | 1-500-454-11 | HEAD, MAGNETIC (PLAYBACK) (DECK A)        |        |
| * 211    | 3-008-588-01 | SLIDER (REW)          |        | HRP301   | 1-500-454-11 | HEAD, MAGNETIC (RECORD/PLAYBACK) (DECK B) |        |
| * 212    | 3-008-589-13 | SLIDER (FF)           |        |          |              |   |        |
| * 213    | 3-008-587-01 | SLIDER (STOP)         |        |          |              |   |        |

7-6. MECHANISM DECK SECTION-3  
(MF-W828-117)



| Ref. No. | Part No.     | Description               | Remark | Ref. No. | Part No.     | Description                   | Remark |
|----------|--------------|---------------------------|--------|----------|--------------|-------------------------------|--------|
| 251      | 3-933-029-01 | LEVER, ERASING PREVENTION |        | 263      | 3-939-383-02 | SPRING, COMPRESSION           |        |
| 252      | 3-933-182-01 | SPRING, CASSETTE          |        | 264      | 3-934-336-01 | BEARING                       |        |
| 253      | 3-932-995-01 | GEAR (MID)                |        | 265      | X-3374-077-1 | FLYWHEEL ASSY (W)             |        |
| 254      | X-3371-667-1 | CLUTCH ASSY               |        | 266      | 3-932-993-01 | CHASSIS, OUTSERT              |        |
| 255      | 3-932-997-01 | GEAR (CAM)                |        | 267      | 3-343-358-01 | RING, RETAINING               |        |
| * 256    | 3-932-999-11 | SLIDER (SW)               |        | 268      | 3-933-005-01 | SPRING (CAM), COMPRESSION     |        |
| 257      | 3-932-998-01 | SPRING (GROUND), TORSION  |        | 269      | 3-016-349-01 | WASHER                        |        |
| 258      | 3-009-648-01 | LEVER (S.OFF)             |        | J102     | 1-771-059-11 | SWITCH, LEAF (PLAY) (DECK A)  |        |
| 259      | 3-020-108-01 | SPRING, TENSION           |        | J103     | 1-771-059-11 | SWITCH, LEAF (PLAY) (DECK B)  |        |
| 260      | 3-009-650-02 | SPRING (K), COMPRESSION   |        | J104     | 1-762-679-11 | SWITCH, LEAF (POWER) (DECK A) |        |
| 261      | 3-936-438-01 | LEVER (K)                 |        | J105     | 1-762-679-11 | SWITCH, LEAF (POWER) (DECK B) |        |
| 262      | X-3373-572-1 | REEL ASSY (N), T          |        | #9       | 7-685-783-09 | SCREW +PTT 2X6 (S)            |        |

7-7. SPEAKER SECTION



| Ref. No. | Part No.     | Description                                      | Remark | Ref. No. | Part No.     | Description                    | Remark |
|----------|--------------|--|--------|----------|--------------|--------------------------------|--------|
| 301      | X-3381-754-1 | SPEAKER ASSY (SVX)<br>(including SP303 or SP304) |        | 305      | 3-038-018-01 | EMBLEM, SONY                   |        |
| * 302    | 1-860-811-11 | RETAINER BOARD                                   |        | SP301    | 1-825-012-11 | SPEAKER (10cm) (WOOFER) (L-CH) |        |
| 303      | 3-039-471-02 | FOOT   |        | SP302    | 1-825-012-11 | SPEAKER (10cm) (WOOFER) (R-CH) |        |
| 304      | 3-236-154-01 | CABINET (REAR (SP/R))                            |        | #1       | 7-685-647-79 | SCREW +BVTP 3X10 TYPE2 N-S     |        |
| * 304    | 3-236-153-01 | CABINET (REAR (SP/L))                            |        | #2       | 7-685-650-79 | SCREW +BVTP 3X16 TYPE2 N-S     |        |

SECTION 8  
ELECTRICAL PARTS LIST

**BATT (+)**   **BATT (-)**  
**DC IN**   **DC JACK HOLD**  
**F/T**   **H/P**

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.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS  
All resistors are in ohms.  
METAL: Metal-film resistor.  
METAL OXIDE: Metal oxide-film resistor.  
F: nonflammable
- Items marked “\*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS  
In each case, u :  $\mu$ , for example:  
uA.. :  $\mu$ A..   uPA.. :  $\mu$ PA..  
uPB.. :  $\mu$ PB..   uPC.. :  $\mu$ PC..  
uPD.. :  $\mu$ PD..
- CAPACITORS  
uF :  $\mu$ F
- COILS  
uH :  $\mu$ H

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

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

| Ref. No.      | Part No.     | Description   | Remark |
|---------------|--------------|---|--------|
| *             | 1-860-809-11 | BATT (+) BOARD<br>*****                                       |        |
| *****         |              |   |        |
| *             | 1-860-810-11 | BATT (-) BOARD<br>*****                                       |        |
| *****         |              |   |        |
| *             | A-4541-738-A | DC IN BOARD, COMPLETE (including DC JACK HOLD BOARD)<br>***** |        |
|               | 1-533-233-31 | HOLDER, FUSE<br><br>< CAPACITOR >                             |        |
| C342          | 1-126-963-11 | ELECT      4.7uF    20%    50V                                |        |
| C350          | 1-126-964-11 | ELECT      10uF     20%    50V                                |        |
| C351          | 1-126-963-11 | ELECT      4.7uF    20%    50V                                |        |
| C352          | 1-162-964-11 | CERAMIC CHIP    0.001uF    10%    50V                         |        |
|               |              | < CONNECTOR >   |        |
| * CNP901      | 1-785-654-11 | PIN, CONNECTOR (PC BOARD) 2P<br><br>< DIODE >                 |        |
| D330          | 8-719-977-28 | DIODE    DTZ10B   |        |
| D905          | 8-719-046-47 | DIODE    1N5401TM   |        |
| D906          | 8-719-046-47 | DIODE    1N5401TM   |        |
|               |              | < JACK >  |        |
| J902          | 1-507-563-21 | JACK, DC (DC IN 12V)<br><br>< TRANSISTOR >                    |        |
| Q101          | 8-729-026-52 | TRANSISTOR    2SA1576A-T106-R                                 |        |
| Q201          | 8-729-026-52 | TRANSISTOR    2SA1576A-T106-R                                 |        |
| Q324          | 8-729-029-10 | TRANSISTOR    DTC143TUA-T106                                  |        |
| Q325          | 8-729-905-34 | TRANSISTOR    2SC4081-Q                                       |        |
| Q326          | 8-729-029-07 | TRANSISTOR    DTC124TUA-T106                                  |        |
| Q327          | 8-729-028-54 | TRANSISTOR    KTC3205<br><br>< RESISTOR >                     |        |
| R128          | 1-216-809-11 | METAL CHIP    100      5%    1/10W                            |        |
| R131          | 1-216-829-11 | METAL CHIP    4.7K     5%    1/10W                            |        |
| R228          | 1-216-809-11 | METAL CHIP    100      5%    1/10W                            |        |
| R231          | 1-216-829-11 | METAL CHIP    4.7K     5%    1/10W                            |        |
| $\Delta$ R308 | 1-249-385-11 | CARBON        2.2      5%    1/4W                             |        |

| Ref. No. | Part No.     | Description   | Remark |
|----------|--------------|---|--------|
| R323     | 1-216-837-11 | METAL CHIP    22K      5%    1/10W                                |        |
| R325     | 1-216-823-11 | METAL CHIP    1.5K     5%    1/10W                                |        |
| R334     | 1-216-849-11 | METAL CHIP    220K     5%    1/10W                                |        |
| R335     | 1-216-855-11 | METAL CHIP    680K     5%    1/10W                                |        |
| *****    |              |   |        |
|          |              | DC JACK HOLD BOARD (supplied with DC IN BOARD, COMPLETE)<br>***** |        |
| *****    |              |   |        |
|          |              | F/T BOARD (supplied with TUNER BOARD, COMPLETE)<br>*****          |        |
|          |              | < RESISTOR >  |        |
| R12      | 1-249-417-11 | CARBON        1K        5%    1/4W                                |        |
| R13      | 1-249-417-11 | CARBON        1K        5%    1/4W                                |        |
|          |              | < VARIABLE RESISTOR >   |        |
| RV2      | 1-225-432-11 | RES, VAR, CARBON 100K (FINE TUNING)                               |        |
| *****    |              |   |        |
| *        | 1-860-805-11 | H/P BOARD<br>*****  |        |
|          |              | < CAPACITOR >   |        |
| C148     | 1-126-947-11 | ELECT        47uF     20%    16V                                  |        |
| C248     | 1-126-947-11 | ELECT        47uF     20%    16V                                  |        |
|          |              | < JACK >  |        |
| J301     | 1-566-891-11 | JACK (PHONES)<br><br>< RESISTOR >                                 |        |
| R149     | 1-249-417-11 | CARBON        1K        5%    1/4W                                |        |
| R150     | 1-247-807-31 | CARBON        100      5%    1/4W                                 |        |
| R249     | 1-249-417-11 | CARBON        1K        5%    1/4W                                |        |
| R250     | 1-247-807-31 | CARBON        100      5%    1/4W                                 |        |
| *****    |              |   |        |

| Ref. No.       | Part No.     | Description                   | Remark           | Ref. No. | Part No.     | Description | Remark           |
|----------------|--------------|-------------------------------|------------------|----------|--------------|-------------|------------------|
|                |              | JOG BOARD                     |                  | C142     | 1-162-286-21 | CERAMIC     | 220PF 10% 50V    |
|                |              | *****                         |                  | C143     | 1-126-947-11 | ELECT       | 47uF 20% 16V     |
|                |              | < CONNECTOR >                 |                  | C144     | 1-104-658-11 | ELECT       | 100uF 20% 10V    |
| * CNP417       | 1-785-673-11 | PIN, CONNECTOR (PC BOARD) 7P  |                  | C145     | 1-104-658-11 | ELECT       | 100uF 20% 10V    |
|                |              | < SWITCH >                    |                  | C146     | 1-136-165-00 | MYLAR       | 0.1uF 5% 50V     |
| S306           | 1-786-290-11 | SWITCH, ROTARY (SOUND SELECT) |                  | C147     | 1-136-165-00 | MYLAR       | 0.1uF 5% 50V     |
| *****          |              |                               |                  | C149     | 1-126-963-11 | ELECT       | 4.7uF 20% 50V    |
| * 1-860-801-11 |              | LED1 BOARD                    |                  | C150     | 1-136-169-00 | MYLAR       | 0.22uF 5% 50V    |
|                |              | *****                         |                  | C201     | 1-162-294-31 | CERAMIC     | 0.001uF 10% 50V  |
|                |              | < DIODE >                     |                  | C202     | 1-162-290-31 | CERAMIC     | 470PF 10% 50V    |
| D313           | 8-719-059-97 | LED L-34HD (FLAT)             |                  | C203     | 1-162-290-31 | CERAMIC     | 470PF 10% 50V    |
| D314           | 8-719-059-97 | LED L-34HD (GROOVE)           |                  | C204     | 1-127-868-21 | CERAMIC     | 0.0022uF 10% 50V |
| D315           | 8-719-059-97 | LED L-34HD (LIVE)             |                  | C205     | 1-127-876-21 | CERAMIC     | 0.01uF 10% 50V   |
| D316           | 8-719-059-97 | LED L-34HD (POP)              |                  | C206     | 1-104-662-11 | ELECT       | 22uF 20% 25V     |
| D317           | 8-719-059-97 | LED L-34HD (CINEMA)           |                  | C207     | 1-162-294-31 | CERAMIC     | 0.001uF 10% 50V  |
| *****          |              |                               |                  | C208     | 1-104-662-11 | ELECT       | 22uF 20% 25V     |
| * 1-860-802-11 |              | LED2 BOARD                    |                  | C209     | 1-127-888-21 | CERAMIC     | 0.1uF 10% 50V    |
|                |              | *****                         |                  | C211     | 1-127-880-21 | CERAMIC     | 0.022uF 10% 50V  |
|                |              | < DIODE >                     |                  | C212     | 1-162-286-21 | CERAMIC     | 220PF 10% 50V    |
| D319           | 8-719-059-97 | LED L-34HD (OPR/BATT)         |                  | C213     | 1-126-960-11 | ELECT       | 1uF 20% 50V      |
| *****          |              |                               |                  | C214     | 1-162-282-31 | CERAMIC     | 100PF 10% 50V    |
| * A-4541-741-A |              | MAIN BOARD, COMPLETE          |                  | C220     | 1-136-169-00 | MYLAR       | 0.22uF 5% 50V    |
|                |              | *****                         |                  | C221     | 1-127-888-21 | CERAMIC     | 0.1uF 10% 50V    |
|                |              | < CAPACITOR >                 |                  | C222     | 1-127-868-21 | CERAMIC     | 0.0022uF 10% 50V |
| C101           | 1-162-294-31 | CERAMIC                       | 0.001uF 10% 50V  | C223     | 1-136-169-00 | MYLAR       | 0.22uF 5% 50V    |
| C102           | 1-162-290-31 | CERAMIC                       | 470PF 10% 50V    | C224     | 1-127-872-21 | CERAMIC     | 0.0047uF 10% 50V |
| C103           | 1-162-290-31 | CERAMIC                       | 470PF 10% 50V    | C225     | 1-162-282-31 | CERAMIC     | 100PF 10% 50V    |
| C104           | 1-127-868-21 | CERAMIC                       | 0.0022uF 10% 50V | C227     | 1-126-960-11 | ELECT       | 1uF 20% 50V      |
| C105           | 1-127-876-21 | CERAMIC                       | 0.01uF 10% 50V   | C228     | 1-162-282-31 | CERAMIC     | 100PF 10% 50V    |
| C106           | 1-104-662-11 | ELECT                         | 22uF 20% 25V     | C229     | 1-162-282-31 | CERAMIC     | 100PF 10% 50V    |
| C107           | 1-162-294-31 | CERAMIC                       | 0.001uF 10% 50V  | C231     | 1-126-960-11 | ELECT       | 1uF 20% 50V      |
| C108           | 1-104-662-11 | ELECT                         | 22uF 20% 25V     | C232     | 1-127-872-21 | CERAMIC     | 0.0047uF 10% 50V |
| C109           | 1-127-888-21 | CERAMIC                       | 0.1uF 10% 50V    | C241     | 1-126-947-11 | ELECT       | 47uF 20% 16V     |
| C111           | 1-127-880-21 | CERAMIC                       | 0.022uF 10% 50V  | C242     | 1-162-286-21 | CERAMIC     | 220PF 10% 50V    |
| C112           | 1-162-286-21 | CERAMIC                       | 220PF 10% 50V    | C243     | 1-126-947-11 | ELECT       | 47uF 20% 16V     |
| C113           | 1-126-960-11 | ELECT                         | 1uF 20% 50V      | C244     | 1-104-658-11 | ELECT       | 100uF 20% 10V    |
| C114           | 1-162-282-31 | CERAMIC                       | 100PF 10% 50V    | C245     | 1-104-658-11 | ELECT       | 100uF 20% 10V    |
| C120           | 1-136-169-00 | MYLAR                         | 0.22uF 5% 50V    | C246     | 1-136-165-00 | MYLAR       | 0.1uF 5% 50V     |
| C121           | 1-127-888-21 | CERAMIC                       | 0.1uF 10% 50V    | C247     | 1-136-165-00 | MYLAR       | 0.1uF 5% 50V     |
| C122           | 1-127-868-21 | CERAMIC                       | 0.0022uF 10% 50V | C249     | 1-126-963-11 | ELECT       | 4.7uF 20% 50V    |
| C123           | 1-136-169-00 | MYLAR                         | 0.22uF 5% 50V    | C250     | 1-136-169-00 | MYLAR       | 0.22uF 5% 50V    |
| C124           | 1-127-872-21 | CERAMIC                       | 0.0047uF 10% 50V | C301     | 1-127-888-21 | CERAMIC     | 0.1uF 10% 50V    |
| C125           | 1-162-282-31 | CERAMIC                       | 100PF 10% 50V    | C302     | 1-127-876-21 | CERAMIC     | 0.01uF 10% 50V   |
| C126           | 1-126-960-11 | ELECT                         | 1uF 20% 50V      | C303     | 1-126-963-11 | ELECT       | 4.7uF 20% 50V    |
| C127           | 1-126-960-11 | ELECT                         | 1uF 20% 50V      | C304     | 1-126-961-11 | ELECT       | 2.2uF 20% 50V    |
| C128           | 1-162-282-31 | CERAMIC                       | 100PF 10% 50V    | C305     | 1-126-947-11 | ELECT       | 47uF 20% 10V     |
| C129           | 1-162-282-31 | CERAMIC                       | 100PF 10% 50V    | C306     | 1-126-923-11 | ELECT       | 220uF 20% 10V    |
| C130           | 1-126-960-11 | ELECT                         | 1uF 20% 50V      | C307     | 1-162-306-11 | CERAMIC     | 0.01uF 20% 16V   |
| C131           | 1-126-960-11 | ELECT                         | 1uF 20% 50V      | C308     | 1-126-923-11 | ELECT       | 220uF 20% 10V    |
| C132           | 1-127-872-21 | CERAMIC                       | 0.0047uF 10% 50V | C309     | 1-104-658-11 | ELECT       | 100uF 20% 10V    |
| C141           | 1-126-947-11 | ELECT                         | 47uF 20% 16V     | C310     | 1-162-290-31 | CERAMIC     | 470PF 10% 50V    |
|                |              |                               |                  | C311     | 1-127-888-21 | CERAMIC     | 0.1uF 10% 50V    |
|                |              |                               |                  | C312     | 1-110-339-11 | MYLAR       | 220PF 5% 50V     |
|                |              |                               |                  | C313     | 1-128-803-21 | CERAMIC     | 33PF 5% 50V      |
|                |              |                               |                  | C314     | 1-126-964-11 | ELECT       | 10uF 20% 50V     |
|                |              |                               |                  | C315     | 1-162-306-11 | CERAMIC     | 0.01uF 20% 16V   |
|                |              |                               |                  | C316     | 1-162-306-11 | CERAMIC     | 0.01uF 20% 16V   |
|                |              |                               |                  | C317     | 1-162-282-31 | CERAMIC     | 100PF 10% 50V    |

**MAIN**

| Ref. No. | Part No.     | Description                  | Remark         | Ref. No. | Part No.     | Description              | Remark |
|----------|--------------|------------------------------|----------------|----------|--------------|--------------------------|--------|
| C318     | 1-162-282-31 | CERAMIC                      | 100PF 10% 50V  | D253     | 8-719-991-33 | DIODE 1SS133T-77         |        |
| C319     | 1-162-282-31 | CERAMIC                      | 100PF 10% 50V  | D301     | 8-719-109-97 | DIODE RD6.8ES-B2         |        |
| C320     | 1-162-306-11 | CERAMIC                      | 0.01uF 20% 16V | D302     | 8-719-991-33 | DIODE 1SS133T-77         |        |
| C321     | 1-162-306-11 | CERAMIC                      | 0.01uF 20% 16V | D303     | 8-719-991-33 | DIODE 1SS133T-77         |        |
| C322     | 1-162-282-31 | CERAMIC                      | 100PF 10% 50V  | D304     | 8-719-991-33 | DIODE 1SS133T-77         |        |
| C323     | 1-162-306-11 | CERAMIC                      | 0.01uF 20% 16V | D305     | 8-719-991-33 | DIODE 1SS133T-77         |        |
| C324     | 1-162-306-11 | CERAMIC                      | 0.01uF 20% 16V | D306     | 8-719-991-33 | DIODE 1SS133T-77         |        |
| C325     | 1-162-306-11 | CERAMIC                      | 0.01uF 20% 16V | D307     | 8-719-991-33 | DIODE 1SS133T-77         |        |
| C326     | 1-162-306-11 | CERAMIC                      | 0.01uF 20% 16V | D308     | 8-719-991-33 | DIODE 1SS133T-77         |        |
| C327     | 1-162-282-31 | CERAMIC                      | 100PF 10% 50V  | D309     | 8-719-991-33 | DIODE 1SS133T-77         |        |
| C328     | 1-162-306-11 | CERAMIC                      | 0.01uF 20% 16V | D310     | 8-719-991-33 | DIODE 1SS133T-77         |        |
| C329     | 1-162-306-11 | CERAMIC                      | 0.01uF 20% 16V | D311     | 8-719-991-33 | DIODE 1SS133T-77         |        |
| C330     | 1-104-658-11 | ELECT                        | 100uF 20% 10V  | D320     | 8-719-991-33 | DIODE 1SS133T-77         |        |
| C331     | 1-104-662-11 | ELECT                        | 22uF 20% 25V   | D321     | 8-719-991-33 | DIODE 1SS133T-77         |        |
| C332     | 1-126-963-11 | ELECT                        | 4.7uF 20% 50V  | D322     | 8-719-991-33 | DIODE 1SS133T-77         |        |
| C333     | 1-126-947-11 | ELECT                        | 47uF 20% 10V   | D323     | 8-719-991-33 | DIODE 1SS133T-77         |        |
| C334     | 1-162-306-11 | CERAMIC                      | 0.01uF 20% 16V | D324     | 8-719-991-33 | DIODE 1SS133T-77         |        |
| C335     | 1-126-964-11 | ELECT                        | 10uF 20% 50V   | D325     | 8-719-991-33 | DIODE 1SS133T-77         |        |
| C336     | 1-126-960-11 | ELECT                        | 1uF 20% 50V    | D326     | 8-719-991-33 | DIODE 1SS133T-77         |        |
| C337     | 1-126-960-11 | ELECT                        | 1uF 20% 50V    | D327     | 8-719-109-72 | DIODE RD3.9ES-B2         |        |
| C338     | 1-126-960-11 | ELECT                        | 1uF 20% 50V    |          |              | < IC >                   |        |
| C339     | 1-126-961-11 | ELECT                        | 2.2uF 20% 50V  | IC301    | 8-759-457-58 | IC BA3426AS              |        |
| C340     | 1-126-963-11 | ELECT                        | 4.7uF 20% 50V  | IC302    | 6-700-904-01 | IC AN7338K               |        |
| C341     | 1-126-964-11 | ELECT                        | 10uF 20% 50V   | IC303    | 8-759-426-51 | IC BA5417                |        |
| C343     | 1-126-960-11 | ELECT                        | 1uF 20% 50V    | IC304    | 8-759-426-51 | IC BA5417                |        |
| C344     | 1-126-960-11 | ELECT                        | 1uF 20% 50V    |          |              | < TERMINAL BOARD >       |        |
| C345     | 1-126-960-11 | ELECT                        | 1uF 20% 50V    | J304     | 1-537-330-11 | TERMINAL BOARD (SPEAKER) |        |
| C346     | 1-162-306-11 | CERAMIC                      | 0.01uF 20% 16V |          |              | < COIL >                 |        |
| C347     | 1-136-173-00 | MYLAR                        | 0.47uF 5% 50V  | L301     | 1-410-525-11 | INDUCTOR 220uH           |        |
| C348     | 1-136-173-00 | MYLAR                        | 0.47uF 5% 50V  |          |              | < TRANSISTOR >           |        |
| C370     | 1-128-548-11 | ELECT                        | 4700uF 20% 25V | Q301     | 8-729-037-08 | TRANSISTOR KTD2058Y      |        |
| C371     | 1-126-934-11 | ELECT                        | 220uF 20% 16V  | Q302     | 8-729-037-34 | TRANSISTOR KRA107M       |        |
| C372     | 1-162-306-11 | CERAMIC                      | 0.01uF 20% 16V | Q303     | 8-729-037-34 | TRANSISTOR KRA107M       |        |
| C373     | 1-126-947-11 | ELECT                        | 47uF 20% 16V   | Q304     | 8-729-037-34 | TRANSISTOR KRA107M       |        |
| C374     | 1-162-306-11 | CERAMIC                      | 0.01uF 20% 16V | Q305     | 8-729-036-77 | TRANSISTOR KRC107M       |        |
| C375     | 1-126-964-11 | ELECT                        | 10uF 20% 50V   | Q306     | 8-729-036-90 | TRANSISTOR KTC3198BL-AT  |        |
| C376     | 1-126-933-11 | ELECT                        | 100uF 20% 16V  | Q307     | 8-729-036-90 | TRANSISTOR KTC3198BL-AT  |        |
| C377     | 1-126-925-11 | ELECT                        | 470uF 20% 10V  | Q308     | 8-729-036-80 | TRANSISTOR KRC110M       |        |
| C378     | 1-104-662-11 | ELECT                        | 22uF 20% 25V   | Q309     | 8-729-037-13 | TRANSISTOR KTA1271Y      |        |
| C379     | 1-104-658-11 | ELECT                        | 100uF 20% 10V  | Q310     | 8-729-037-13 | TRANSISTOR KTA1271Y      |        |
|          |              | < CONNECTOR >                |                | Q311     | 8-729-036-90 | TRANSISTOR KTC3198BL-AT  |        |
| * CNP301 | 1-785-657-11 | PIN, CONNECTOR (PC BOARD) 5P |                | Q312     | 8-729-036-90 | TRANSISTOR KTC3198BL-AT  |        |
| * CNP302 | 1-785-656-11 | PIN, CONNECTOR (PC BOARD) 4P |                | Q313     | 8-729-036-86 | TRANSISTOR KTC3203Y-AT   |        |
| * CNP303 | 1-785-654-11 | PIN, CONNECTOR (PC BOARD) 2P |                | Q314     | 8-729-036-86 | TRANSISTOR KTC3203Y-AT   |        |
| * CNP305 | 1-785-657-21 | PIN, CONNECTOR (PC BOARD) 5P |                | Q315     | 8-729-036-90 | TRANSISTOR KTC3198BL-AT  |        |
| * CNP306 | 1-785-657-11 | PIN, CONNECTOR (PC BOARD) 5P |                | Q316     | 8-729-036-90 | TRANSISTOR KTC3198BL-AT  |        |
| * CNP307 | 1-785-658-11 | PIN, CONNECTOR (PC BOARD) 6P |                | Q317     | 8-729-036-90 | TRANSISTOR KTC3198BL-AT  |        |
| CNP311   | 1-566-690-11 | PLUG, CONNECTOR (2.5mm) 2P   |                | Q318     | 8-729-036-90 | TRANSISTOR KTC3198BL-AT  |        |
| * CNP314 | 1-785-654-11 | PIN, CONNECTOR (PC BOARD) 2P |                | Q319     | 8-729-036-80 | TRANSISTOR KRC110M       |        |
| * CNP315 | 1-785-656-21 | PIN, CONNECTOR (PC BOARD) 4P |                | Q320     | 8-729-036-80 | TRANSISTOR KRC110M       |        |
| * CNP316 | 1-785-661-11 | PIN, CONNECTOR (PC BOARD) 9P |                | Q321     | 8-729-037-34 | TRANSISTOR KRA107M       |        |
| * CNP318 | 1-815-444-11 | PIN, CONNECTOR (PWB) 3P      |                | Q322     | 8-729-036-77 | TRANSISTOR KRC107M       |        |
| * CNP319 | 1-785-654-11 | PIN, CONNECTOR (PC BOARD) 2P |                | Q323     | 8-729-036-80 | TRANSISTOR KRC110M       |        |
| * CNP418 | 1-785-657-21 | PIN, CONNECTOR (PC BOARD) 5P |                |          |              | < DIODE >                |        |
| D153     | 8-719-991-33 | DIODE 1SS133T-77             |                |          |              |                          |        |



| Ref. No.     | Part No.     | Description | Remark       | Ref. No. | Part No.     | Description | Remark       |
|--------------|--------------|-------------|--------------|----------|--------------|-------------|--------------|
| < RESISTOR > |              |             |              | R244     | 1-249-409-11 | CARBON      | 220 5% 1/4W  |
| R101         | 1-249-417-11 | CARBON      | 1K 5% 1/4W   | R245     | 1-249-437-11 | CARBON      | 47K 5% 1/4W  |
| R102         | 1-249-429-11 | CARBON      | 10K 5% 1/4W  | R246     | 1-249-441-11 | CARBON      | 100K 5% 1/4W |
| R103         | 1-249-437-11 | CARBON      | 47K 5% 1/4W  | R247     | 1-249-385-11 | CARBON      | 2.2 5% 1/4W  |
| R104         | 1-249-409-11 | CARBON      | 220 5% 1/4W  | R248     | 1-249-385-11 | CARBON      | 2.2 5% 1/4W  |
| R105         | 1-249-409-11 | CARBON      | 220 5% 1/4W  | R251     | 1-249-421-11 | CARBON      | 2.2K 5% 1/4W |
| R106         | 1-247-807-31 | CARBON      | 100 5% 1/4W  | R252     | 1-249-415-11 | CARBON      | 680 5% 1/4W  |
| R108         | 1-249-437-11 | CARBON      | 47K 5% 1/4W  | R301     | 1-247-843-11 | CARBON      | 3.3K 5% 1/4W |
| R109         | 1-247-807-31 | CARBON      | 100 5% 1/4W  | R302     | 1-249-429-11 | CARBON      | 10K 5% 1/4W  |
| R110         | 1-247-807-31 | CARBON      | 100 5% 1/4W  | R303     | 1-249-435-11 | CARBON      | 33K 5% 1/4W  |
| R120         | 1-249-427-11 | CARBON      | 6.8K 5% 1/4W | R304     | 1-247-895-11 | CARBON      | 470K 5% 1/4W |
| R121         | 1-249-419-11 | CARBON      | 1.5K 5% 1/4W | R305     | 1-247-807-31 | CARBON      | 100 5% 1/4W  |
| R122         | 1-249-409-11 | CARBON      | 220 5% 1/4W  | R306     | 1-249-433-11 | CARBON      | 22K 5% 1/4W  |
| R123         | 1-249-421-11 | CARBON      | 2.2K 5% 1/4W | R307     | 1-249-439-11 | CARBON      | 68K 5% 1/4W  |
| R124         | 1-249-421-11 | CARBON      | 2.2K 5% 1/4W | R309     | 1-249-417-11 | CARBON      | 1K 5% 1/4W   |
| R125         | 1-249-421-11 | CARBON      | 2.2K 5% 1/4W | R310     | 1-249-417-11 | CARBON      | 1K 5% 1/4W   |
| R126         | 1-249-417-11 | CARBON      | 1K 5% 1/4W   | R311     | 1-249-417-11 | CARBON      | 1K 5% 1/4W   |
| R127         | 1-249-413-11 | CARBON      | 470 5% 1/4W  | R312     | 1-249-417-11 | CARBON      | 1K 5% 1/4W   |
| R129         | 1-249-425-11 | CARBON      | 4.7K 5% 1/4W | R313     | 1-249-429-11 | CARBON      | 10K 5% 1/4W  |
| R130         | 1-249-425-11 | CARBON      | 4.7K 5% 1/4W | R314     | 1-249-433-11 | CARBON      | 22K 5% 1/4W  |
| R132         | 1-249-417-11 | CARBON      | 1K 5% 1/4W   | R315     | 1-249-433-11 | CARBON      | 22K 5% 1/4W  |
| R133         | 1-249-429-11 | CARBON      | 10K 5% 1/4W  | R316     | 1-249-429-11 | CARBON      | 10K 5% 1/4W  |
| R134         | 1-249-419-11 | CARBON      | 1.5K 5% 1/4W | R317     | 1-249-417-11 | CARBON      | 1K 5% 1/4W   |
| R141         | 1-249-429-11 | CARBON      | 10K 5% 1/4W  | R318     | 1-249-433-11 | CARBON      | 22K 5% 1/4W  |
| R142         | 1-249-409-11 | CARBON      | 220 5% 1/4W  | R319     | 1-249-429-11 | CARBON      | 10K 5% 1/4W  |
| R143         | 1-247-807-31 | CARBON      | 100 5% 1/4W  | R320     | 1-249-425-11 | CARBON      | 4.7K 5% 1/4W |
| R144         | 1-249-409-11 | CARBON      | 220 5% 1/4W  | R321     | 1-249-429-11 | CARBON      | 10K 5% 1/4W  |
| R145         | 1-249-437-11 | CARBON      | 47K 5% 1/4W  | R322     | 1-247-807-31 | CARBON      | 100 5% 1/4W  |
| R146         | 1-249-441-11 | CARBON      | 100K 5% 1/4W | R330     | 1-249-429-11 | CARBON      | 10K 5% 1/4W  |
| R147         | 1-249-385-11 | CARBON      | 2.2 5% 1/4W  | R331     | 1-249-429-11 | CARBON      | 10K 5% 1/4W  |
| R148         | 1-249-385-11 | CARBON      | 2.2 5% 1/4W  | R332     | 1-249-429-11 | CARBON      | 10K 5% 1/4W  |
| R151         | 1-249-421-11 | CARBON      | 2.2K 5% 1/4W | R333     | 1-249-429-11 | CARBON      | 10K 5% 1/4W  |
| R152         | 1-249-415-11 | CARBON      | 680 5% 1/4W  | R336     | 1-249-437-11 | CARBON      | 47K 5% 1/4W  |
| R201         | 1-249-417-11 | CARBON      | 1K 5% 1/4W   | R337     | 1-247-887-00 | CARBON      | 220K 5% 1/4W |
| R202         | 1-249-429-11 | CARBON      | 10K 5% 1/4W  | R338     | 1-249-441-11 | CARBON      | 100K 5% 1/4W |
| R203         | 1-249-437-11 | CARBON      | 47K 5% 1/4W  | R339     | 1-247-887-00 | CARBON      | 220K 5% 1/4W |
| R204         | 1-249-409-11 | CARBON      | 220 5% 1/4W  | R340     | 1-249-441-11 | CARBON      | 100K 5% 1/4W |
| R205         | 1-249-409-11 | CARBON      | 220 5% 1/4W  | R341     | 1-247-887-00 | CARBON      | 220K 5% 1/4W |
| R206         | 1-247-807-31 | CARBON      | 100 5% 1/4W  | R342     | 1-249-441-11 | CARBON      | 100K 5% 1/4W |
| R208         | 1-249-437-11 | CARBON      | 47K 5% 1/4W  | R343     | 1-247-903-00 | CARBON      | 1M 5% 1/4W   |
| R209         | 1-247-807-31 | CARBON      | 100 5% 1/4W  | R344     | 1-249-417-11 | CARBON      | 1K 5% 1/4W   |
| R210         | 1-247-807-31 | CARBON      | 100 5% 1/4W  | R347     | 1-249-425-11 | CARBON      | 4.7K 5% 1/4W |
| R220         | 1-249-427-11 | CARBON      | 6.8K 5% 1/4W | R349     | 1-249-429-11 | CARBON      | 10K 5% 1/4W  |
| R221         | 1-249-419-11 | CARBON      | 1.5K 5% 1/4W | R350     | 1-249-417-11 | CARBON      | 1K 5% 1/4W   |
| R222         | 1-249-409-11 | CARBON      | 220 5% 1/4W  | R351     | 1-249-441-11 | CARBON      | 100K 5% 1/4W |
| R223         | 1-249-421-11 | CARBON      | 2.2K 5% 1/4W | R352     | 1-249-417-11 | CARBON      | 1K 5% 1/4W   |
| R224         | 1-249-421-11 | CARBON      | 2.2K 5% 1/4W | R353     | 1-249-417-11 | CARBON      | 1K 5% 1/4W   |
| R225         | 1-249-421-11 | CARBON      | 2.2K 5% 1/4W | R354     | 1-249-421-11 | CARBON      | 2.2K 5% 1/4W |
| R226         | 1-249-417-11 | CARBON      | 1K 5% 1/4W   | R355     | 1-249-429-11 | CARBON      | 10K 5% 1/4W  |
| R227         | 1-249-413-11 | CARBON      | 470 5% 1/4W  | R356     | 1-249-413-11 | CARBON      | 470 5% 1/4W  |
| R229         | 1-249-425-11 | CARBON      | 4.7K 5% 1/4W | R357     | 1-249-425-11 | CARBON      | 4.7K 5% 1/4W |
| R230         | 1-249-425-11 | CARBON      | 4.7K 5% 1/4W | R358     | 1-249-417-11 | CARBON      | 1K 5% 1/4W   |
| R232         | 1-249-417-11 | CARBON      | 1K 5% 1/4W   | R359     | 1-249-441-11 | CARBON      | 100K 5% 1/4W |
| R234         | 1-249-419-11 | CARBON      | 1.5K 5% 1/4W | R360     | 1-249-435-11 | CARBON      | 33K 5% 1/4W  |
| R241         | 1-249-429-11 | CARBON      | 10K 5% 1/4W  | R361     | 1-249-431-11 | CARBON      | 15K 5% 1/4W  |
| R242         | 1-249-409-11 | CARBON      | 220 5% 1/4W  | R362     | 1-249-429-11 | CARBON      | 10K 5% 1/4W  |
| R243         | 1-247-807-31 | CARBON      | 100 5% 1/4W  | R363     | 1-249-429-11 | CARBON      | 10K 5% 1/4W  |
|              |              |             |              | R367     | 1-249-417-11 | CARBON      | 1K 5% 1/4W   |

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|             |                  |              |               |              |
|-------------|------------------|--------------|---------------|--------------|
| <b>MAIN</b> | <b>MAXI BASS</b> | <b>POWER</b> | <b>REC SW</b> | <b>TUNER</b> |
|-------------|------------------|--------------|---------------|--------------|

| Ref. No.              | Part No.     | Description                      | Remark        |
|-----------------------|--------------|----------------------------------|---------------|
| R368                  | 1-249-413-11 | CARBON                           | 470 5% 1/4W   |
| R370                  | 1-249-389-11 | CARBON                           | 4.7 5% 1/4W   |
| R371                  | 1-249-413-11 | CARBON                           | 470 5% 1/4W   |
| R372                  | 1-249-413-11 | CARBON                           | 470 5% 1/4W   |
| R373                  | 1-249-413-11 | CARBON                           | 470 5% 1/4W   |
| R374                  | 1-249-417-11 | CARBON                           | 1K 5% 1/4W    |
| R375                  | 1-249-421-11 | CARBON                           | 2.2K 5% 1/4W  |
| R376                  | 1-249-417-11 | CARBON                           | 1K 5% 1/4W    |
| R377                  | 1-249-425-11 | CARBON                           | 4.7K 5% 1/4W  |
| R378                  | 1-247-843-11 | CARBON                           | 3.3K 5% 1/4W  |
| R379                  | 1-249-413-11 | CARBON                           | 470 5% 1/4W   |
| R380                  | 1-249-425-11 | CARBON                           | 4.7K 5% 1/4W  |
| R381                  | 1-249-437-11 | CARBON                           | 47K 5% 1/4W   |
| R382                  | 1-249-441-11 | CARBON                           | 100K 5% 1/4W  |
| R383                  | 1-249-437-11 | CARBON                           | 47K 5% 1/4W   |
| R384                  | 1-249-421-11 | CARBON                           | 2.2K 5% 1/4W  |
| R385                  | 1-249-417-11 | CARBON                           | 1K 5% 1/4W    |
| R386                  | 1-247-807-31 | CARBON                           | 100 5% 1/4W   |
| R387                  | 1-247-807-31 | CARBON                           | 100 5% 1/4W   |
| R388                  | 1-249-437-11 | CARBON                           | 47K 5% 1/4W   |
| < VARIABLE RESISTOR > |              |                                  |               |
| RV302                 | 1-228-994-00 | RES, ADJ, METAL 10K              |               |
| < SWITCH >            |              |                                  |               |
| S302                  | 1-570-905-11 | SWITCH, LEVER SLIDE (FUNCTION)   |               |
| S303                  | 1-571-588-11 | SWITCH, SLIDE (ISS)              |               |
| < TRANSFORMER >       |              |                                  |               |
| T301                  | 1-416-041-11 | TRANSFORMER, BIAS OSCILLATION    |               |
| *****                 |              |                                  |               |
| *                     | A-4541-740-A | MAXI BASS BOARD, COMPLETE        |               |
| *****                 |              |                                  |               |
|                       | 3-236-142-01 | BUTTON (M.B)                     |               |
|                       | 3-239-048-01 | HOLDER (LED)                     |               |
| < CAPACITOR >         |              |                                  |               |
| C349                  | 1-126-923-11 | ELECT                            | 220uF 20% 10V |
| < DIODE >             |              |                                  |               |
| D318                  | 8-719-052-65 | LED SLR-342DUT31 (MAXI BASS)     |               |
| < RESISTOR >          |              |                                  |               |
| R345                  | 1-249-433-11 | CARBON                           | 22K 5% 1/4W   |
| R346                  | 1-249-407-11 | CARBON                           | 150 5% 1/4W   |
| R348                  | 1-247-807-31 | CARBON                           | 100 5% 1/4W   |
| < SWITCH >            |              |                                  |               |
| S301                  | 1-571-474-11 | SWITCH, PUSH (1 KEY) (MAXI BASS) |               |
| *****                 |              |                                  |               |

| Ref. No.      | Part No.     | Description                                 | Remark          |
|---------------|--------------|---|-----------------|
| *             | 1-860-808-11 | POWER BOARD                                 | *****           |
|               | 1-533-217-31 | HOLDER, FUSE                                |                 |
| < CAPACITOR > |              |   |                 |
| C901          | 1-127-888-21 | CERAMIC                                     | 0.1uF 10% 50V   |
| C902          | 1-127-888-21 | CERAMIC                                     | 0.1uF 10% 50V   |
| C903          | 1-127-888-21 | CERAMIC                                     | 0.1uF 10% 50V   |
| C904          | 1-127-888-21 | CERAMIC                                     | 0.1uF 10% 50V   |
| < CONNECTOR > |              |   |                 |
| * CNP313      | 1-815-444-11 | PIN, CONNECTOR (PWB) 3P                     |                 |
| < DIODE >     |              |   |                 |
| △ D901        | 8-719-046-07 | DIODE 2A02M                                 |                 |
| △ D902        | 8-719-046-07 | DIODE 2A02M                                 |                 |
| △ D903        | 8-719-046-07 | DIODE 2A02M                                 |                 |
| △ D904        | 8-719-046-07 | DIODE 2A02M                                 |                 |
| < AC INLET >  |              |   |                 |
| △ J901        | 1-526-838-31 | INLET, AC 2P (~ AC IN)                      |                 |
| < SWITCH >    |              |   |                 |
| △ S901        | 1-552-921-00 | SWITCH, POWER (VOLTAGE SELECTOR)            |                 |
| *****         |              |   |                 |
| REC SW BOARD  |              |   |                 |
| *****         |              |   |                 |
| < SWITCH >    |              |   |                 |
| S304          | 1-572-325-11 | SWITCH, SLIDE (REC/PB)                      |                 |
| *****         |              |   |                 |
| *             | A-3021-630-A | TUNER BOARD, COMPLETE (including F/T BOARD) |                 |
| *****         |              |   |                 |
|               | 3-236-140-02 | CHASSIS (TUNE)                              |                 |
|               | 3-236-143-01 | KNOB (BAND)                                 |                 |
|               | 3-236-148-01 | GEAR (VC)                                   |                 |
|               | 3-241-556-01 | TERMINAL, SPACER (SP)                       |                 |
|               | 7-621-259-25 | SCREW +P 2.6X4                              |                 |
|               | 7-685-647-79 | SCREW +BVTP 3X10 TYPE2 N-S                  |                 |
| < CAPACITOR > |              |   |                 |
| C1            | 1-162-286-21 | CERAMIC                                     | 220PF 10% 50V   |
| C2            | 1-162-282-31 | CERAMIC                                     | 100PF 10% 50V   |
| C3            | 1-162-199-31 | CERAMIC                                     | 10PF 5% 50V     |
| C4            | 1-162-199-31 | CERAMIC                                     | 10PF 5% 50V     |
| C5            | 1-162-199-31 | CERAMIC                                     | 10PF 5% 50V     |
| C6            | 1-162-199-31 | CERAMIC                                     | 10PF 5% 50V     |
| C7            | 1-162-294-31 | CERAMIC                                     | 0.001uF 10% 50V |
| C8            | 1-126-947-11 | ELECT                                       | 47uF 20% 16V    |
| C9            | 1-162-294-31 | CERAMIC                                     | 0.001uF 10% 50V |
| C10           | 1-162-306-11 | CERAMIC                                     | 0.01uF 20% 16V  |
| C11           | 1-162-191-31 | CERAMIC                                     | 2.2PF 10% 50V   |
| C12           | 1-162-191-31 | CERAMIC                                     | 2.2PF 10% 50V   |
| C13           | 1-162-195-31 | CERAMIC                                     | 4.7PF 10% 50V   |

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

| Ref. No. | Part No.     | Description                  | Remark           | Ref. No. | Part No.     | Description                     | Remark |
|----------|--------------|------------------------------|------------------|----------|--------------|---------------------------------|--------|
| C14      | 1-162-191-31 | CERAMIC                      | 2.2PF 10% 50V    |          |              | < COIL >                        |        |
| C15      | 1-162-199-31 | CERAMIC                      | 10PF 5% 50V      |          |              |                                 |        |
| C16      | 1-128-805-21 | CERAMIC                      | 47PF 5% 50V      | L1       | 1-428-860-11 | COIL, AIR-CORE                  |        |
| C17      | 1-136-479-11 | FILM                         | 0.001uF 5% 100V  | L2       | 1-416-509-11 | COIL, AIR-CORE                  |        |
| C18      | 1-136-356-11 | FILM                         | 470PF 5% 100V    | L3       | 1-402-593-11 | ANTENNA, FERRITE-ROD (MW)       |        |
| C19      | 1-136-287-11 | FILM                         | 0.0047uF 5% 100V | L4       | 1-406-253-81 | COIL (OSC)                      |        |
| C20      | 1-128-821-21 | CERAMIC                      | 0.001uF 5% 50V   | L5       | 1-424-690-11 | COIL (ANT)                      |        |
| C21      | 1-128-817-21 | CERAMIC                      | 470PF 5% 50V     | L6       | 1-406-247-11 | COIL (OSC)                      |        |
| C22      | 1-128-801-21 | CERAMIC                      | 22PF 5% 50V      | L7       | 1-428-863-11 | COIL, SW2 ANT                   |        |
| C23      | 1-162-294-31 | CERAMIC                      | 0.001uF 10% 50V  | L8       | 1-406-470-11 | COIL (OSC)                      |        |
| C24      | 1-126-961-11 | ELECT                        | 2.2uF 20% 50V    | L9       | 1-428-862-11 | COIL, FM DET                    |        |
| C25      | 1-126-961-11 | ELECT                        | 2.2uF 20% 50V    | L10      | 1-410-501-11 | INDUCTOR 2.2uH                  |        |
| C26      | 1-162-203-31 | CERAMIC                      | 15PF 5% 50V      |          |              | < TRANSISTOR >                  |        |
| C28      | 1-126-964-11 | ELECT                        | 10uF 20% 50V     | Q1       | 8-729-036-89 | TRANSISTOR KTC3198GR-A          |        |
| C30      | 1-162-306-11 | CERAMIC                      | 0.01uF 20% 16V   | Q2       | 8-729-036-58 | TRANSISTOR KRC102M-AT           |        |
| C31      | 1-126-963-11 | ELECT                        | 4.7uF 20% 50V    |          |              | < RESISTOR >                    |        |
| C32      | 1-162-306-11 | CERAMIC                      | 0.01uF 20% 16V   | R1       | 1-249-401-11 | CARBON 47 5% 1/4W               |        |
| C33      | 1-126-960-11 | ELECT                        | 1uF 20% 50V      | R2       | 1-249-441-11 | CARBON 100K 5% 1/4W             |        |
| C34      | 1-126-947-11 | ELECT                        | 47uF 20% 16V     | R3       | 1-249-421-11 | CARBON 2.2K 5% 1/4W             |        |
| C35      | 1-126-923-11 | ELECT                        | 220uF 20% 10V    | R4       | 1-249-411-11 | CARBON 330 5% 1/4W              |        |
| C36      | 1-127-876-21 | CERAMIC                      | 0.01uF 10% 50V   | R6       | 1-249-427-11 | CARBON 6.8K 5% 1/4W             |        |
| C37      | 1-127-876-21 | CERAMIC                      | 0.01uF 10% 50V   | R7       | 1-249-427-11 | CARBON 6.8K 5% 1/4W             |        |
| C38      | 1-126-960-11 | ELECT                        | 1uF 20% 50V      | R8       | 1-249-421-11 | CARBON 2.2K 5% 1/4W             |        |
| C39      | 1-126-959-11 | ELECT                        | 0.47uF 20% 50V   | R9       | 1-249-429-11 | CARBON 10K 5% 1/4W              |        |
| C40      | 1-126-963-11 | ELECT                        | 4.7uF 20% 50V    | R10      | 1-249-429-11 | CARBON 10K 5% 1/4W              |        |
| C41      | 1-126-960-11 | ELECT                        | 1uF 20% 50V      | R11      | 1-249-441-11 | CARBON 100K 5% 1/4W             |        |
| C43      | 1-162-282-31 | CERAMIC                      | 100PF 10% 50V    |          |              | < VARIABLE RESISTOR >           |        |
| C45      | 1-162-294-31 | CERAMIC                      | 0.001uF 10% 50V  | RV1      | 1-228-995-00 | RES, ADJ, METAL 22K             |        |
| C46      | 1-162-294-31 | CERAMIC                      | 0.001uF 10% 50V  |          |              | < SWITCH >                      |        |
| C47      | 1-162-306-11 | CERAMIC                      | 0.01uF 20% 16V   | S1       | 1-786-291-11 | SWITCH, LEVER SLIDE (BAND)      |        |
| C49      | 1-162-286-21 | CERAMIC                      | 220PF 10% 50V    |          |              | < COIL >                        |        |
| C50      | 1-162-282-31 | CERAMIC                      | 100PF 10% 50V    | T1       | 1-416-845-11 | COIL (IFT)                      |        |
|          |              | < FILTER >                   |                  | *****    |              |                                 |        |
| CF1      | 1-795-079-71 | FILTER, CERAMIC              |                  |          |              |                                 |        |
| CF2      | 1-767-615-11 | FILTER, CERAMIC              |                  |          |              |                                 |        |
|          |              | < CONNECTOR >                |                  |          |              |                                 |        |
| * CNP1   | 1-785-668-11 | PIN, CONNECTOR (PC BOARD) 2P |                  | *        | 1-860-806-11 | VOL BOARD                       |        |
|          |              | < VARIABLE CAPACITOR >       |                  |          |              | *****                           |        |
| CT1-4    | 1-151-693-31 | CAP, VAR                     |                  |          |              | < VARIABLE RESISTOR >           |        |
| CV1-4    | 1-151-693-31 | CAP, VAR (TUNING)            |                  | RV301    | 1-225-764-12 | RES, VAR, CARBON 20KX2 (VOLUME) |        |
|          |              | < TRIMMER >                  |                  | *****    |              |                                 |        |
| CT6      | 1-141-299-11 | CAP, CERAMIC TRIMMER 5PF     |                  |          |              |                                 |        |
| CT8      | 1-141-299-11 | CAP, CERAMIC TRIMMER 5PF     |                  |          |              |                                 |        |
|          |              | < DIODE >                    |                  |          |              |                                 |        |
| D1       | 8-719-991-33 | DIODE 1SS133T-77             |                  |          |              |                                 |        |
| D2       | 8-719-991-33 | DIODE 1SS133T-77             |                  |          |              |                                 |        |
| D3       | 8-719-991-33 | DIODE 1SS133T-77             |                  |          |              |                                 |        |
|          |              | < IC >                       |                  |          |              |                                 |        |
| IC1      | 8-752-050-20 | IC CXA1238S                  |                  |          |              |                                 |        |

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| Ref. No. | Part No.     | Description                           | Remark   |
|----------|--------------|---------------------------------------|----------|
|          |              | MISCELLANEOUS<br>*****                |          |
| * 302    | 1-860-811-11 | RETAINER BOARD                        |          |
| ANT1     | 1-501-820-11 | ANTENNA, TELESCOPIC (FM/SW)           |          |
| △ F901   | 1-533-468-12 | FUSE, GLASS TUBE (DIA.5) (2A/250V)    |          |
| △ F902   | 1-533-468-12 | FUSE, GLASS TUBE (DIA.5) (2A/250V)    |          |
| △ F903   | 1-533-459-12 | FUSE, GLASS TUBE (DIA.5) (0.25A/250V) |          |
| △ F904   | 1-533-471-12 | FUSE, GLASS TUBE (DIA.5) (4A/250V)    |          |
| HE301    | 1-543-876-11 | HEAD (ERASE) (DECK B)                 |          |
| HP301    | 1-500-454-11 | HEAD, MAGNETIC (PLAYBACK) (DECK A)    |          |
| HRP301   | 1-500-454-11 | HEAD, MAGNETIC (RECORD/PLAYBACK)      | (DECK B) |
| J102     | 1-771-059-11 | SWITCH, LEAF (PLAY) (DECK A)          |          |
| J103     | 1-771-059-11 | SWITCH, LEAF (PLAY) (DECK B)          |          |
| J104     | 1-762-679-11 | SWITCH, LEAF (POWER) (DECK A)         |          |
| J105     | 1-762-679-11 | SWITCH, LEAF (POWER) (DECK B)         |          |
| M301     | A-3174-238-A | MOTOR ASSY (W) (CAPSTAN/REEL)         |          |
| MIC301   | 1-542-527-11 | MICROPHONE, ELECTRET CAP (MIC)        |          |
| SP301    | 1-825-012-11 | SPEAKER (10cm) (WOOFER) (L-CH)        |          |
| SP302    | 1-825-012-11 | SPEAKER (10cm) (WOOFER) (R-CH)        |          |
| △ T901   | 1-437-570-21 | TRANSFORMER, POWER                    |          |
| *****    |              |                                       |          |
|          |              | ACCESSORIES<br>*****                  |          |
| △        | 1-823-401-12 | CORD, POWER                           |          |
|          | 3-260-753-01 | MANUAL, INSTRUCTION (ENGLISH,ARABIC)  |          |

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

MEMO

