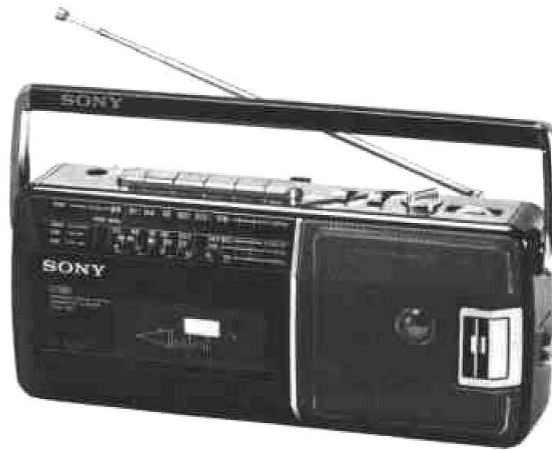


CFM-140L

SERVICE MANUAL

AEP Model



SPECIFICATIONS

Radio section

| | | |
|-----------------|--------|------------------------------|
| Frequency range | FM | 87.6 – 107 MHz |
| | MW | 530 – 1,605 kHz |
| | LW | 150 – 255 kHz |
| | SW | 5.95 – 18 MHz |
| Antennas | FM/SW: | Telescopic antenna |
| | MW/LW: | Built-in ferrite bar antenna |

Tape recorder section and general

| | |
|-------------------------|--|
| Frequency response | 125—6,300 Hz |
| Recording system | 2 track mono |
| Speakers | Approx. 7.6 cm (3 inches) dia woofer |
| | Approx. 2 cm (0.75 inches) dia tweeter |
| Peak music power output | 1.4W |
| Outputs | Earphone jack for 8—300 ohm impedance earphone |

| Battery life | Batteries | FM recording |
|--------------|-----------------------|--------------|
| | Sony SUM-2(NS) | 5 hours |
| | Sony AM-2(N) alkaline | 8 hours |

| | |
|------------|---|
| Dimensions | Approx. 308 × 134 × 90 mm (w/h/d) |
| | (12 × 5 1/2 × 3 1/2 inches) |
| Weight | incl. projecting parts & controls not including handle Approx. 1.5 kg (3 lbs 5 oz) incl. batteries |

Tape Transport Mechanism Type


MF-110

CONTENTS

Page

| | |
|---|----|
| FUNCTION OF CONTROLS | 2 |
| SECTION 1 BLOCK DIAGRAM | 3 |
| SECTION 2 DISASSEMBLY | |
| 2-1. DISASSEMBLY | 4 |
| 2-2. DIAL CORD STRINGING | 5 |
| SECTION 3 ADJUSTMENTS | |
| 3-1. MECHANICAL ADJUSTMENTS | 6 |
| 3-2. ELECTRICAL ADJUSTMENTS | 7 |
| SECTION 4 DIAGRAMS | |
| 4-1. MOUNTING DIAGRAM | 11 |
| Semiconductor Lead Layouts | 11 |
| 4-2. SCHEMATIC DIAGRAM | 13 |
| SECTION 5 EXPLODED VIEWS AND PARTS LIST | 15 |
| SECTION 6 ELECTRICAL PARTS LIST | 18 |

SAFETY-RELATED COMPONENT WARNING!!

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

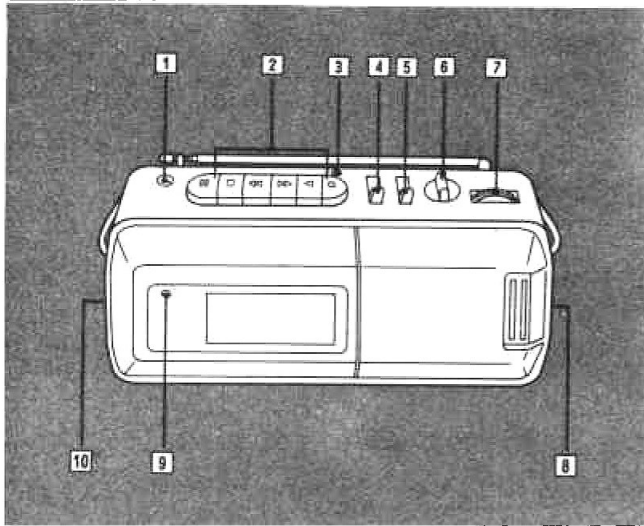
FM/MW/LW/SW CASSETTE-CORDER
SONY®



TC

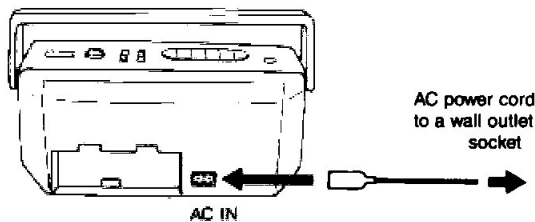
FUNCTION OF CONTROLS

Front panel



- 1 **EARPHONE jack**
- 2 **Tape operation buttons**
 - ▮ PAUSE
 - STOP/EJECT
 - ◀ FF (fast-forward) button
 - ▶ REW (rewind) button
 - ▶ PLAY (playback) button
 - REC (record) button
- 3 **MIC (built-in)**
- 4 **FUNCTION SELECTOR (TAPE (RADIO OFF) /RADIO)**
- 5 **BAND selector (FM/MW/LW/SW)**
- 6 **VOLUME control**
- 7 **TUNING control**
- 8 **FINE TUNING control**
- 9 **OPR/BATT (operation/battery check) indicator**
When it glows faintly during battery operation, replace all the batteries with new ones.
- 10 **AC IN socket**

Rear panel



Service Note

IC201 is indicated as KA2213 on schematic diagram, mounting diagram and block diagram in this service manual.

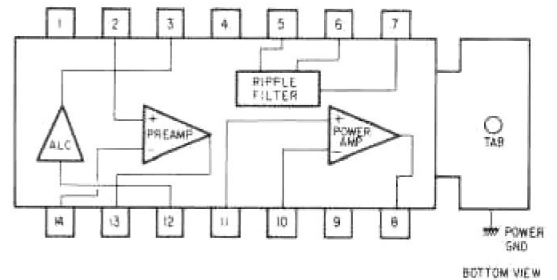
KA2213 or LA4160 is mounted on the main board for IC201.

The position of pin 1 of LA4160 is different from that of KA2213.

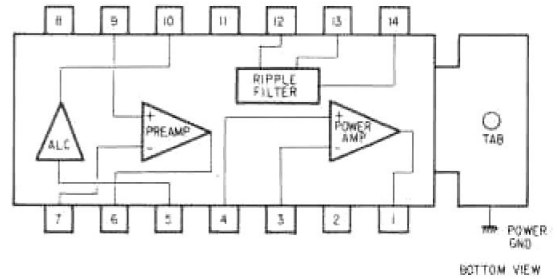
But the internal connection of IC is the same regardless of the pin number.

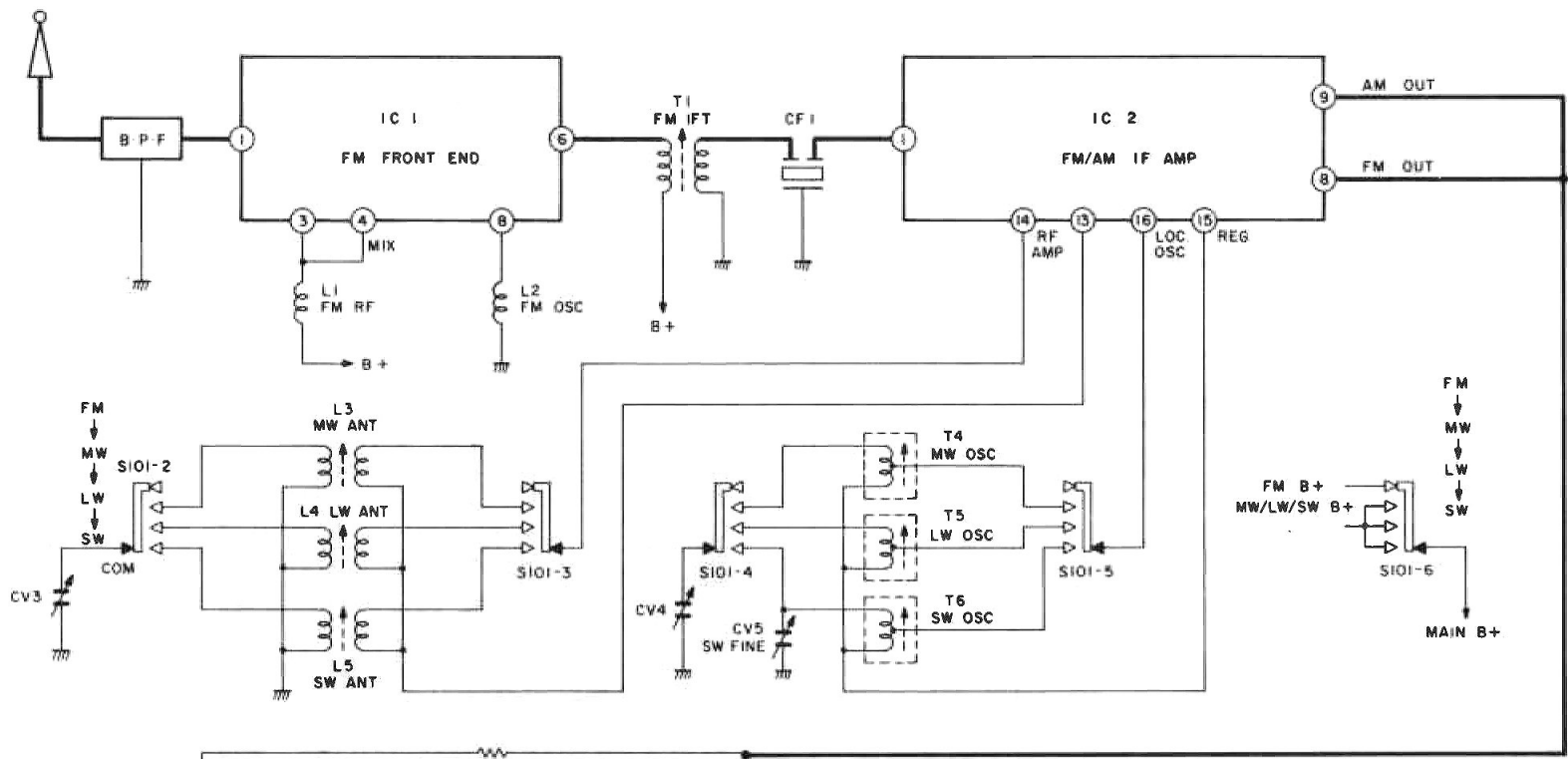
When replacing the IC201, be careful to the position of the heat sink. (Mount it to the original position.)

● KA2213

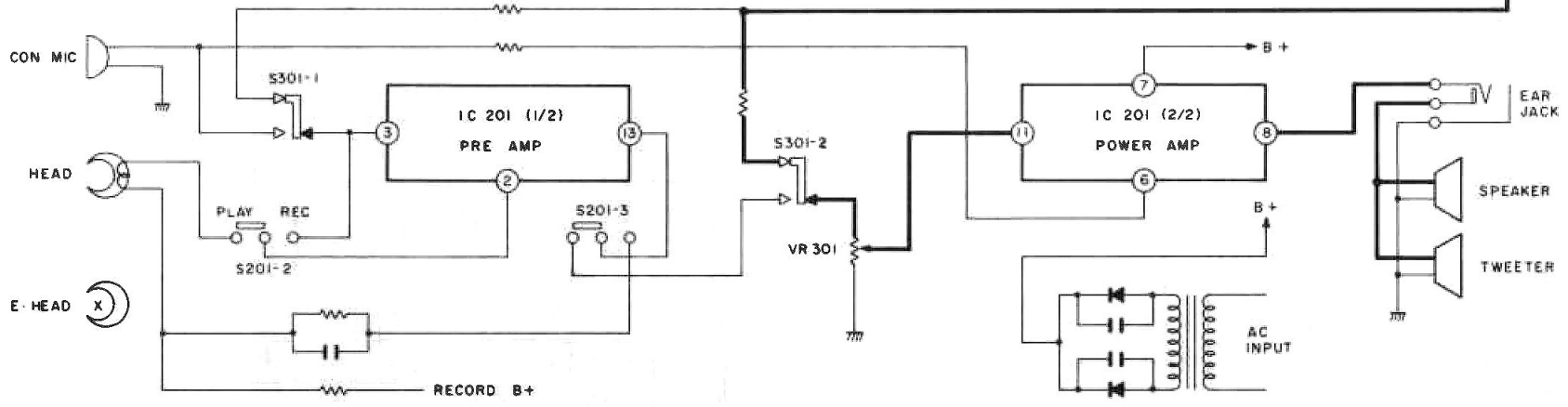


● LA4160





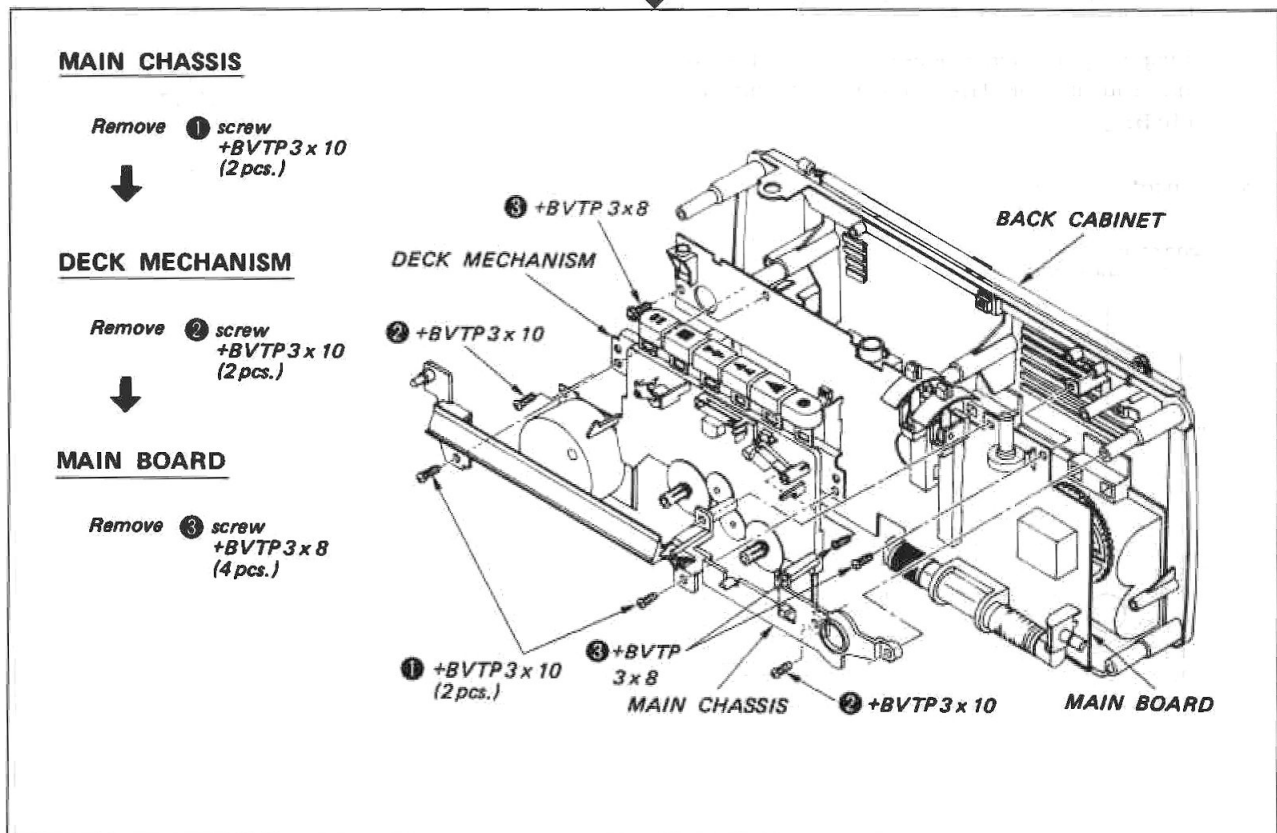
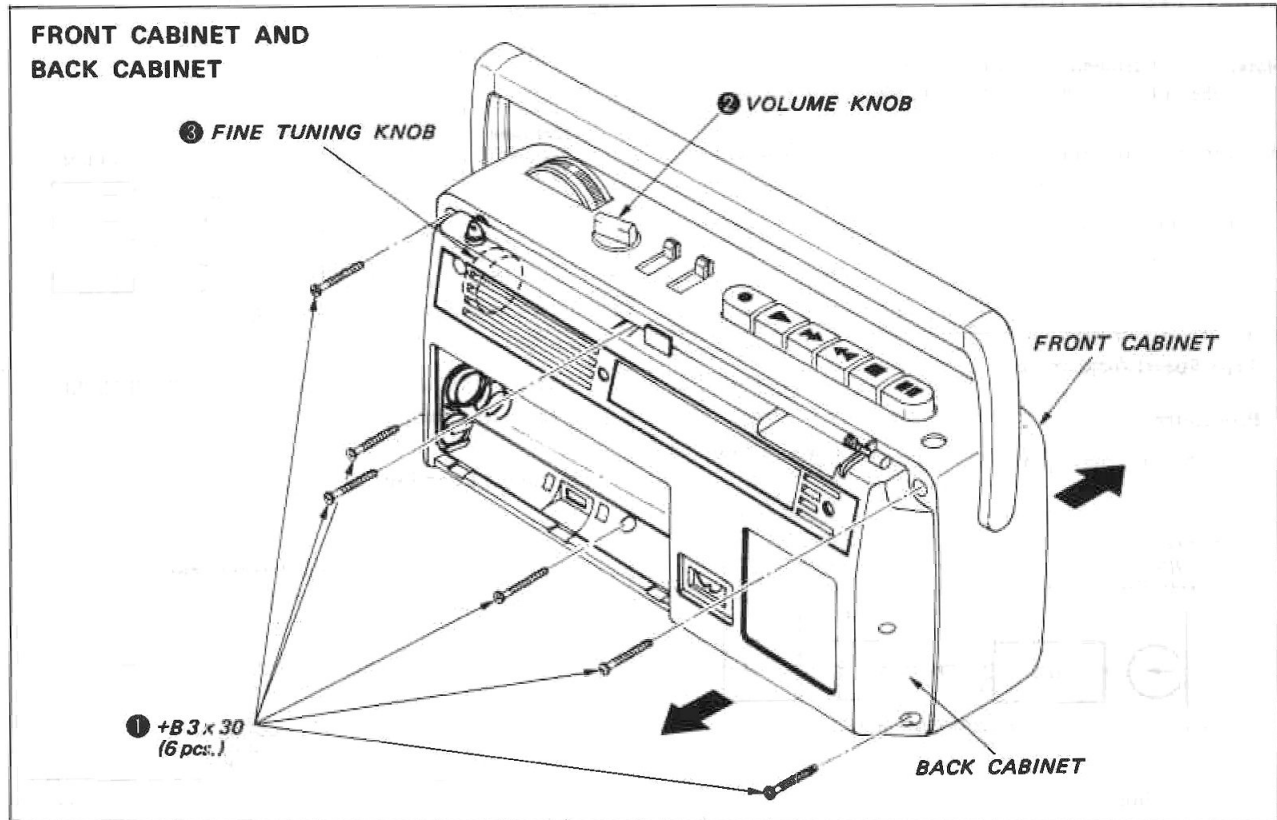
SECTION 1
BLOCK DIAGRAM



SECTION 2 DISASSEMBLY

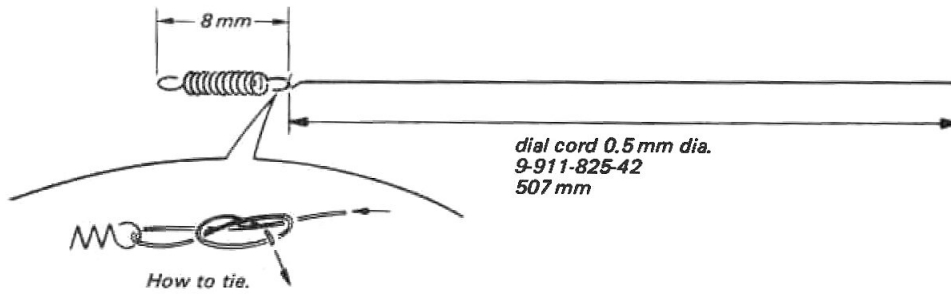
2-1. DISASSEMBLY

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

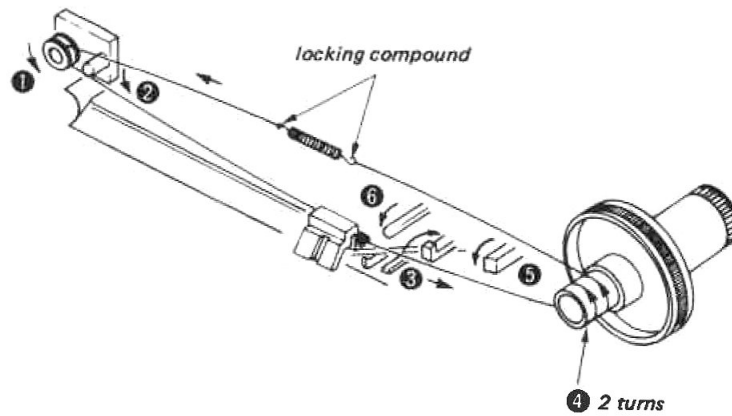


2-2. DIAL CORD STRINGING

1) Dial Cord Preparation



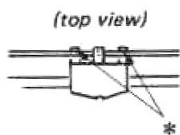
2) Dial Cord Stringing



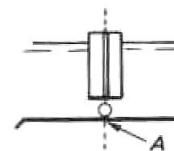
3) Pointer Setting

① Turn the drum wheel counterclockwise (seen from the foil pattern) to set the lowest frequency.

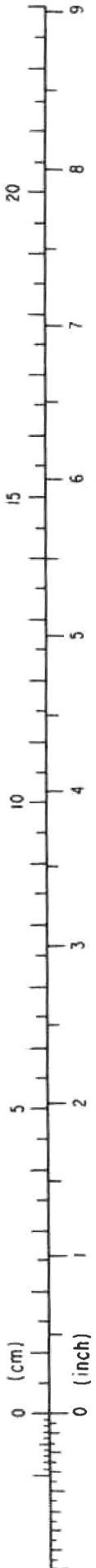
② Hook the pointer to the dial cord as illustrated.



④ Apply locking compound to the portion *.



③ Set the pointer to the portion A close to the lowest frequency position.



**SECTION 3
ADJUSTMENTS**

3-1. MECHANICAL ADJUSTMENTS AND MEASUREMENTS

PRECAUTION

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

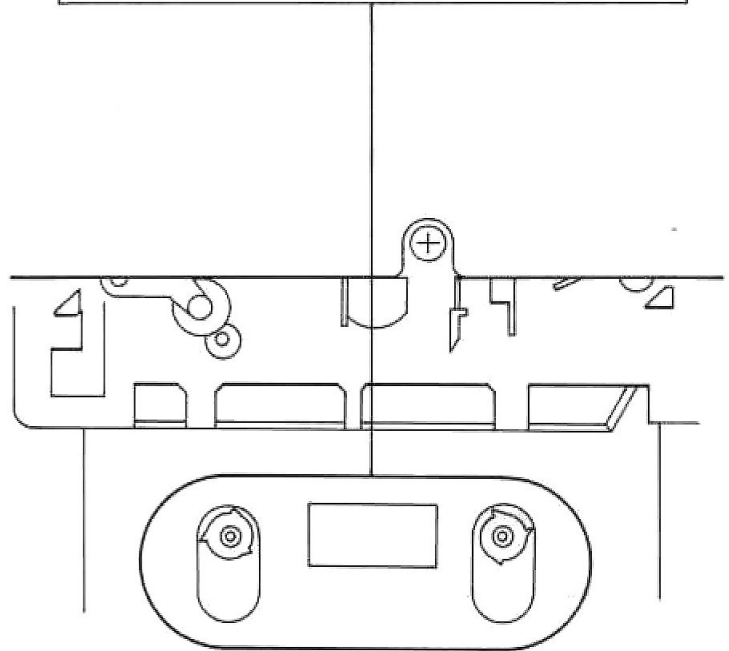
| | |
|----------------------|--------------|
| record/playback head | pinch roller |
| erase head | rubber belts |
| capstan | idlers |
2. Demagnetize the record/playback head with a head demagnetizer. (Do not bring the head demagnetizer close to the erase head.)
3. Do not use a magnetized screwdriver 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.

Torque Measurement

| Torque | Torque Meter | Meter Reading |
|--------------|--------------|---|
| Playback | CQ-102C | 25 – 50 g·cm (0.34 – 0.69 oz·inch) |
| Rewind | CQ-201B | 85 – 120 g·cm (1.17 – 1.66 oz·inch) |
| Fast Forward | CQ-201B | more than 85 g·cm (more than 1.17 oz·inch) |
| Back Tension | CQ-102C | 2.5 – 5 g·cm (0.03 – 0.07 oz·inch) |

Tape Tension Measurement

| Meter | Meter Reading |
|---------|---------------------------|
| CQ-403A | more than 170 g (5.99 oz) |



3-2. ELECTRICAL ADJUSTMENTS

CASSETTE SECTION

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

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

FUNCTION: TAPE (RADIO OFF)

VOLUME: mechanical mid

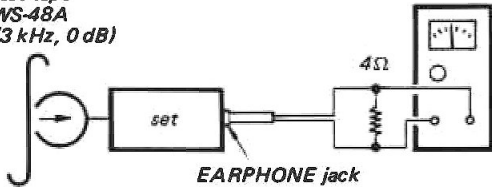
Tape Speed Adjustment

Procedure:

Mode: playback

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

speed checker
LFM-30
or
digital frequency
counter



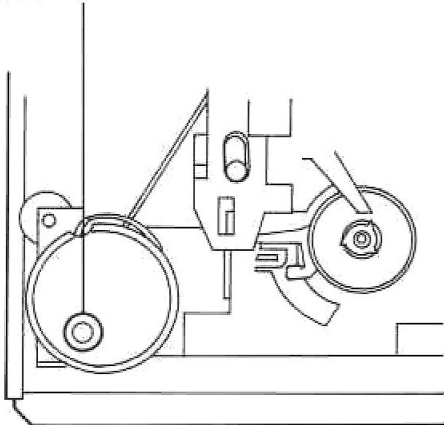
Specifications:

| Speed checker | Digital frequency counter |
|---------------|---------------------------|
| -2.5 to +3% | 2,925 – 3,090 Hz |

Frequency difference between the beginning and the end of the tape should be within 1% (30 Hz).

Adjustment Location:

tape speed adjustment
control inside motor

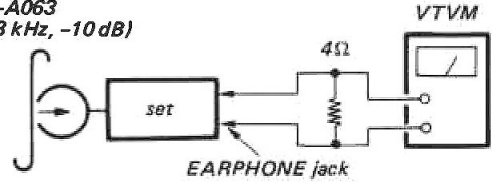


Record/playback Head Azimuth Adjustment

Procedure:

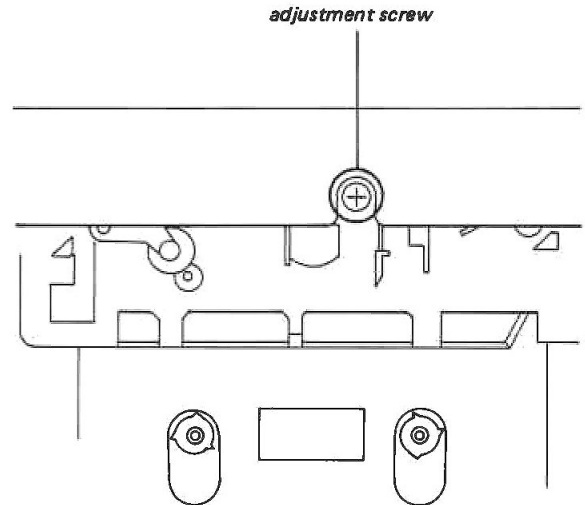
1. Mode: playback

test tape
P-4-A063
(6.3 kHz, -10 dB)



2. Turn the adjustment screw for the maximum output levels.

Adjustment Location:

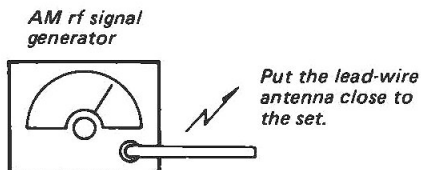


RADIO SECTION

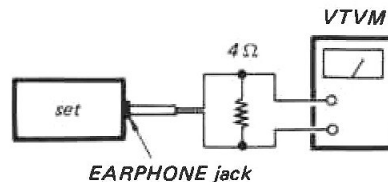
AM SECTION

- MW Section FUNCTION switch: MW
- LW Section FUNCTION switch: LW

Setting:



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



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

| MW FREQUENCY COVERAGE ADJUSTMENT | |
|---------------------------------------|---------|
| Adjust for a maximum reading on VTVM. | |
| 1,680 kHz | 515 kHz |
| CT6 | T4 |

| LW FREQUENCY COVERAGE ADJUSTMENT | |
|---------------------------------------|---------|
| Adjust for a maximum reading on VTVM. | |
| 265 kHz | 145 kHz |
| CT7 | T5 |

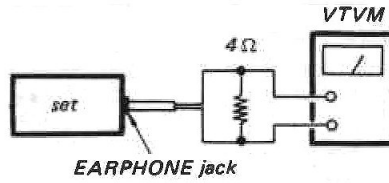
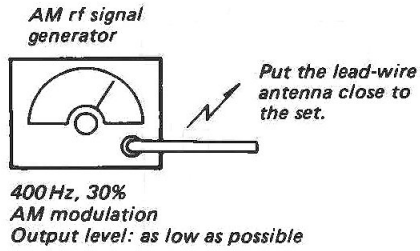
| LW TRACKING ADJUSTMENT | |
|---------------------------------------|---------|
| Adjust for a maximum reading on VTVM. | |
| CT4 | 240 kHz |
| L4 | 160 kHz |

| IF ALIGNMENT | |
|---------------------------------------|---------|
| T3 | 455 kHz |
| Adjust for a maximum reading on VTVM. | |

| MW TRACKING ADJUSTMENT | |
|---------------------------------------|-----------|
| L3 | CT3 |
| 620 kHz | 1,400 kHz |
| Adjust for a maximum reading on VTVM. | |

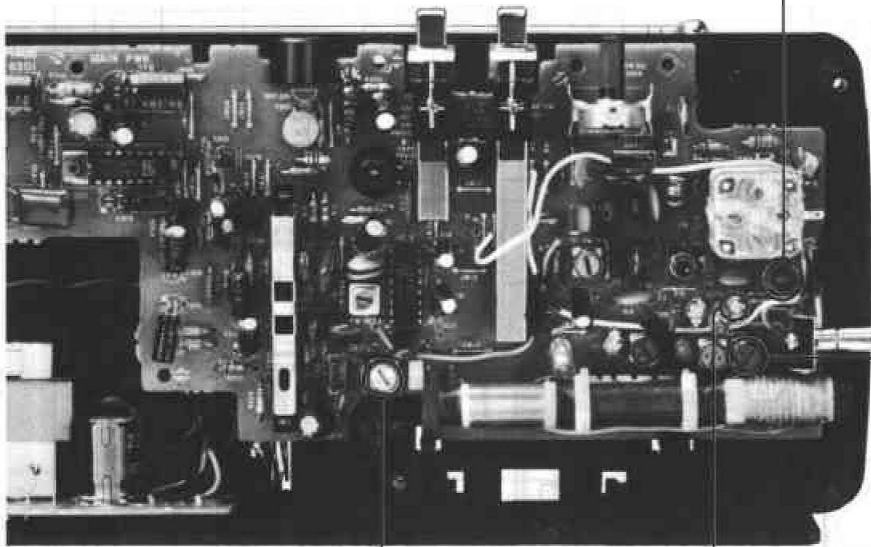
●SW Section FUNCTION switch: SW

Setting:



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

| |
|---------------------------------------|
| SW TRACKING ADJUSTMENT |
| Adjust for a maximum reading on VTVM. |
| 7 MHz |
| L5 |



FINE TUNING (CV5) CENTER

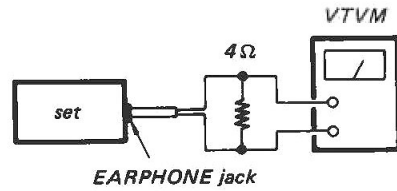
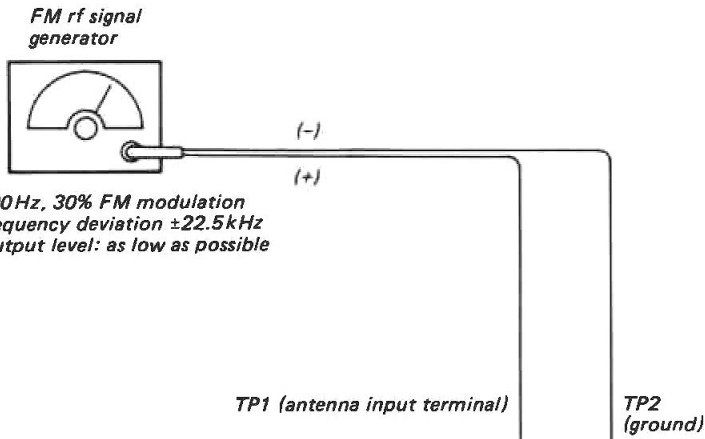
| |
|---------------------------------------|
| T3 |
| 455 kHz |
| Adjust for a maximum reading on VTVM. |
| IF ALIGNMENT |

| | |
|---|---------|
| CT8 | T6 |
| 18.4 MHz | 5.8 MHz |
| Adjust for a maximum reading on VTVM. | |
| SW FREQUENCY COVERAGE ADJUSTMENT | |

FM SECTION

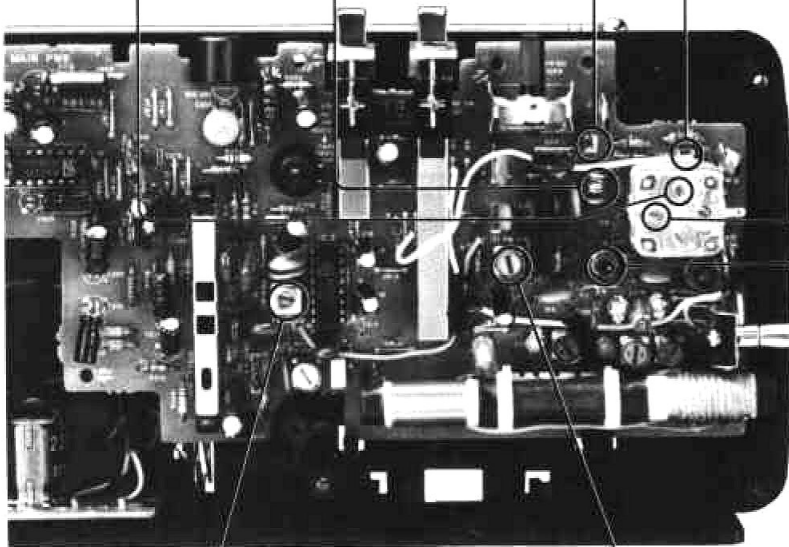
- FM Section FUNCTION switch: FM

Setting:



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

| FM TRACKING ADJUSTMENT | |
|---------------------------------------|-----------|
| Adjust for a maximum reading on VTVM. | |
| 107.8 MHz | 87.35 MHz |
| CT2 | L1 |



| FM FREQUENCY COVERAGE ADJUSTMENT | |
|---------------------------------------|-----------|
| Adjust for a maximum reading on VTVM. | |
| CT1 | 107.8 MHz |
| L2 | 87.35 MHz |

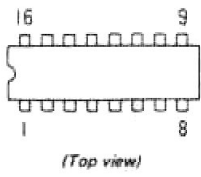
| T2 |
|---|
| Adjust for a minimum reading on Distortion Meter. |
| FM IF ALIGNMENT (2) |

| T1 |
|---------------------------------------|
| Adjust for a maximum reading on VTVM. |
| FM IF ALIGNMENT (1) |

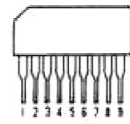
SECTION 4 DIAGRAMS

• Semiconductor Lead Layouts

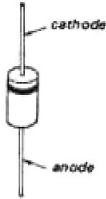
LA1260S



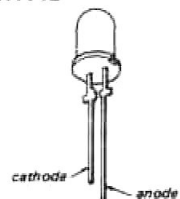
TA7358AP



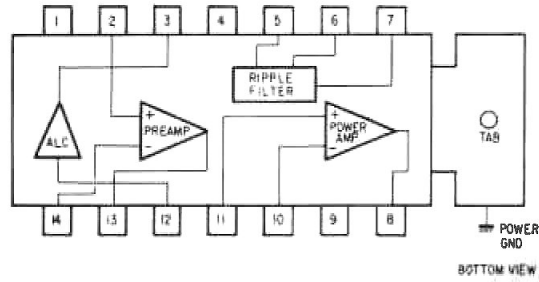
1S1555
KD-345
1SS106
10E2
UZP-4.7B



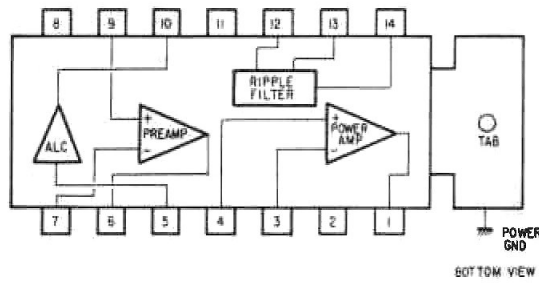
KLR114E



• KA2213



• LA4160



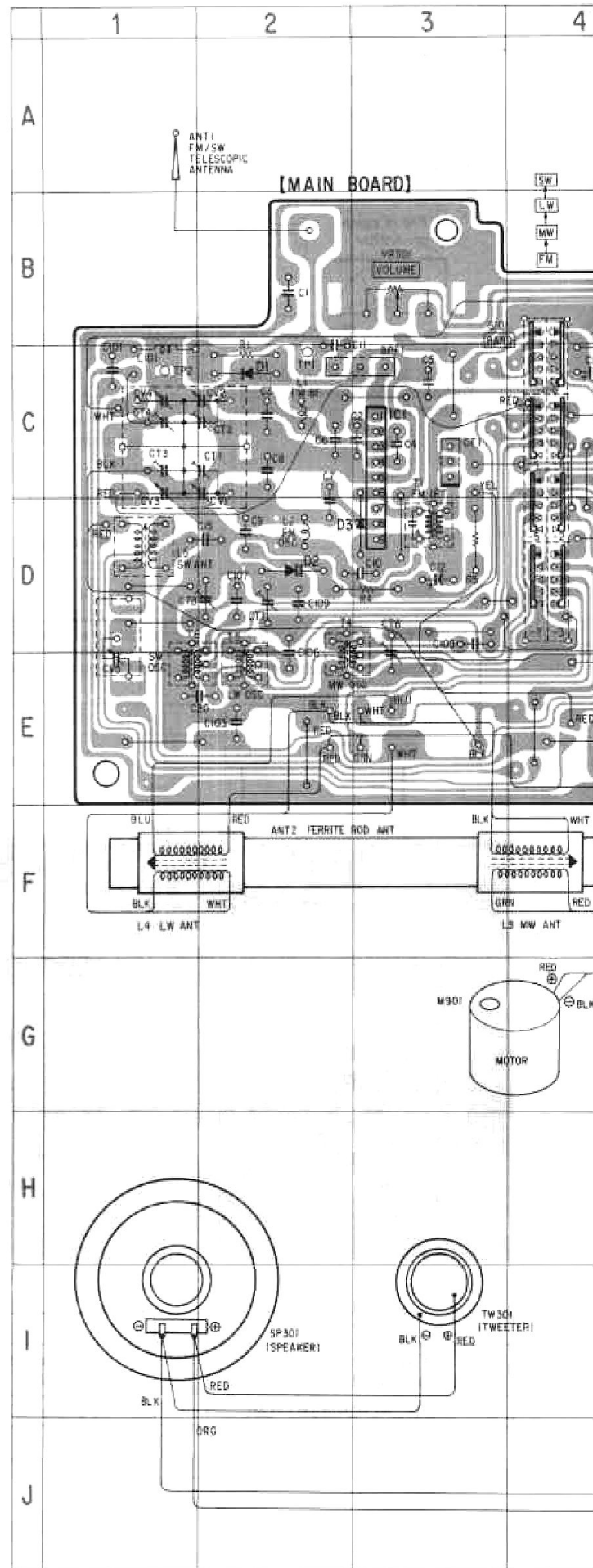
• Semiconductors Location

| Ref. No. | Location | Ref. No. | Location |
|----------|----------|----------|----------|
| D1 | C-2 | D401 | E-9 |
| D2 | D-2 | D901 | H-9 |
| D3 | D-3 | D902 | H-8 |
| D201 | C-7 | | |
| D202 | E-7 | IC1 | C-3 |
| D203 | D-7 | IC2 | D-5 |
| D301 | B-8 | IC201 | C-8 |

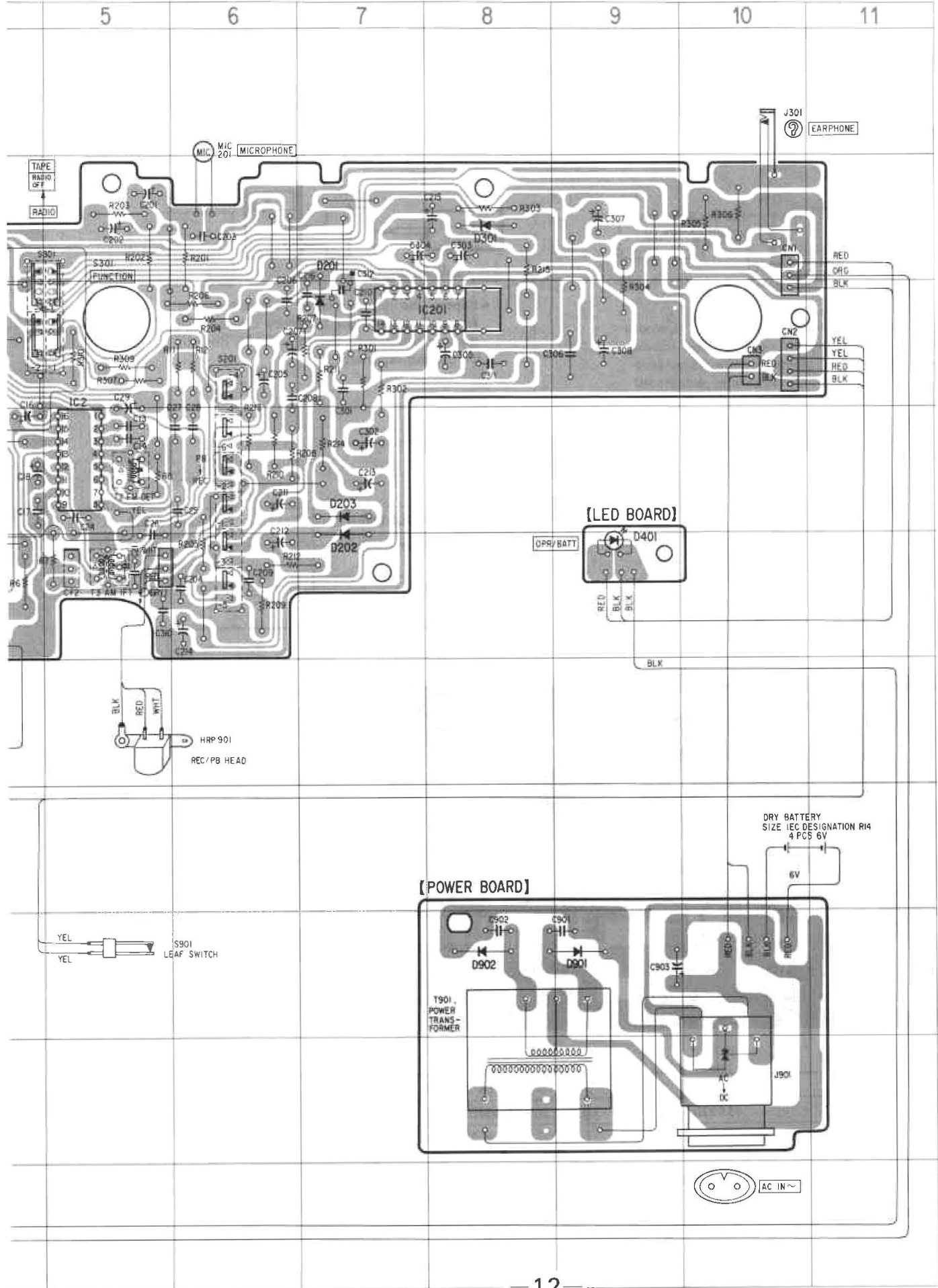
Note:

- : part mounted on the conductor side.

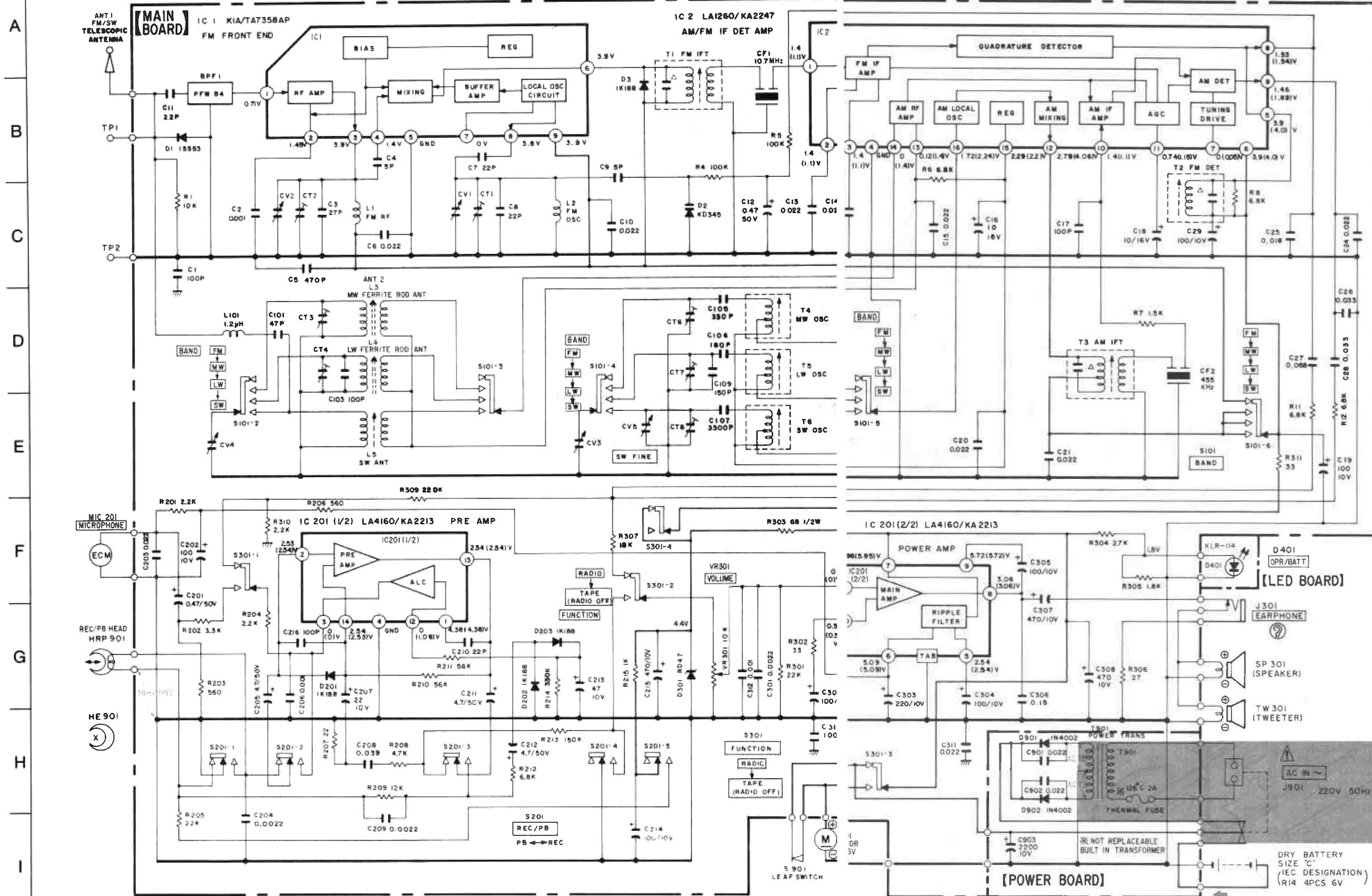
4-1. MOUNTING DIAGRAM



CFM-140L



4-2. SCHEMATIC DIAGRAM



Note:

- All capacitors are in μF unless otherwise noted. pF : $\mu\mu\text{F}$ 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $1/4\text{W}$ or less unless otherwise specified.
- Δ : internal component.
- --- : B+ bus.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken under no-signal (detuned) conditions with VOM (50 $\text{k}\Omega/\text{V}$). No mark: FM () : AM
- Voltage variations may be noted due to normal production tolerances.

• Switch

| Ref. I | Switch | Position |
|--------|----------|----------|
| S10 | BAND | FM |
| S20 | REC/PB | PB |
| S30 | FUNCTION | RADIO |
| S9C | MD POWER | OFF |

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

SECTION 5
EXPLODED VIEWS AND PARTS LIST

NOTE:


The mechanical parts with no reference number in the exploded views are not supplied.

Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

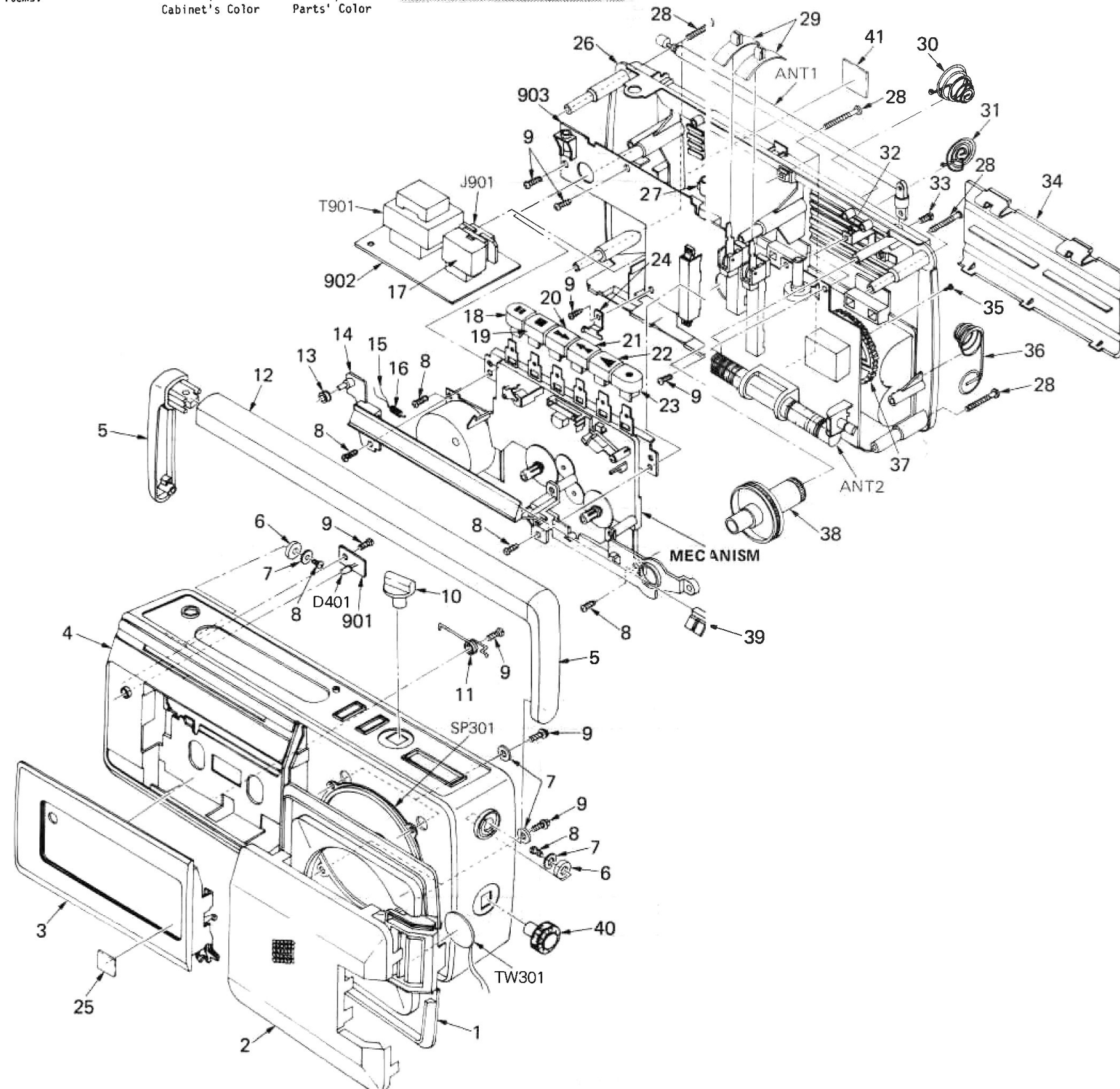
The construction parts of an assembled part are indicated with a collation number in the remark column.

Color Indication of Appearance Parts
Example: (RED) KNOB, BALANCE (WHITE)

Cabinet's Color Parts' Color

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

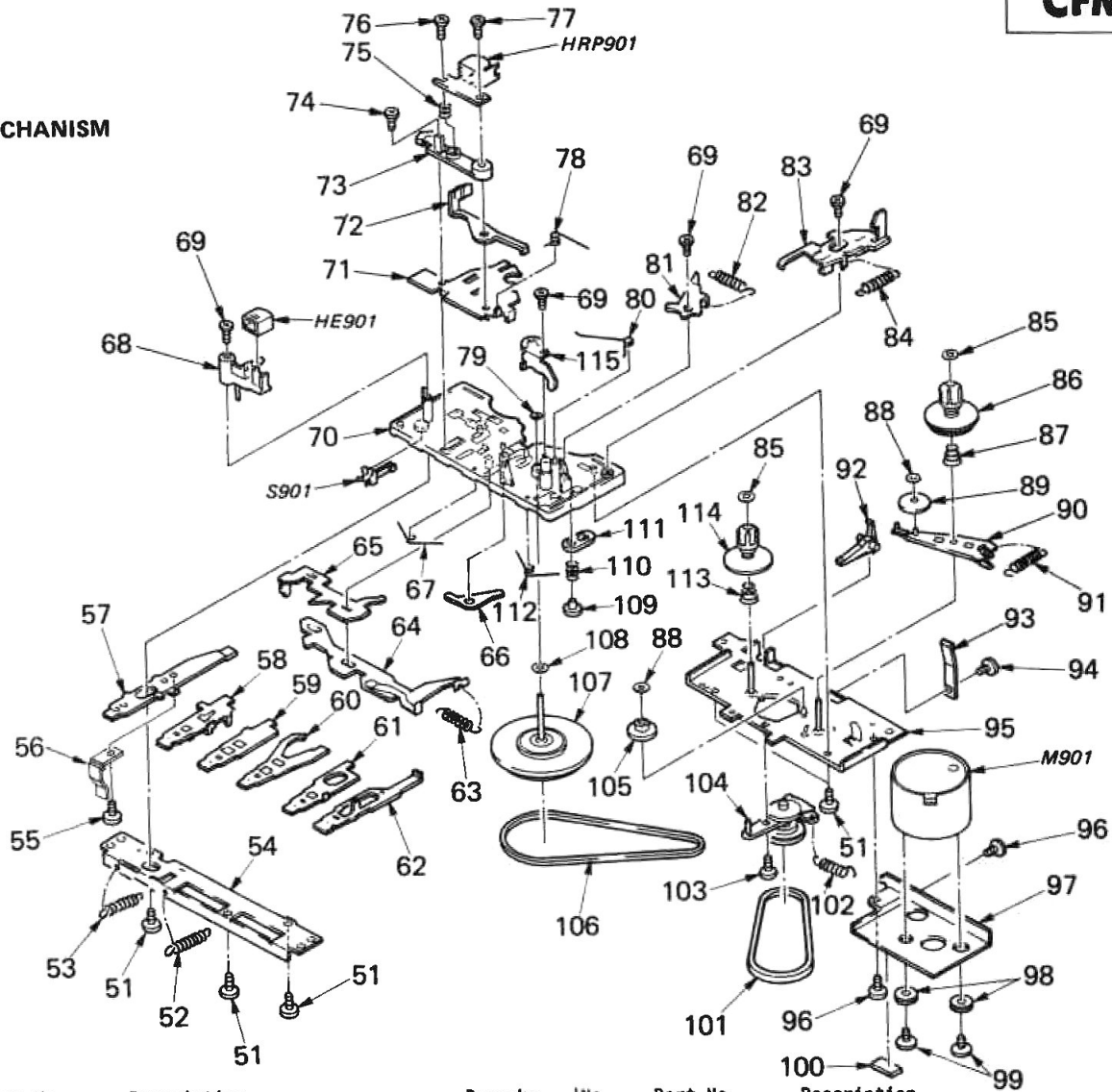
5-1.



| No. | Part No. | Description | Remarks |
|-----|------------------------------|--|---------|
| 1 | 3-391-507-01 | SPEAKER GRILLE (DEC) | |
| 2 | 3-391-506-01 | SPEAKER GRILLE | |
| 3 | X-3598-123-2 X-3598-123-5 | (BLACK)...LID CASSETTE ASSY (WHITE)...LID CASSETTE ASSY | |
| 4 | X-3598-122-2 X-3598-122-5 | (BLACK)...FRONT CABINET ASSY (WHITE)...FRONT CABINET ASSY | |
| 5 | 3-391-509-01 | (BLACK,WHITE)...HANDLE BEAM | |
| 6 | 3-598-123-01 | HANDLE, WASHER | |
| 7 | 7-688-003-11 | W 3, MIDDLE | |
| 8 | 7-685-647-79 | SCREW +BVTP 3X10 | |
| 9 | 7-685-646-79 | SCREW +BVTP 3X8 | |
| 10 | 3-391-531-01 | KNOB VOLUME | |
| 11 | 3-391-545-01 | SPRING DOOR | |
| 12 | 3-391-508-01 3-391-508-11 | (BLACK)...HANDLE BAR BLACK (WHITE)...HANDLE BAR WHITE | |
| 13 | 3-391-521-01 | WHEEL DIAL B | |
| 14 | *3-391-515-01 | MAIN CHASSIS | |
| 15 | 9-911-825-42 | DIAL CORD 0.5MM | |
| 16 | *3-597-529-01 | SPRING-DIAL | |
| 17 | 3-597-465-01 | AC SOCKET COVER | |
| 18 | 3-391-523-01 | KNOB DECK PAUSE | |
| 19 | 3-391-524-01 | KNOB DECK STOP | |
| 20 | 3-391-526-01 | KNOB DECK REW | |
| 21 | 3-391-525-01 | KNOB DECK FF | |
| 22 | 3-391-527-01 | KNOB DECK PLAY | |
| 23 | 3-391-528-01 | KNOB DECK REC | |
| 24 | *3-391-532-01 | BRKT P/T | |
| 25 | 3-703-707-01 | STICKER, SONY SYMBOL (21) | |

| No. | Part No. | Description | Remarks |
|-------|------------------------------|--|---------|
| 26 | 3-391-510-01 3-391-510-11 | (BLACK)...CABINET BACK BLK (WHITE)...CABINET BACK WHT | |
| 27 | 3-597-451-01 | MICROPHONE HOLDER | |
| 28 | 7-685-153-19 | SCREW +P 3X30 | |
| 29 | 3-391-530-01 | KNOB LEVER | |
| 30 | 3-391-512-01 | SPRING BATTERY M | |
| 31 | 3-391-514-01 | SPRING BATTERY P | |
| 32 | 3-391-546-01 | BRKT ANT | |
| 33 | 7-682-148-01 | SCREW +P 3X8 | |
| 34 | 3-391-511-01 3-391-511-11 | (BLACK)...LID BATTERY (WHITE)...LID BATTERY | |
| 35 | 7-621-284-20 | SCREW +P 2.6X6 | |
| 36 | 3-391-513-01 | SPRING BATTERY P M | |
| 37 | 3-391-518-01 | WHEEL DRUM | |
| 38 | 3-391-517-01 | KNOB TUNING | |
| 39 | 3-391-516-01 | POINTER | |
| 40 | 3-597-562-01 | KNOB-FINE TUNING | |
| 41 | 3-391-542-01 3-391-542-11 | (BLACK)...LABEL RATING (B) (SONY CORP) (WHITE)...LABEL RATING (W) (SONY CORP) | |
| 901 | *1-622-843-11 | LED PCB | |
| 902 | *1-622-844-11 | POWER PCB | |
| 903 | *1-622-842-11 | MAIN PCB | |
| ANT1 | 1-501-346-11 | ANTENNA, TELESCOPIC | |
| ANT2 | 1-402-265-11 | ANTENNA, FERRITE-ROD (LW/MW)(L3,L4) | |
| D401 | 1-807-330-11 | DIODE KLR114E (LED)(OPR/BATT) | |
| J901 | *1-526-921-11 | SOCKET, AC (AC IN) | |
| SP301 | 1-503-614-11 | SPEAKER | |
| T901 | *1-448-854-11 | TRANSFORMER, POWER | |
| TW301 | 1-503-615-11 | SPEAKER, PIEZOELECTRIC | |

5-2. MECHANISM



| No. | Part No. | Description | Remarks |
|-----|---------------|-----------------------------|---------|
| 51 | 7-685-103-24 | SCREW +P 2X5 TYPE2 SLIT | |
| 52 | 3-598-877-01 | PLAY BUTTON LEVER SP (S) | |
| 53 | 3-598-829-01 | BUTTON LEVER SPRING (A) | |
| 54 | *3-390-225-01 | CHASSIS, SUB | |
| 55 | 3-598-862-01 | +PS 2X3 | |
| 56 | *3-391-529-01 | BRKT-RECORD | |
| 57 | 3-390-218-01 | LEVER, REC BUTTON | |
| 58 | *3-390-221-01 | LEVER, PLAY BUTTON | |
| 59 | *3-390-222-01 | LEVER, REW BUTTON | |
| 60 | *3-390-223-01 | LEVER, FF BUTTON | |
| 61 | *3-390-219-01 | LEVER, STOP BUTTON | |
| 62 | *X-3598-105-1 | LEVER ASSY, PAUSE BUTTON | |
| 63 | 3-598-832-01 | ACTUATOR SPRING | |
| 64 | X-3598-107-1 | ACTUATOR ASSY, PUSH BUTTON | |
| 65 | *3-598-816-01 | SWITCH PLATE | |
| 66 | *3-598-823-01 | REW LEVER | |
| 67 | 3-598-879-01 | BUTTON LEVER SPRING (E) | |
| 68 | 3-598-842-01 | MG ARM | |
| 69 | 3-598-844-01 | P.M.E. SCREW | |
| 70 | X-3598-106-1 | BASE ASSY, MAIN | |
| 71 | *3-598-880-01 | HEAD PANEL | |
| 72 | *X-3598-803-1 | SENSING PLATE ASSY | |
| 73 | 3-598-839-01 | HEAD BASE | |
| 74 | 7-621-772-38 | SCREW +B 2X6 | |
| 75 | 3-598-845-01 | SPRING | |
| 76 | 7-621-772-30 | SCREW +B 2X6 | |
| 77 | 7-627-553-88 | SCREW, PRECISION +P 2X7 | |
| 78 | 3-598-882-01 | PINCH ROLLER SPRING | |
| 79 | 3-598-868-01 | P WASHER CUT (1.55X3.8X0.5) | |
| 80 | 3-598-881-01 | HEAD PANEL SPRING (S) | |
| 81 | *3-598-878-01 | AUTO LEVER | |
| 82 | 3-598-834-01 | AUTO LEVER SPRING | |
| 83 | 3-598-859-01 | EJECT SLIDE LEVER | |
| 84 | 3-598-860-01 | EJECT SLIDE LEVER SP | |
| 85 | 3-598-867-01 | P WASHER CUT (1.2X3X0.4) | |

| No. | Part No. | Description | Remarks |
|--------|---------------|---------------------------|---------|
| 86 | X-3598-809-1 | TAKE-UP REEL ASSY | |
| 87 | 3-598-852-01 | BACK TENSION SPRING | |
| 88 | 3-598-866-01 | P WASHER CUT (1.2X3X0.25) | |
| 89 | 3-596-940-01 | GEAR, T ROLLER | |
| 90 | X-3598-808-1 | TAKE-UP GEAR PLATE ASSY | |
| 91 | 3-598-884-01 | T.G. PLATE SPRING | |
| 92 | 3-598-851-01 | RECORD SAFETY LEVER | |
| 93 | 3-390-227-01 | SPRING, PACK | |
| 94 | 7-621-555-12 | SCREW +K 2X3 | |
| 95 | *X-3598-813-1 | REEL BASE ASSY | |
| 96 | 7-685-781-04 | SCREW +PTT 2X4 (S) | |
| 97 | *3-390-220-01 | BRACKET, MOTOR | |
| 98 | 3-598-854-01 | MOTOR RUBBER | |
| 99 | 3-598-855-01 | MOTOR COLLER SCREW | |
| 100 | 3-598-858-01 | MAT | |
| 101 | 3-598-883-01 | RF BELT | |
| 102 | 3-598-847-01 | RF PULLEY ARM SPRING | |
| 103 | 3-596-945-01 | SCREW, ARM COLLAR | |
| 104 | X-3598-812-1 | RF PULLEY ARM ASSY | |
| 105 | 3-596-941-01 | GEAR, FF | |
| 106 | 3-390-226-01 | BELT, MAIN | |
| 107 | X-3598-806-1 | FLYWHEEL ASSY | |
| 108 | 3-598-869-01 | P WASHER CUT (2.05X4X0.4) | |
| 109 | 3-598-826-01 | PAUSE STOPPER | |
| 110 | 3-598-825-01 | PAUSE LEVER SPRING | |
| 111 | *3-598-824-01 | PAUSE LEVER | |
| 112 | 3-390-224-01 | SPRING (C), BUTTON LEVER | |
| 113 | 3-598-850-01 | BACK TENSION SPRING | |
| 114 | X-3598-810-1 | SUPPLY REEL ASSY | |
| 115 | X-3598-804-1 | PINCH ROLLER ASSY | |
| HE901 | 1-543-342-11 | E.HEAD | |
| HRP901 | 1-543-300-11 | R.P.HEAD | |
| M901 | 3-390-244-01 | MOTOR ASSY | |
| S901 | 1-570-692-11 | SWITCH, LEAF | |

SECTION 6

ELECTRICAL PARTS LIST

NOTE:

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:

MF:μF, PF:μμF.

RESISTORS

- All resistors are in ohms.
- F : nonflammable

COILS

· MMH : mH, UH : μH

SEMICONDUCTORS

In each case, U : μ, for example:

UA...: μA..., UPA...: μPA..., UPC...: μPC,
UPD...: μPD...

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

ELECTRICAL PARTS

| Ref.No. | Part No. | Description |
|---------|---------------|-------------------------------------|
| 901 | *1-622-843-11 | LED PCB |
| 902 | *1-622-844-11 | POWER PCB |
| 903 | *1-622-842-11 | MAIN PCB |
| ANT1 | 1-501-346-11 | ANTENNA, TELESCOPIC |
| ANT2 | 1-402-265-11 | ANTENNA, FERRITE-ROD (LW/MW)(L3,L4) |
| BPF1 | 1-236-008-11 | FILTER, CERAMIC |

CAPACITORS

| Ref.No. | Description |
|---------|-------------------------|
| C1 | CERAMIC 100PF SL |
| C2 | CERAMIC 0.001MF D |
| C3 | CERAMIC 27PF CH |
| C4 | CERAMIC 5PF CH |
| C5 | CERAMIC 470PF SL |
| C6 | CERAMIC 0.022MF |
| C7 | CERAMIC 22PF CH |
| C8 | CERAMIC 22PF WJ |
| C9 | CERAMIC 5PF CH |
| C10 | CERAMIC 0.022MF |
| C11 | CERAMIC 22PF CH |
| C12 | ELECTROLYTIC 0.47MF 50V |
| C13 | CERAMIC 0.022MF |
| C14 | CERAMIC 0.022MF |
| C15 | CERAMIC 0.022MF |
| C16 | ELECTROLYTIC 10MF 16V |
| C17 | CERAMIC 100PF SL |
| C18 | ELECTROLYTIC 10MF 16V |
| C19 | ELECTROLYTIC 100MF 10V |
| C20 | CERAMIC 0.022MF |
| C21 | CERAMIC 0.022MF |
| C24 | POLYESTER 0.022MF |
| C25 | POLYESTER 0.018MF |
| C26 | POLYESTER 0.033MF |
| C27 | POLYESTER 0.068MF |
| C28 | POLYESTER 0.033MF |
| C29 | ELECTROLYTIC 100MF 10V |
| C101 | CERAMIC 47PF CH |
| C103 | CERAMIC 100PF CH |
| C105 | POLYSTYRENE 330PF |
| C106 | POLYSTYRENE 180PF |
| C107 | POLYSTYRENE 3300PF |
| C109 | CERAMIC 150PF SL |
| C201 | ELECTROLYTIC 0.47MF 50V |
| C202 | ELECTROLYTIC 100MF 10V |
| C203 | CERAMIC 0.022MF |
| C204 | POLYESTER 0.0022MF |
| C205 | ELECTROLYTIC 4.7MF 50V |
| C206 | POLYESTER 0.001MF |

CAPACITORS

| Ref.No. | Description |
|---------|-------------------------|
| C207 | ELECTROLYTIC 22MF 10V |
| C208 | POLYESTER 0.039MF |
| C209 | POLYESTER 0.0022MF |
| C210 | CERAMIC 22PF CH |
| C211 | ELECTROLYTIC 4.7MF 50V |
| C212 | ELECTROLYTIC 4.7MF 50V |
| C213 | ELECTROLYTIC 47MF 10V |
| C214 | ELECTROLYTIC 100MF 10V |
| C215 | ELECTROLYTIC 470MF 10V |
| C216 | CERAMIC 100PF SL |
| C301 | POLYESTER 0.0022MF |
| C302 | ELECTROLYTIC 100MF 10V |
| C303 | ELECTROLYTIC 220MF 10V |
| C304 | ELECTROLYTIC 100MF 10V |
| C305 | ELECTROLYTIC 100MF 10V |
| C306 | POLYESTER 0.15MF |
| C307 | ELECTROLYTIC 470MF 10V |
| C308 | ELECTROLYTIC 470MF 10V |
| C310 | CERAMIC 100PF SL |
| C311 | CERAMIC 0.022 |
| C312 | CERAMIC 0.001 |
| C901 | CERAMIC 0.022MF |
| C902 | CERAMIC 0.022MF |
| C903 | ELECTROLYTIC 2200MF 10V |

| Ref.No. | Part No. | Description |
|---------|---------------|---|
| CF1 | 1-527-795-71 | FILTER, CERAMIC |
| CF2 | 1-527-870-00 | FILTER |
| CN1 | *1-508-742-00 | PIN, CONNECTOR 3P (LED/SP) |
| CN2 | *1-508-797-00 | PIN, CONNECTOR 4P (MOTOR/LEAF) |
| CN3 | *1-508-796-00 | PIN, CONNECTOR 2P (POWER 8+6V) |
| CN4 | *1-506-647-11 | PIN, CONNECTOR 3P (R/P HEAD) |
| CNJ | *1-558-362-11 | WIRE, CONNECTOR LEAD (CN1-CN4) |
| CT6 | 1-141-342-11 | CAP, VAR, TRIMMER |
| CT7 | 1-141-342-11 | CAP, VAR, TRIMMER |
| CT8 | 1-141-342-11 | CAP, VAR, TRIMMER |
| CV5 | 1-151-535-11 | TUNING, FINE |
| CV | 1-151-559-11 | CAP, VAR, POLYETHYLENE(CV1-CV4,CT1-CT4) |
| D1 | 8-719-815-55 | DIODE 1S1555 |
| D2 | 1-807-373-11 | DIODE KD-345 |
| D3 | 8-719-911-06 | DIODE 1S5106 |
| D201 | 8-719-911-06 | DIODE 1S5106 |
| D202 | 8-719-911-06 | DIODE 1S5106 |
| D203 | 8-719-911-06 | DIODE 1S5106 |

ELECTRICAL PARTS

| Ref.No. | Part No. | Description |
|---------|--------------|-------------------------------|
| D301 | 1-807-721-11 | DIODE UZP-4.7B |
| D401 | 1-807-330-11 | DIODE KLR114E (LED)(OPR/BATT) |
| D901 | 8-719-200-02 | DIODE 10E2 |
| D902 | 8-719-200-02 | DIODE 10E2 |
| HE901 | 1-543-342-11 | E.HEAD |
| HRP201 | 1-543-300-11 | R.P HEAD |
| IC1 | 8-759-204-03 | IC TA7358AP |
| IC2 | 8-759-801-24 | IC LA1260S |
| IC201 | 1-807-374-11 | IC LA4160 |
| J301 | 1-563-091-11 | JACK, MINIATURE (EARPHONES) |
| J901 | 1-526-921-11 | SOCKET, AC (AC IN) |
| L1 | 1-422-278-11 | COIL-H, SPRING |
| L2 | 1-406-223-11 | COIL-OSC FM |
| L5 | 1-402-270-11 | ANTENNA, COIL (SW) |
| L101 | 1-410-649-11 | COIL, CHOKE 1.2UH |
| M901 | 3-390-244-01 | MOTOR ASSY |
| MIC201 | 1-542-075-11 | MICROPHONE, CONDENSER |

RESISTORS


| Ref.No. | Description |
|---------|-------------|
| R1 | CARBON 10K |
| R4 | CARBON 100K |
| R5 | CARBON 100K |
| R6 | CARBON 6.8K |
| R7 | CARBON 1.5K |
| R8 | CARBON 6.8K |
| R11 | CARBON 6.8K |
| R12 | CARBON 6.8K |
| R201 | CARBON 2.2K |
| R202 | CARBON 3.3K |
| R203 | CARBON 560 |
| R204 | CARBON 2.2K |
| R205 | CARBON 22K |
| R206 | CARBON 560 |
| R207 | CARBON 22 |
| R208 | CARBON 4.7K |
| R209 | CARBON 12K |
| R210 | CARBON 56K |
| R211 | CARBON 56K |
| R212 | CARBON 6.8K |
| R213 | CARBON 150K |
| R214 | CARBON 330K |
| R215 | CARBON 1K |
| R301 | CARBON 22K |

RESISTORS

| Ref.No. | Description | |
|---------|--------------|--------------------------|
| R302 | CARBON 33 | |
| R303 | CARBON 68 | |
| R304 | CARBON 2.7K | |
| R305 | CARBON 1.8K | |
| R306 | CARBON 27 | |
| R307 | CARBON 18K | |
| R309 | CARBON 220K | |
| R310 | CARBON 2.2K | |
| R311 | CARBON 33 | |
| R312 | CARBON 1/2W | |
| Ref.No. | Part No. | Description |
| S101 | 1-570-792-11 | SWITCH, LEVER (BAND) |
| S201 | 1-570-646-11 | SWITCH, SLIDE (REC/PB) |
| S301 | 1-571-012-11 | SWITCH, LEVER (FUNCTION) |
| S901 | 1-570-692-11 | SWITCH, LEAF (MD POWER) |
| SP301 | 1-503-614-11 | SPEAKER |
| T1 | 1-404-639-11 | FM IFT |
| T2 | 1-404-640-11 | FM DET |
| T3 | 1-404-638-11 | AM IFT |
| T4 | 1-406-225-11 | COIL, MW OSCILLATION |
| T5 | 1-406-224-11 | COIL, OSCILLATION |
| T6 | 1-406-226-11 | COIL, SW OSCILLATION |
| TW301 | 1-503-615-11 | SPEAKER, PIEZOELECTRIC |
| VR301 | 1-237-225-11 | VOLUME 10K (VOLUME) |

ACCESSORY & PACKING MATERIAL

| Part No. | Description |
|--------------|---------------------------|
| 1-555-234-00 | CORD, POWER |
| 3-391-536-01 | INDIVIDUAL CARTOR |
| 3-390-298-01 | CUSHION (R) |
| 3-390-299-01 | CUSHION (L) |
| 3-527-213-00 | LABEL, SERIAL NUMBER |
| 3-598-101-01 | BAG, PROTECTION |
| 3-701-632-00 | BAG, POLYETHYLENE |
| 3-703-707-01 | STICKER, SONY SYMBOL (21) |
| 3-703-895-01 | LABEL, COLOR (BLACK) |
| 3-703-908-01 | LABEL, COLOR (WHITE) |
| 3-765-976-11 | MANUAL, INSTRUCTION |
| 3-765-976-41 | MANUAL, INSTRUCTION |

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

