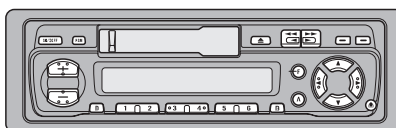


# Service Manual

**Pioneer**

KEH-1900R/X1M/EW



ORDER NO.  
**CRT2267**

HIGH POWER CASSETTE PLAYER WITH RDS TUNER

# KEH-1900R

## KEH-1930R

**X1M/EW**

**X1M/EW**

### NOTE:

- See the separate manual CX-644(CRT1800) for the cassette mechanism description.
- The cassette mechanism assy employed in this model is one of 2M series.

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**PIONEER ELECTRONIC CORPORATION**

4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153-8654, Japan

**PIONEER ELECTRONICS SERVICE INC.** P.O.Box 1760, Long Beach, CA 90801-1760 U.S.A.

**PIONEER ELECTRONIC [EUROPE] N.V.** Haven 1087 Keetberglaan 1, 9120 Melsele, Belgium

**PIONEER ELECTRONICS ASIACENTRE PTE.LTD.** 253 Alexandra Road, #04-01, Singapore 159936

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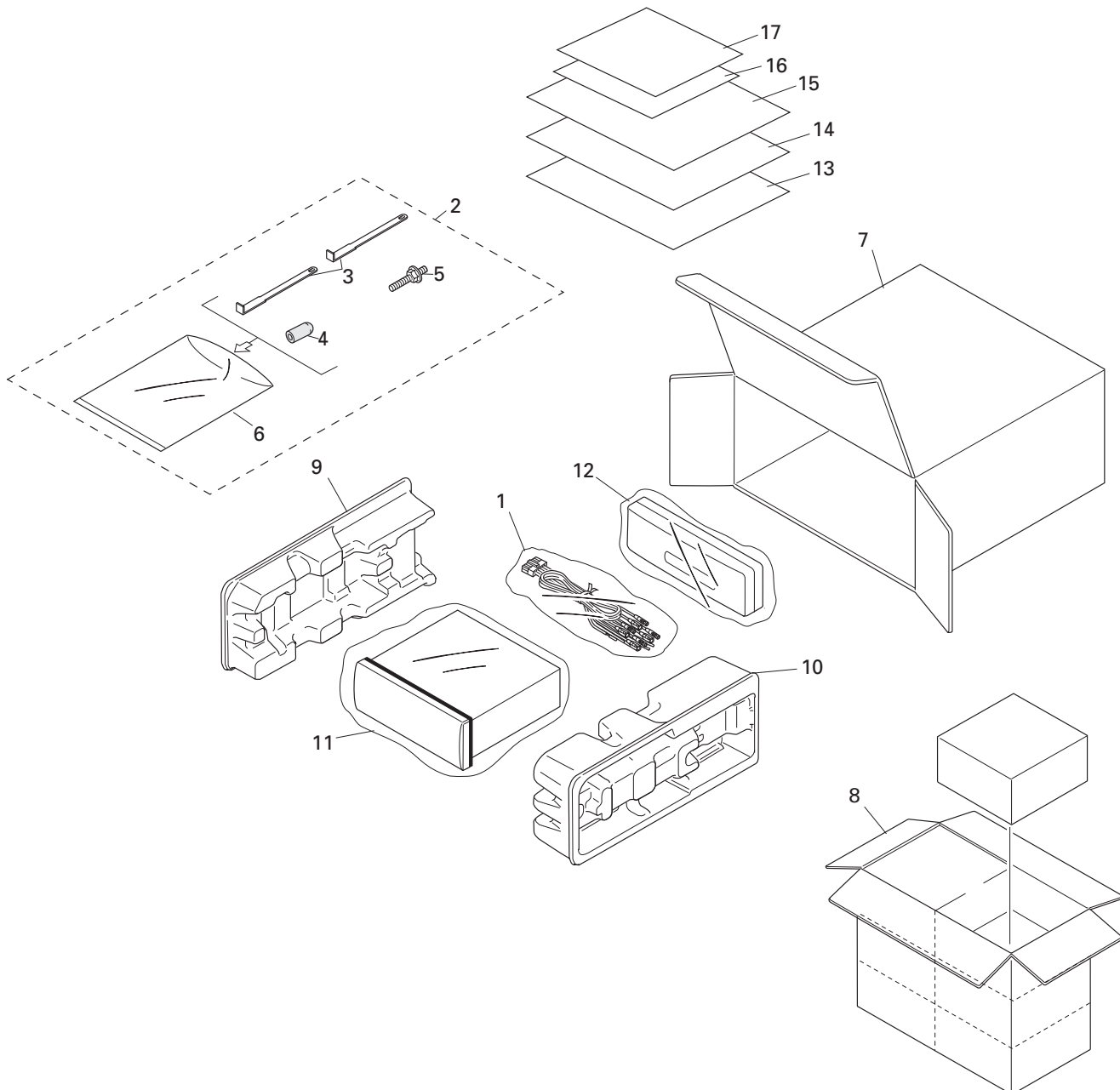
## 1. SAFETY INFORMATION

### CAUTION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual. Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely; you should not risk trying to do so and refer the repair to a qualified service technician.

## 2. EXPLODED VIEWS AND PARTS LIST

### 2.1 PACKING



**NOTE:**

- Parts marked by "\*" are generally unavailable because they are not in our Master Spare Parts List.
- Screws adjacent to ∇ mark on the product are used for disassembly.

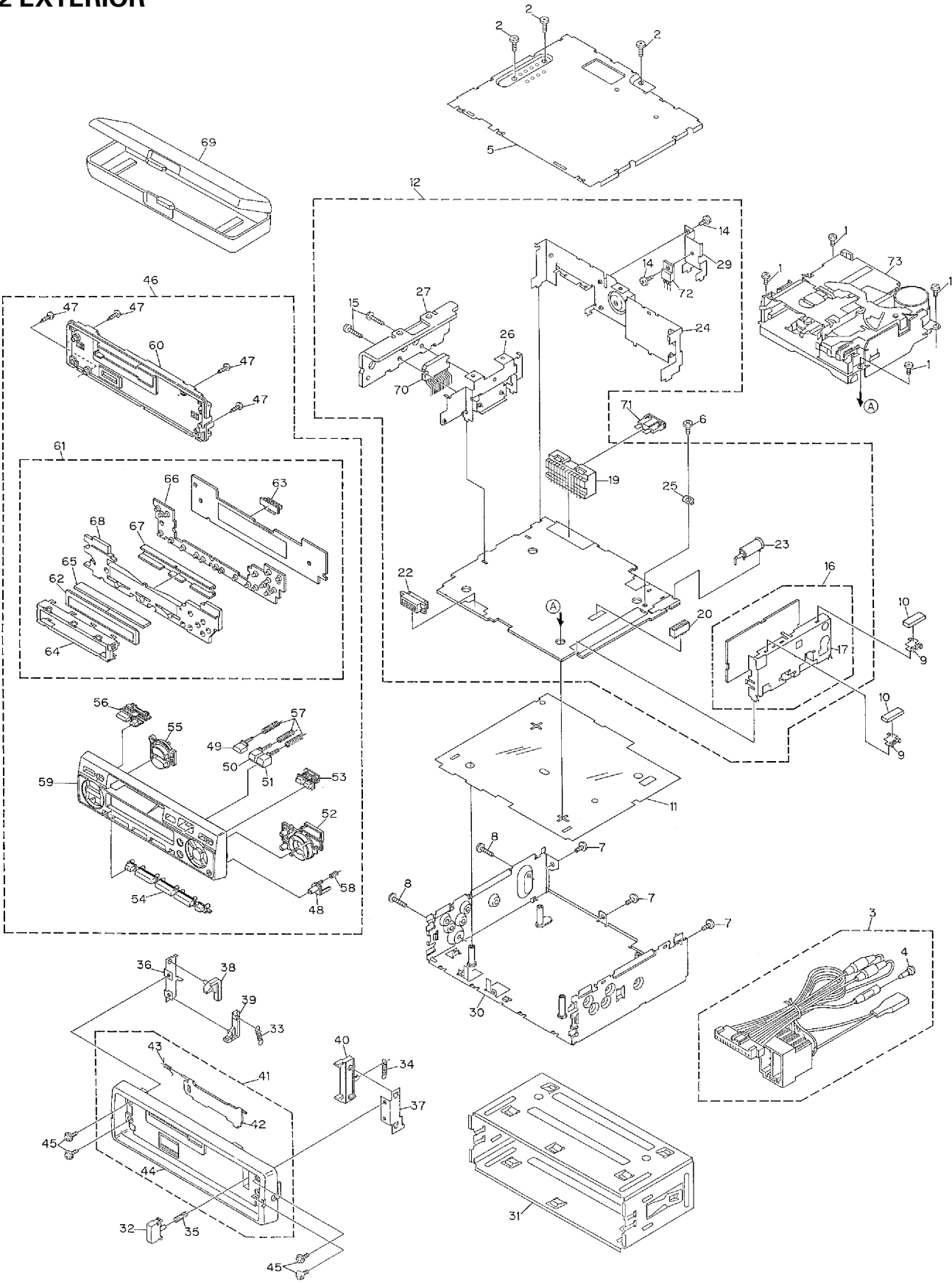
**● PACKING SECTION PARTS LIST**

| Mark No. | Description            | Part.No          |                  |
|----------|------------------------|------------------|------------------|
|          |                        | KEH-1900R/X1M/EW | KEH-1930R/X1M/EW |
| 1        | Cord Assy              | CDE5807          | CDE5807          |
| 2        | Accessory Assy         | CEA1917          | CEA1917          |
| 3        | Handle                 | CNC5395          | CNC5395          |
| 4        | Bush                   | CNV3930          | CNV3930          |
| 5        | Screw                  | CBA1304          | CBA1304          |
| *        | 6 Polyethylene Bag     | E36-615          | E36-615          |
|          | 7 Carton               | CHG3600          | CHG3601          |
|          | 8 Contain Box          | CHL3600          | CHL3601          |
|          | 9 Protector            | CHP1622          | CHP1622          |
| 10       | Protector              | CHP1623          | CHP1623          |
|          | 11 Polyethylene Bag    | CEG-162          | CEG-162          |
|          | 12 Case Assy           | CXB3520          | CXB3520          |
|          | 13 Owner's Manual      | CRD2806          | CRD2806          |
|          | 14 Owner's Manual      | CRD2807          | CRD2807          |
|          | 15 Installation Manual | CRD2809          | CRD2809          |
| *        | 16 Passport            | CRY1013          | CRY1013          |
| *        | 17 Warranty Card       | CRY1087          | CRY1087          |

**● Owner's Manual, Installation Manual**

| Model            | Part No. | Language                                    |
|------------------|----------|---------------------------------------------|
| KEH-1900R/X1M/EW | CRD2806  | English,Spanish,Dutch                       |
| KEH-1930R/X1M/EW | CRD2807  | French,Italian,German                       |
|                  | CRD2809  | English,Spanish,Dutch,French,Italian,German |

2.2 EXTERIOR



## (1) EXTERIOR SECTION PARTS LIST

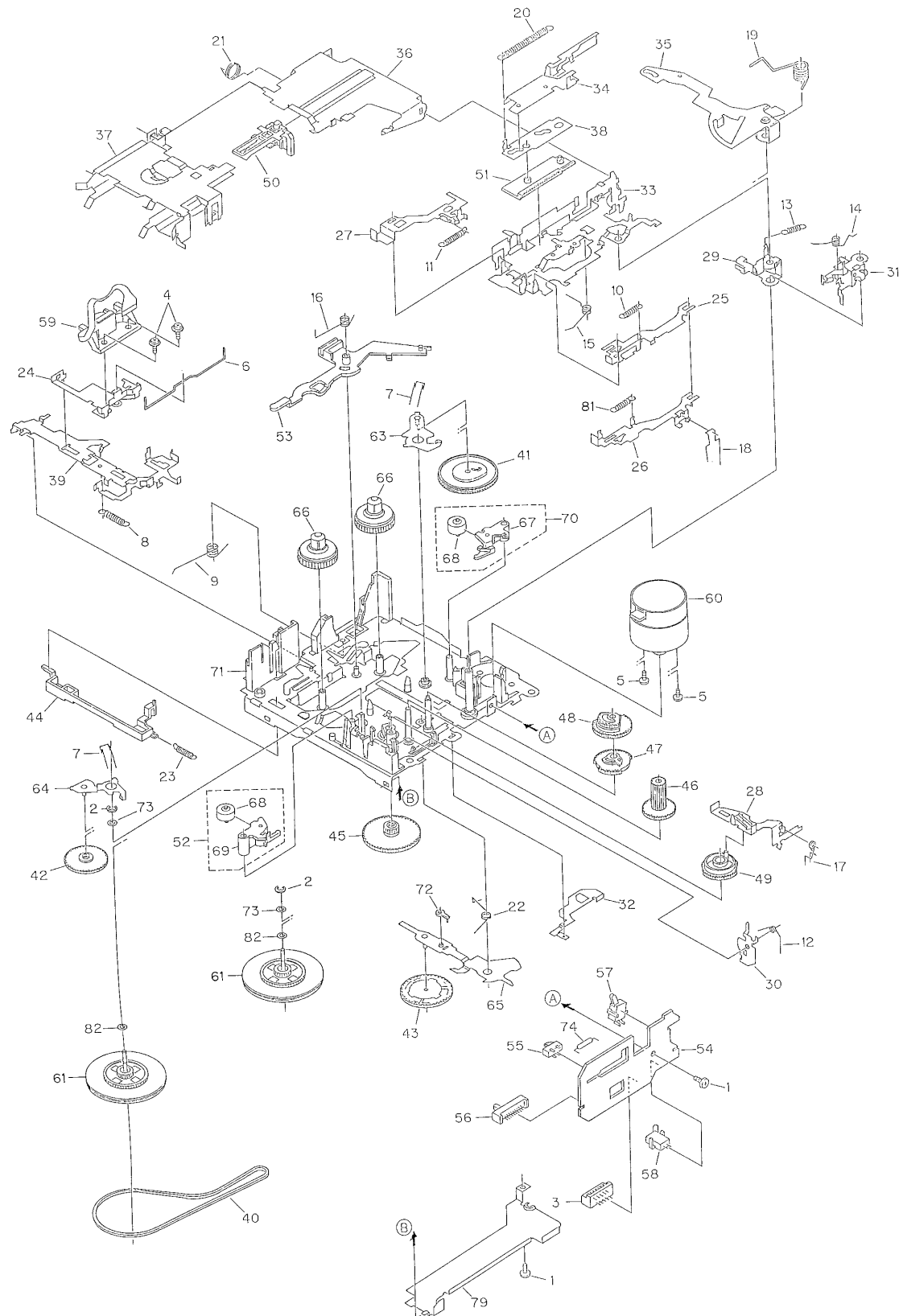
| Mark No. | Description         | Part No.              | Mark No. | Description             | Part No.              |
|----------|---------------------|-----------------------|----------|-------------------------|-----------------------|
| 1        | Screw               | BSZ26P050FMC          | 41       | Panel Unit              | See Contrast table(2) |
| 2        | Screw               | BSZ30P100FMC          | 42       | Door                    | See Contrast table(2) |
| 3        | Cord Assy           | CDE5807               | 43       | Spring                  | CBH1838               |
| 4        | Terminal Cover      | CKX-003               | 44       | Panel                   | See Contrast table(2) |
| 5        | Case                | CNB2481               | 45       | Screw                   | IMS20P030FZK          |
| 6        | Screw               | BSZ30P055FUC          | 46       | Detach Grille Assy      | See Contrast table(2) |
| 7        | Screw               | BSZ30P060FMC          | 47       | Screw                   | BPZ20P120FZK          |
| 8        | Screw               | BSZ30P100FMC          | 48       | Button(Detachable)      | CAC5869               |
| 9        | Holder              | CNC5704               | 49       | Button(Eject)           | See Contrast table(2) |
| 10       | Cushion             | CNM4870               | 50       | Button(REW)             | See Contrast table(2) |
| 11       | Insulator           | CNM5025               | 51       | Button(FF)              | See Contrast table(2) |
| 12       | Tuner Amp Unit      | CWM6350               | 52       | Button(F,A,Cross)       | See Contrast table(2) |
| 13       | .....               |                       | 53       | Button(-,-)             | See Contrast table(2) |
| 14       | Screw               | BSZ26P080FMC          | 54       | Button(1-6,D,B)         | CAC5881               |
| 15       | Screw               | BSZ26P140FMC          | 55       | Button(+,-)             | See Contrast table(2) |
| 16       | FM/AM Tuner Unit    | CWE1466               | 56       | Button(SO/OFF,PGM)      | See Contrast table(2) |
| 17       | Holder              | CNC6554               | 57       | Spring                  | CBH1836               |
| 18       | .....               |                       | 58       | Spring                  | CBH2103               |
| 19       | Plug(CN601)         | CKM1270               | 59       | Grille Unit             | See Contrast table(2) |
| 20       | Connector(CN604)    | CKS3362               | 60       | Cover                   | See Contrast table(2) |
| 21       | .....               |                       | 61       | Keyboard Unit           | See Contrast table(2) |
| 22       | Connector(CN603)    | CKS3581               | 62       | LCD(LCD901)             | CAW1512               |
| 23       | Antenna Jack(CN301) | CKX1056               | 63       | Connector(CN901)        | CKS3580               |
| 24       | Panel               | CNB2246               | 64       | Holder                  | CNC8054               |
| 25       | Holder              | CNC5399               | 65       | Connector               | CNV5586               |
| 26       | Holder              | CNC6216               | 66       | Rubber                  | CNV5587               |
| 27       | Heat Sink           | CNC6217               | 67       | Holder                  | CNV5589               |
| 28       | .....               |                       | 68       | Lighting Conductor      | CNV5752               |
| 29       | Holder              | CNC6845               | 69       | Case Assy               | CXB3520               |
| 30       | Chassis Unit        | See Contrast table(2) | 70       | IC(IC501)               | TDA7384               |
| 31       | Holder Unit         | CXB2687               | 71       | Fuse(10A)(FU951)        | CEK1136               |
| 32       | Button              | CAC4836               | 72       | Transistor(Q804)        | 2SD2396               |
| 33       | Spring              | CBH1834               | 73       | Cassette Mechanism Assy | EXK3450               |
| 34       | Spring              | CBH1835               |          |                         |                       |
| 35       | Spring              | CBH1996               |          |                         |                       |
| 36       | Bracket             | CNC6135               |          |                         |                       |
| 37       | Bracket             | CNC6791               |          |                         |                       |
| 38       | Arm                 | CNV4692               |          |                         |                       |
| 39       | Arm                 | CNV4693               |          |                         |                       |
| 40       | Arm                 | CNV4728               |          |                         |                       |

**(2) CONTRAST TABLE**

**KEH-1900R/X1M/EW and KEH-1930R/X1M/EW are constructed the same except for the following:**

| Mark | No. | Description        | Part No.         |                  |
|------|-----|--------------------|------------------|------------------|
|      |     |                    | KEH-1900R/X1M/EW | KEH-1930R/X1M/EW |
|      | 30  | Chassis Unit       | CXB3224          | CXB3225          |
|      | 41  | Panel Unit         | CXB3714          | CXB3716          |
|      | 42  | Door               | CAT2028          | CAT2037          |
|      | 44  | Panel              | CNS5211          | CNS5212          |
|      | 46  | Detach Grille Assy | CXB3376          | CXB3373          |
|      | 49  | Button(Eject)      | CAC5870          | CAC5871          |
|      | 50  | Button(REW)        | CAC5872          | CAC5873          |
|      | 51  | Button(FF)         | CAC5874          | CAC5875          |
|      | 52  | Button(Cross,A,F)  | CAC6127          | CAC5877          |
|      | 53  | Button(-,-)        | CAC5878          | CAC5879          |
|      | 55  | Button(+,-)        | CAC6128          | CAC5883          |
|      | 56  | Button(SO/OFF,PGM) | CAC5884          | CAC5885          |
|      | 59  | Grille Unit        | CXB4038          | CXB4039          |
|      | 60  | Cover              | CNS5209          | CNS5210          |
|      | 61  | Keyboard Unit      | CWM6272          | CWM6274          |

## 2.3 CASSETTE MECHANISM ASSY



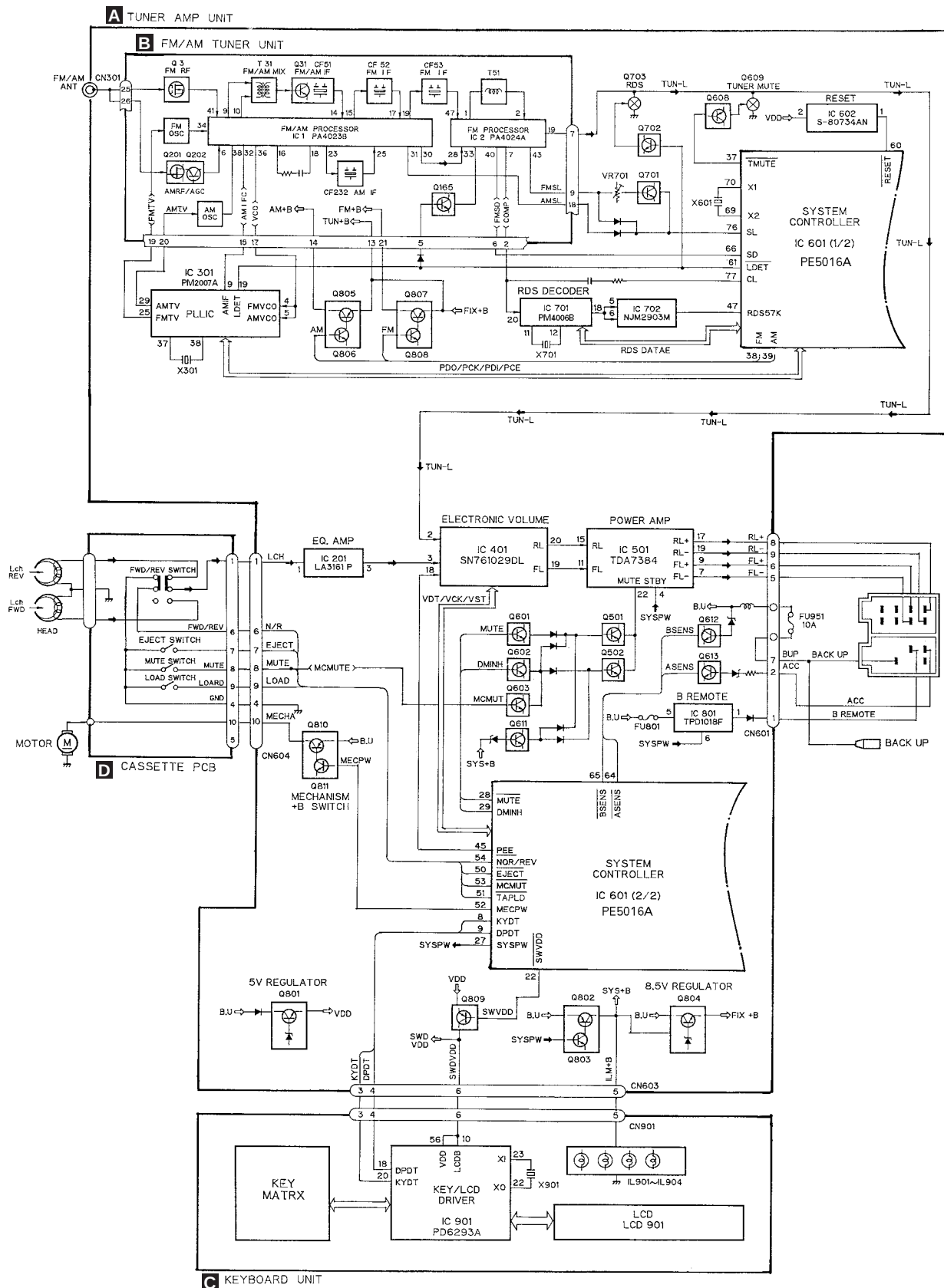
# ● CASSETTE MECHANISM ASSY SECTION PARTS LIST

| Mark No. | Description    | Part No.     | Mark No. | Description         | Part No.    |
|----------|----------------|--------------|----------|---------------------|-------------|
| 1        | Screw          | BSZ23P050FMC | 46       | Gear                | ENV1475     |
| 2        | Washer         | CBG1003      | 47       | Gear                | ENV1512     |
| 3        | Connector(CN1) | CKS2829      | 48       | Gear                | ENV1513     |
| 4        | Screw(M2x5)    | EBA1038      | 49       | Gear                | ENV1502     |
| 5        | Screw(M2x2.5)  | EBA1037      | 50       | Lever               | ENV1480     |
| 6        | Spring         | EBH1554      | 51       | Lever               | ENV1487     |
| 7        | Spring         | EBH1555      | 52       | Pinch Holder Unit   | EXA1516     |
| 8        | Spring         | EBH1556      | 53       | Arm                 | ENV1519     |
| 9        | Spring         | EBH1603      | * 54     | PCB                 | ENP1161     |
| 10       | Spring         | EBH1591      | 55       | Switch(EJECT)(S4)   | ESG1006     |
| 11       | Spring         | EBH1559      | 56       | Switch(FWD/REV)(S3) | ESH1006     |
| 12       | Spring         | EBH1593      | 57       | Switch(LOAD)(S1)    | ESN1016     |
| 13       | Spring         | EBH1561      | 58       | Switch(MUTE)(S2)    | ESN1017     |
| 14       | Spring         | EBH1562      | 59       | Head Assy(HD1)      | EXA1466     |
| 15       | Spring         | EBH1563      | 60       | Motor Unit(M1)      | EXA1467     |
| 16       | Spring         | EBH1590      | 61       | Flywheel Unit       | EXA1547     |
| 17       | Spring         | EBH1565      | 62       | .....               |             |
| 18       | Spring         | EBH1566      | 63       | Arm Unit            | EXA1447     |
| 19       | Spring         | EBH1567      | 64       | Arm Unit            | EXA1448     |
| 20       | Spring         | EBH1568      | 65       | Arm Unit            | EXA1550     |
| 21       | Spring         | EBH1569      | 66       | Reel Unit           | EXA1450     |
| 22       | Spring         | EBH1571      | 67       | Pinch Holder        | ENV1466     |
| 23       | Spring         | EBH1579      | 68       | Pinch Roller        | ENV1518     |
| 24       | Head Base      | ENC1475      | 69       | Pinch Holder        | ENV1467     |
| 25       | Lever          | ENC1429      | 70       | Pinch Holder Unit   | EXA1515     |
| 26       | Lever          | ENC1430      | 71       | Chassis Unit        | EXA1498     |
| 27       | Lever          | ENC1431      | 72       | Arm                 | ENV1524     |
| 28       | Lever          | ENC1432      | 73       | Washer              | CBF-167     |
| 29       | Arm            | ENC1433      | 74       | Resistor(R1)        | RD1/4HM472J |
| 30       | Arm            | ENC1434      | 75-78    | .....               |             |
| 31       | Arm            | ENC1480      | 79       | Cover               | ENC1452     |
| 32       | Arm            | ENC1476      | 80       | .....               |             |
| 33       | Bracket        | ENC1512      | 81       | Spring              | EBH1592     |
| 34       | Lever          | ENC1523      | 82       | Washer              | CBF1051     |
| 35       | Arm            | ENC1524      |          |                     |             |
| 36       | Frame          | ENC1440      |          |                     |             |
| 37       | Holder         | ENC1441      |          |                     |             |
| 38       | Lever          | ENC1446      |          |                     |             |
| 39       | Lever          | ENC1478      |          |                     |             |
| 40       | Belt           | ENT1027      |          |                     |             |
| 41       | Gear           | ENV1504      |          |                     |             |
| 42       | Gear           | ENV1470      |          |                     |             |
| 43       | Gear           | ENV1517      |          |                     |             |
| 44       | Lever          | ENV1472      |          |                     |             |
| 45       | Gear           | ENV1510      |          |                     |             |

### 3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

#### 3.1 BLOCK DIAGRAM

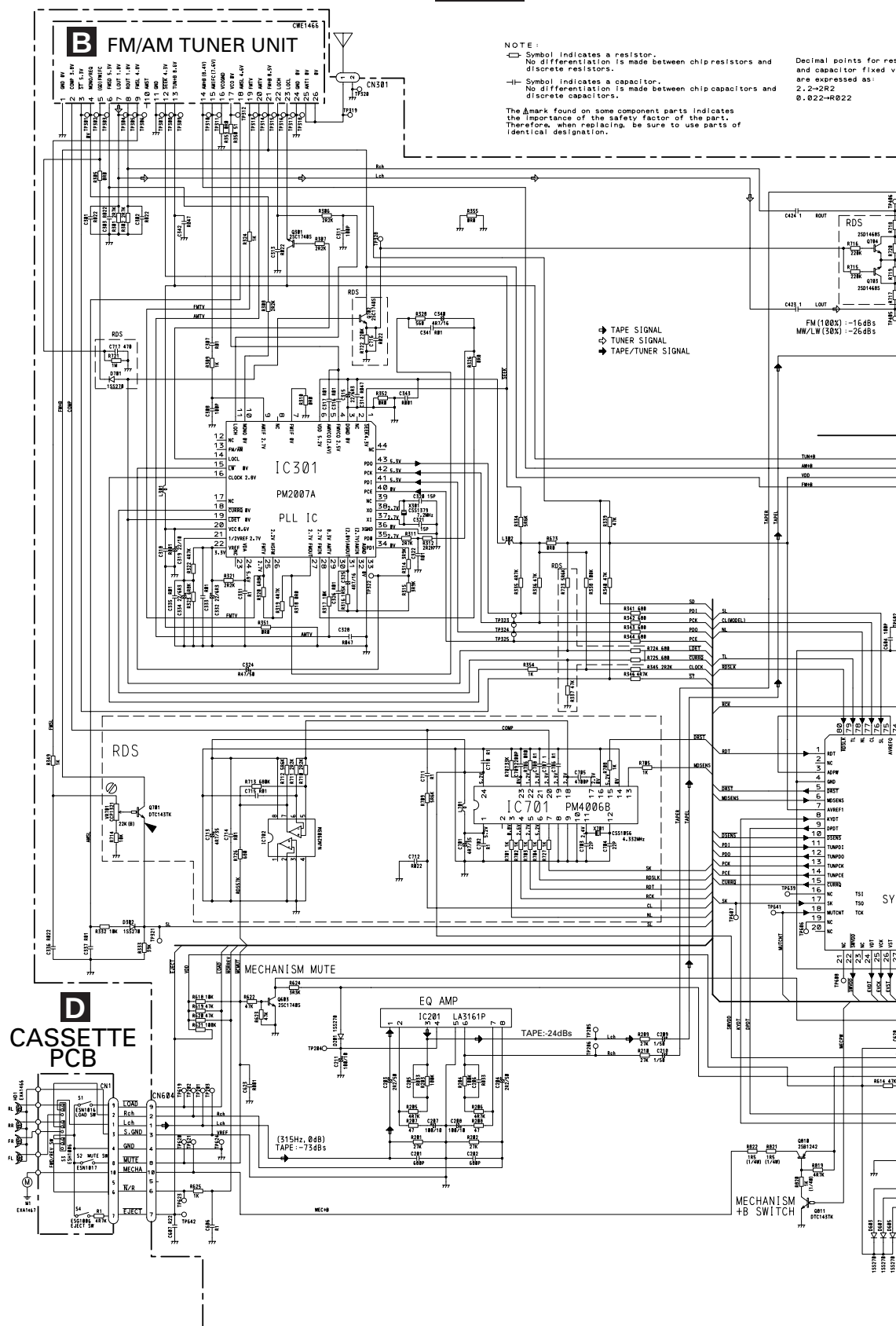
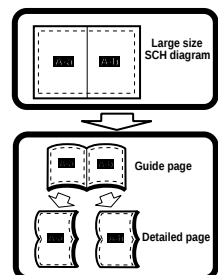
● KEH-1900R/X1M/EW



### 3.2 OVERALL CONNECTION DIAGRAM(GUIDE PAGE)

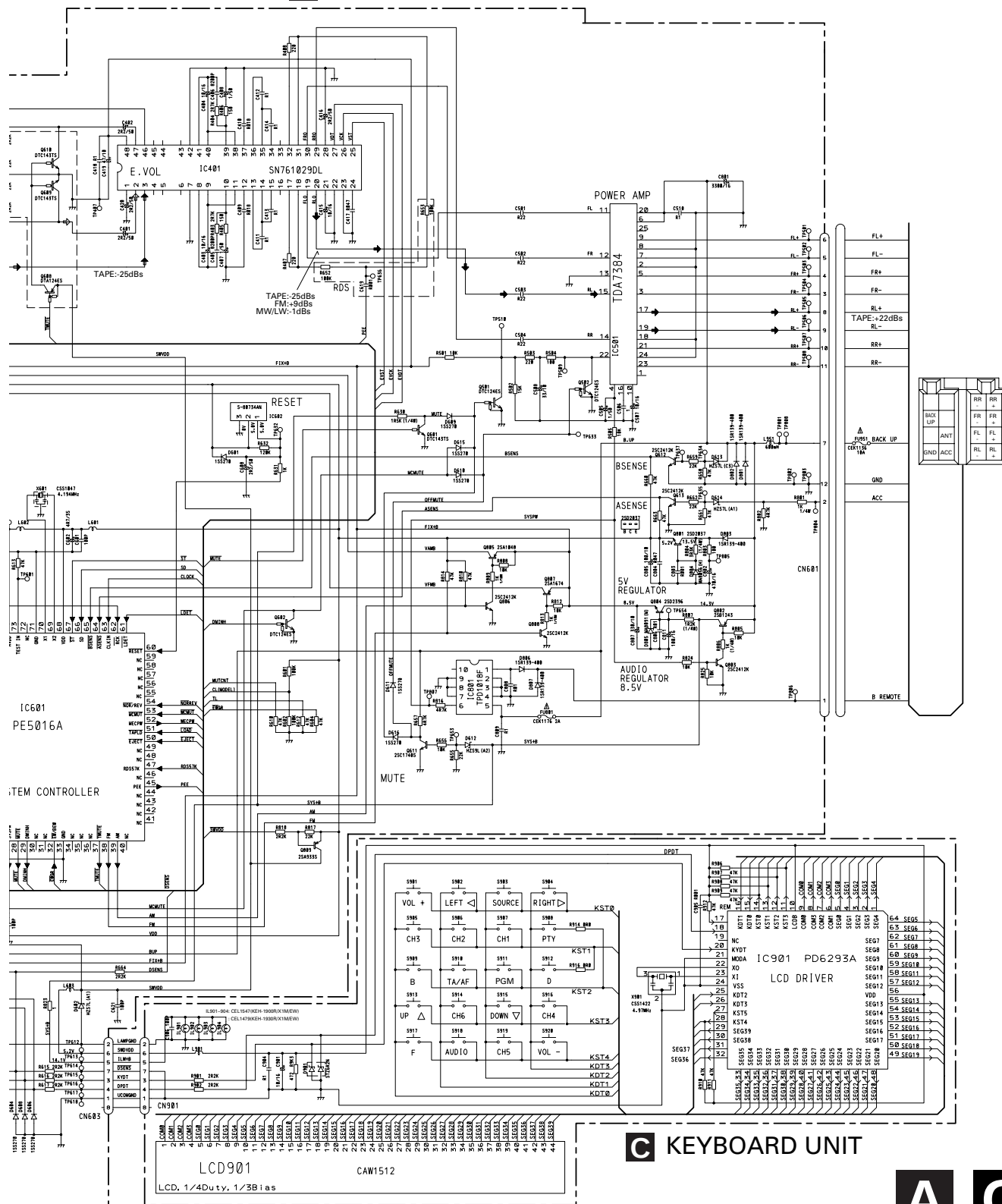
Note: When ordering service parts, be sure to refer to "EXPLODED VIEWS AND PARTS LIST" or "ELECTRICAL PARTS LIST".

A-a



A-b

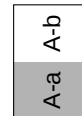
## A TUNER AMP UNIT



## C KEYBOARD UNIT

A C



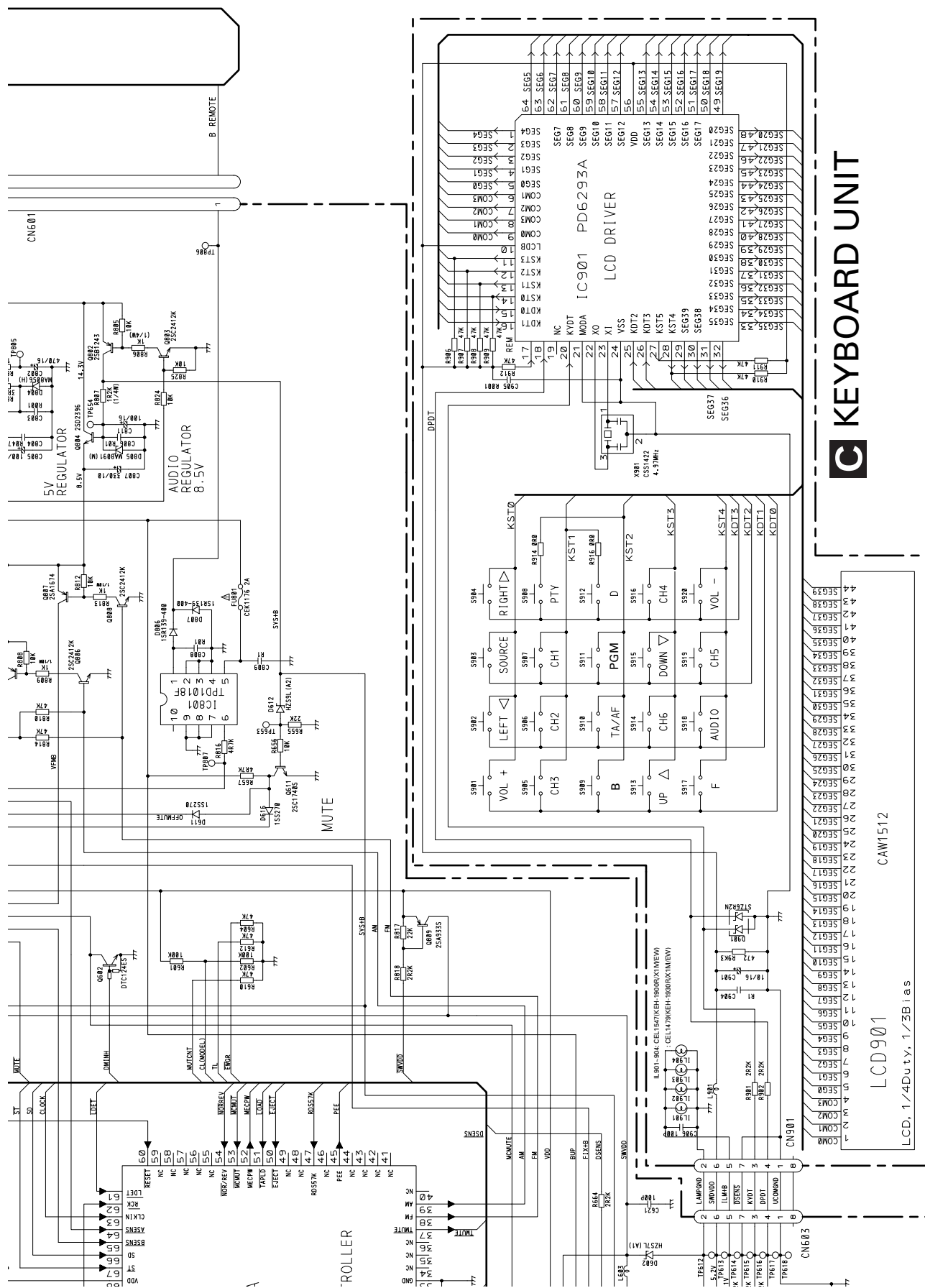


# CASSETTE PCB

A-a

D





A-a A-b

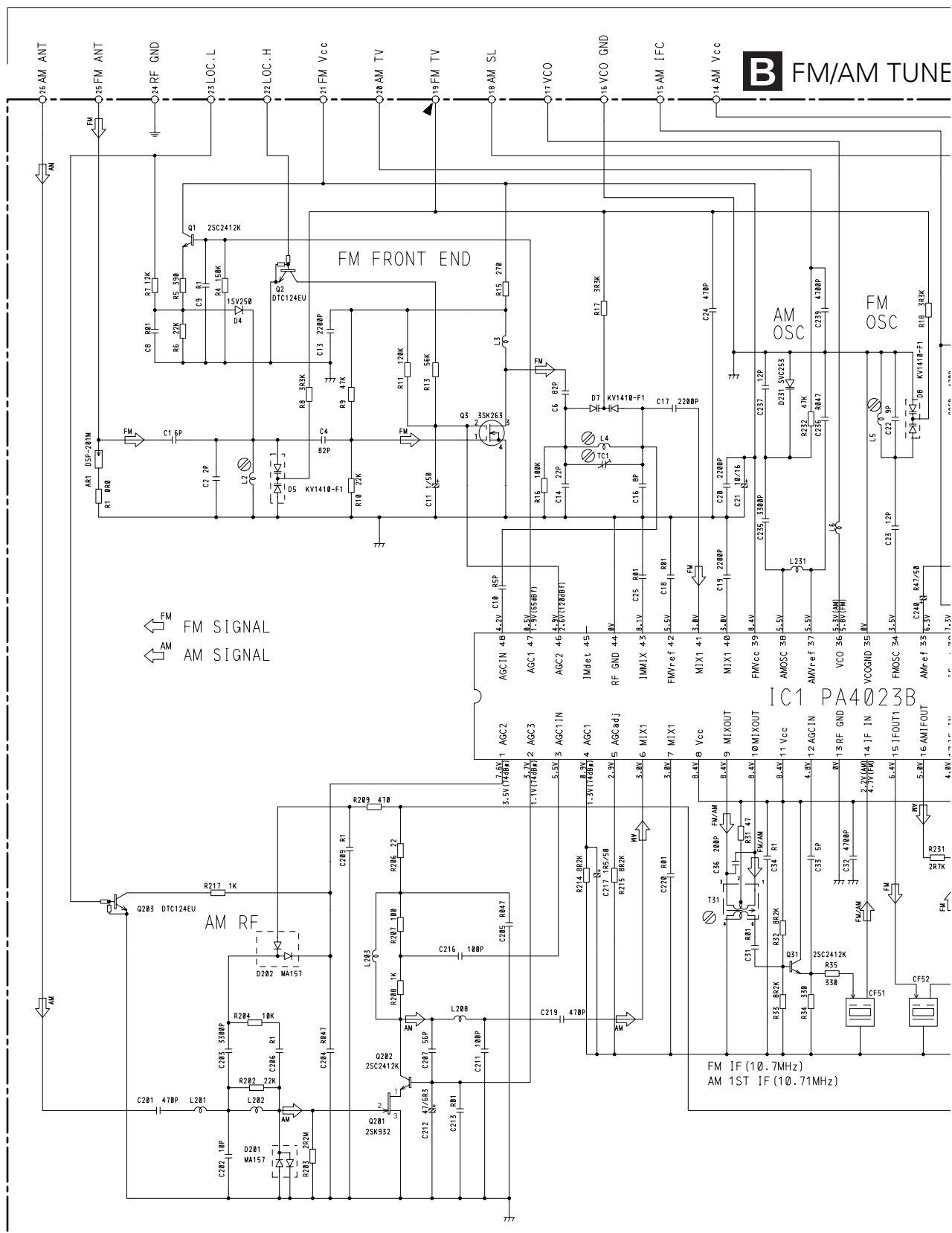
A

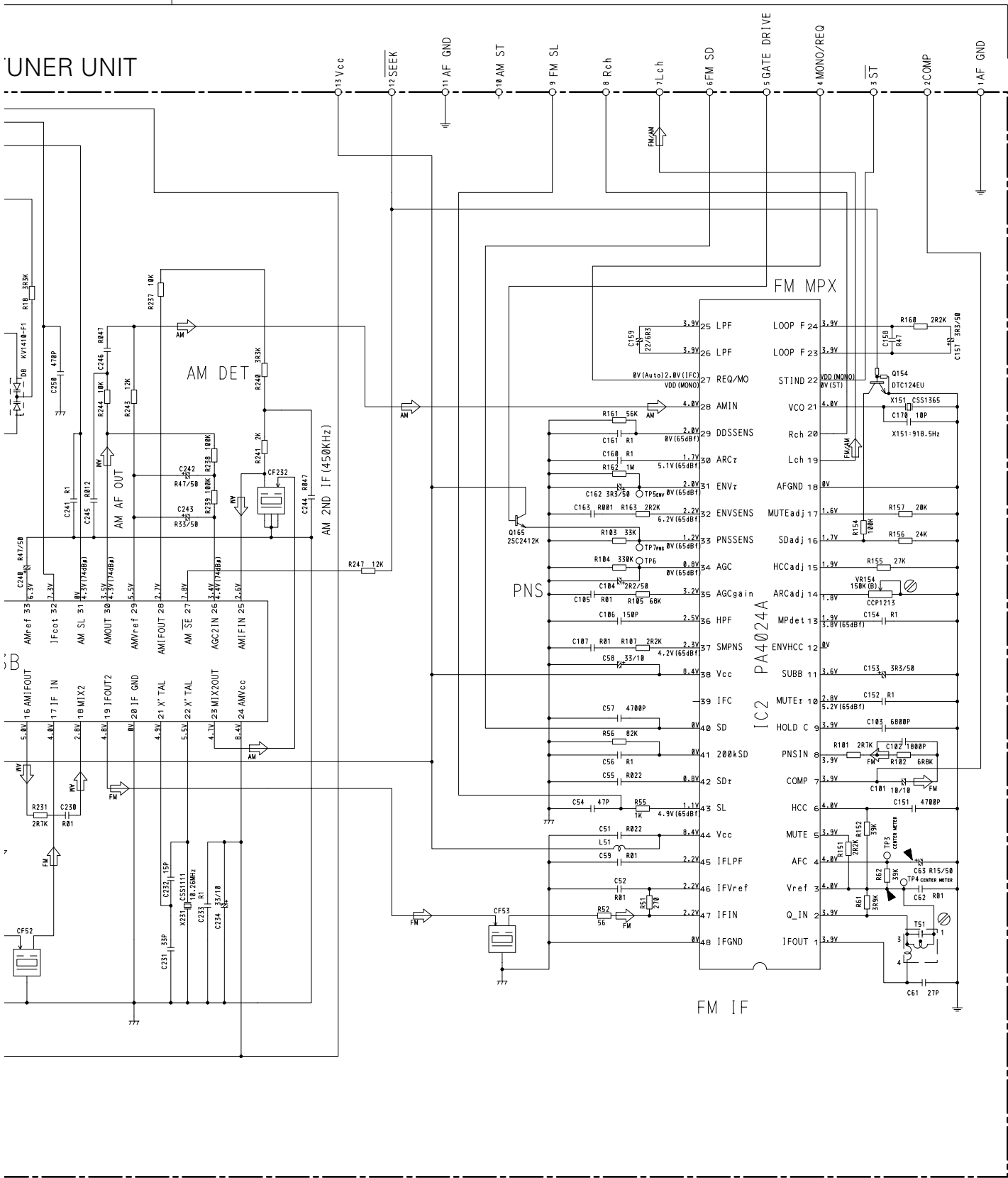
B

C

D

### 3.3 FM/AM TUNER UNIT





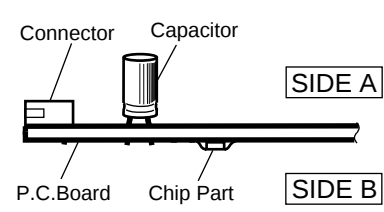
# 4. PCB CONNECTION DIAGRAM

## 4.1 TUNER AMP UNIT

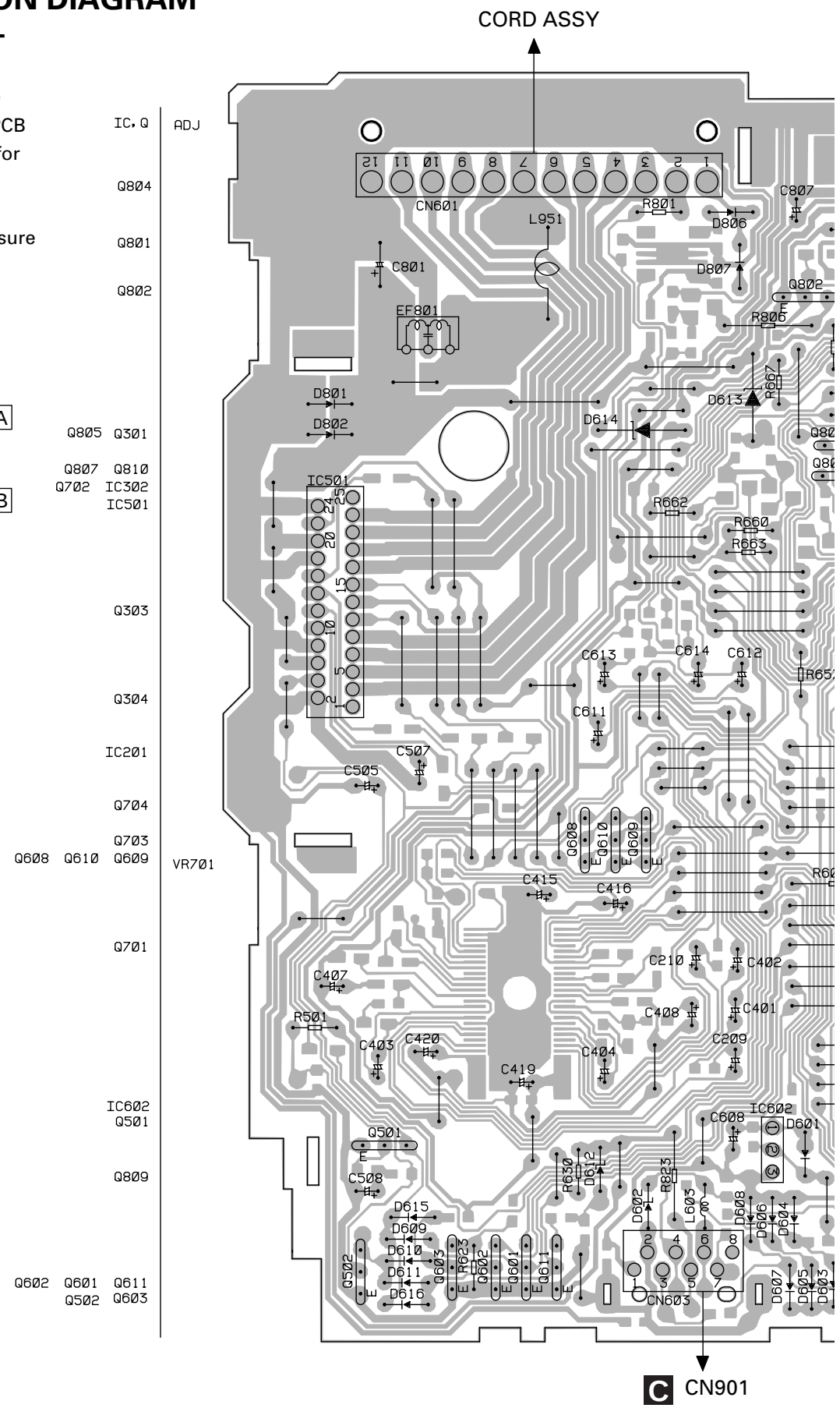
### NOTE FOR PCB DIAGRAMS

1. The parts mounted on this PCB include all necessary parts for several destination.  
For further information for respective destinations, be sure to check with the schematic diagram.

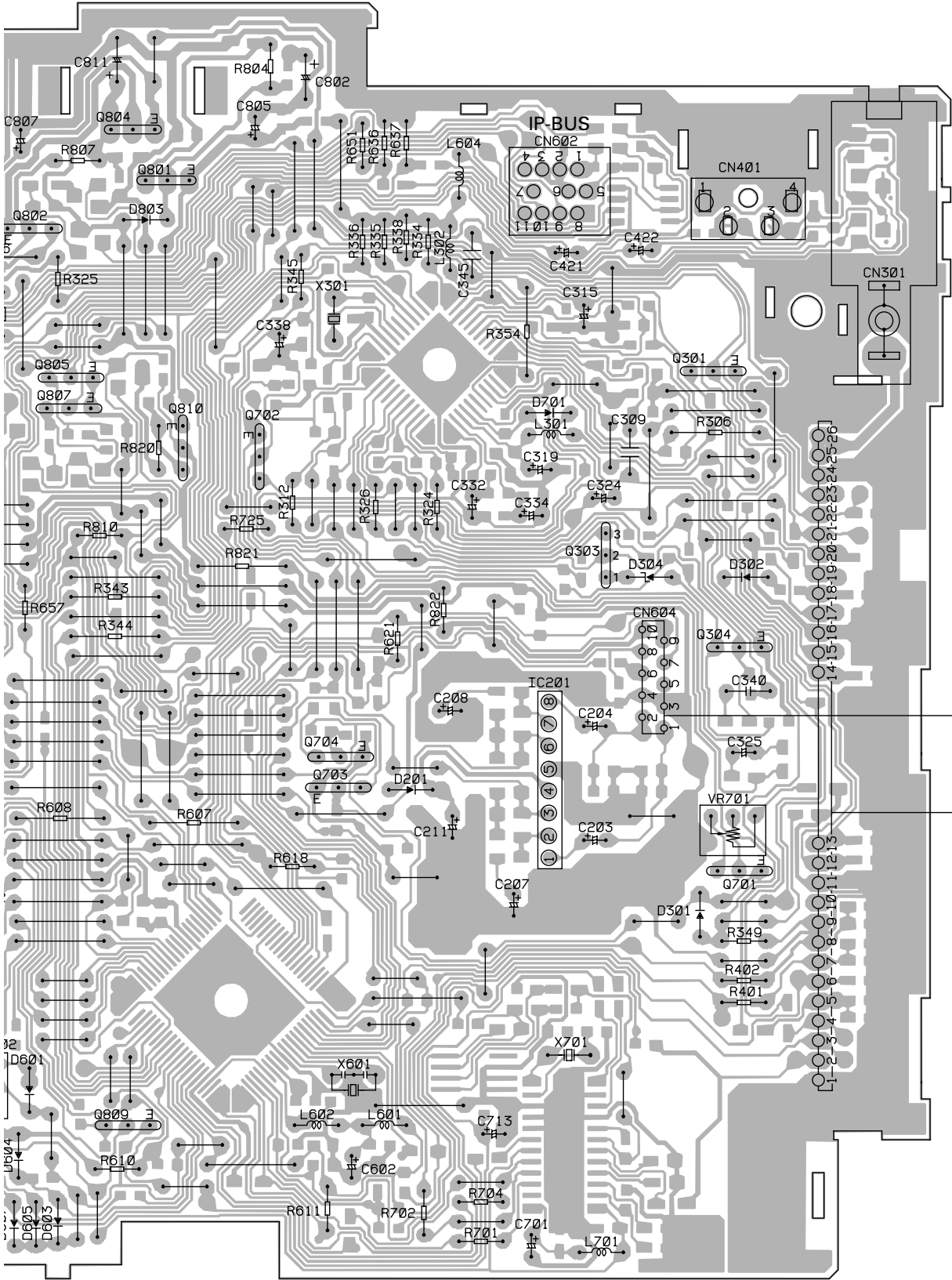
2. Viewpoint of PCB diagrams



## A TUNER AMP UNIT



SIDE A



**D** CN1

**B**

**A**

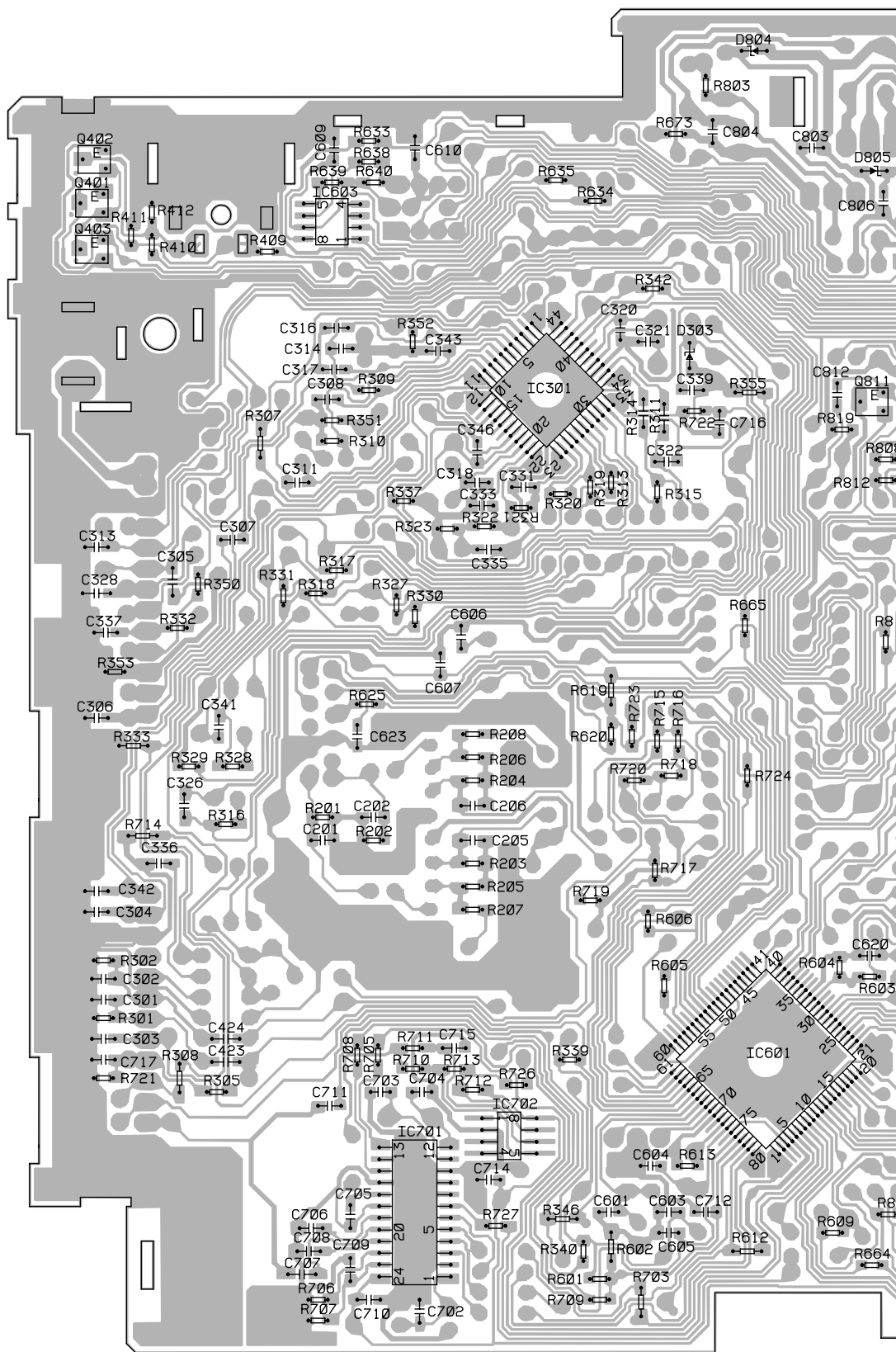
**A** TUNER AMP UNIT

A

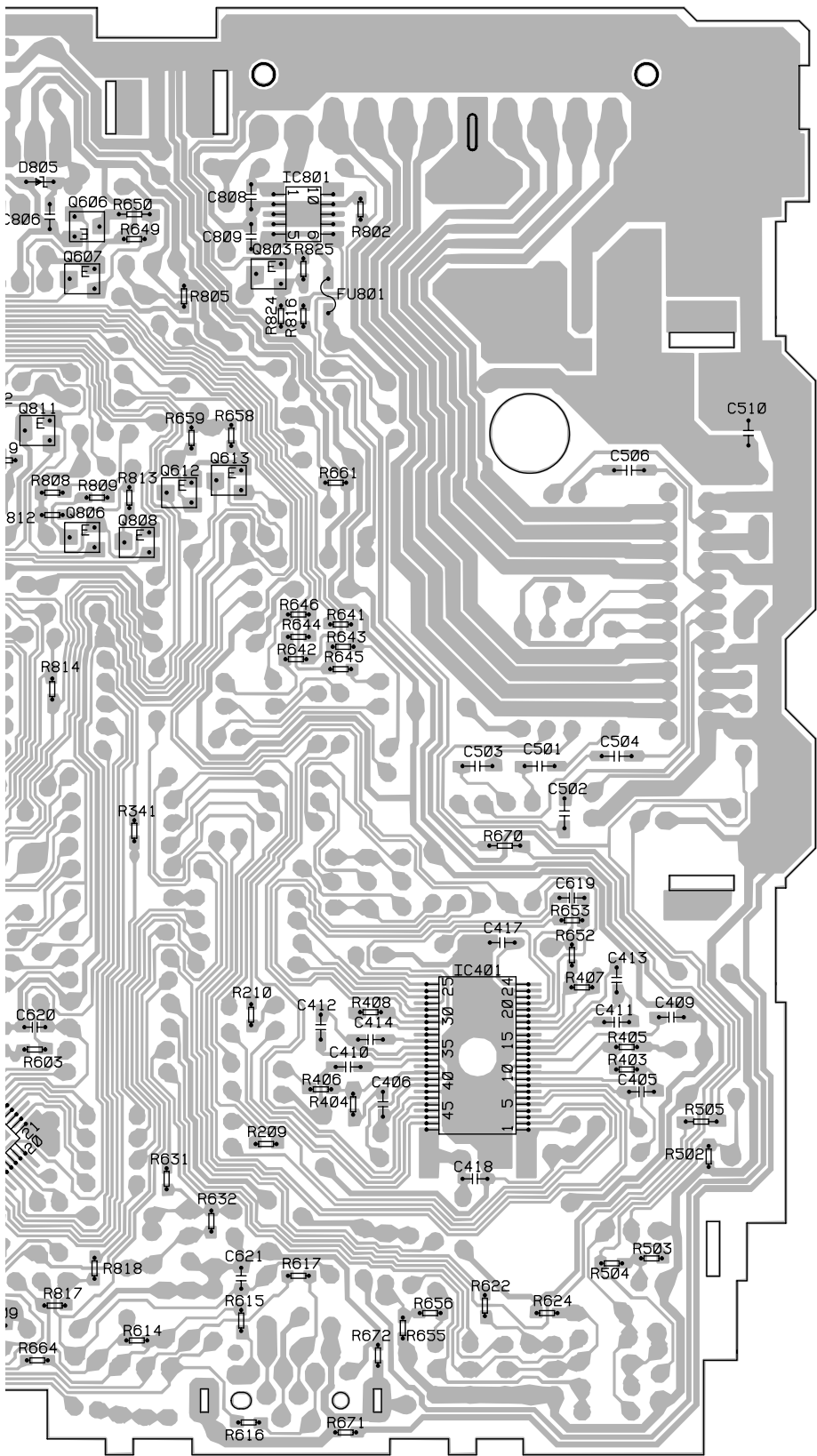
B

C

D



SIDE B



IC, Q

Q402

IC801 Q606  
Q401 IC603

Q403  
Q607 Q803

Q811  
IC301

Q613  
Q612

Q806 Q808

IC401

IC601

IC702  
IC701

**B**



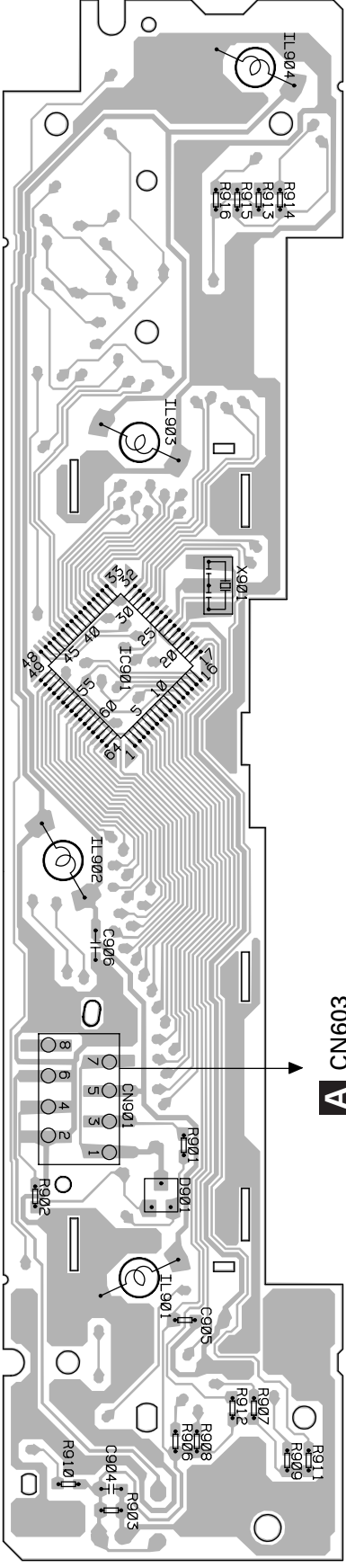
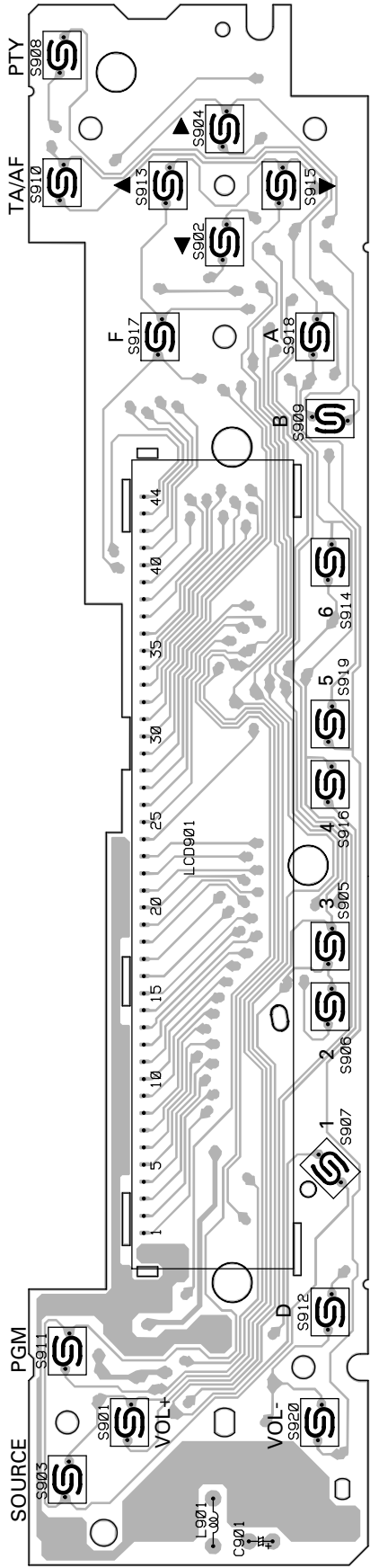
**A**



4.3 KEYBOARD UNIT

SIDE A

SIDE B



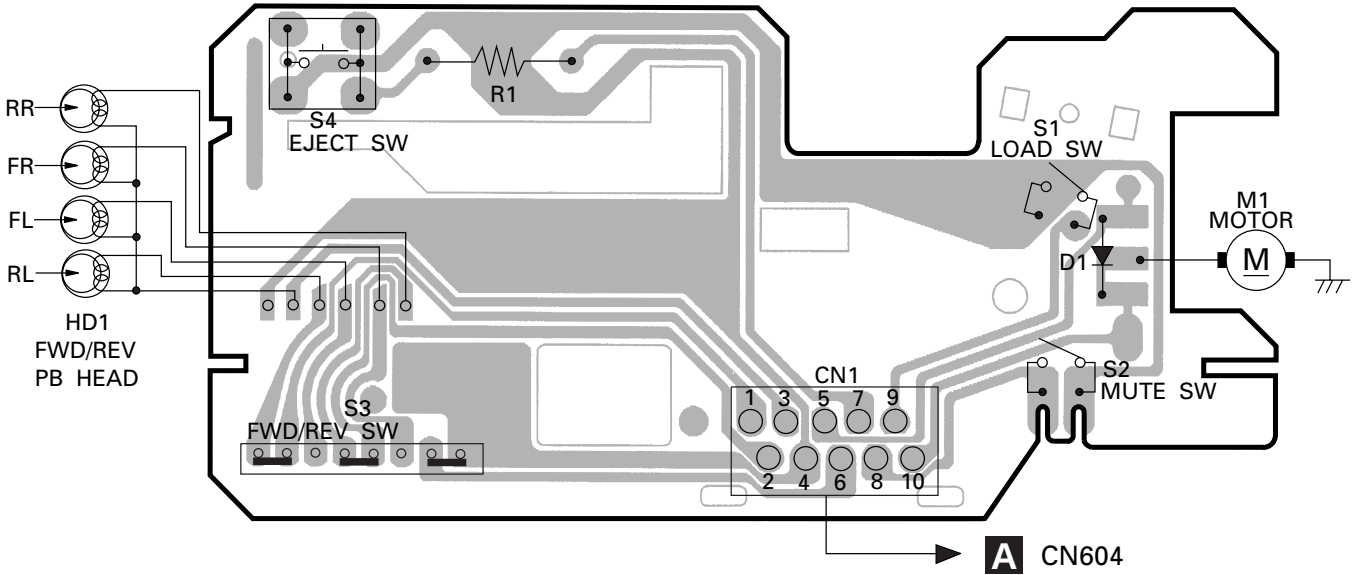
C KEYBOARD UNIT

C KEYBOARD UNIT



4.4 CASSETTE MECHANISM PCB

**D** CASSETTE PCB



## 5. ELECTRICAL PARTS LIST

**NOTE:**

- Parts whose parts numbers are omitted are subject to being not supplied.
- The part numbers shown below indicate chip components.

## Chip Resistor

RS1/○S○○○J,RS1/○○S○○○J

Chip Capacitor (except for CQS.....)

CKS....., CCS....., CSZS.....

| ====Circuit Symbol and No.==Part Name                                                  | Part No.   | ====Circuit Symbol and No.==Part Name | Part No.         |
|----------------------------------------------------------------------------------------|------------|---------------------------------------|------------------|
| <div><div>A</div><div>Unit Number : CWM6350<br/>Unit Name : Tuner Amp Unit</div></div> |            | D 613 Diode                           | HZS7L(C3)        |
|                                                                                        |            | D 614 Diode                           | HZS7L(A1)        |
|                                                                                        |            | D 615 Diode                           | 1SS270           |
| MISCELLANEOUS                                                                          |            | D 616 Diode                           | 1SS270           |
|                                                                                        |            | D 701 Diode                           | 1SS270           |
| IC 201 IC                                                                              | LA3161P    |                                       |                  |
| IC 301 IC                                                                              | PM2007A    | D 801 Diode                           | 1SR139-400       |
| IC 401 IC                                                                              | SN761029DL | D 802 Diode                           | 1SR139-400       |
| IC 501 IC                                                                              | TDA7384    | D 803 Diode                           | 1SR139-400       |
| IC 601 IC                                                                              | PE5016A    | D 804 Diode                           | MA8056(H)        |
|                                                                                        |            | D 805 Diode                           | MA8091(M)        |
| IC 602 IC                                                                              | S-80734AN  |                                       |                  |
| IC 701 IC                                                                              | PM4006B    | D 806 Diode                           | 1SR139-400       |
| IC 702 IC                                                                              | NJM2903M   | D 807 Diode                           | 1SR139-400       |
| IC 801 IC                                                                              | TPD1018F   | L 301 Ferri-Inductor                  | LAU101K          |
| Q 301 Transistor                                                                       | 2SC1740S   | L 302 Ferri-Inductor                  | LAU2R2K          |
|                                                                                        |            | L 601 Ferri-Inductor                  | LAU101K          |
| Q 501 Transistor                                                                       | DTC124ES   |                                       |                  |
| Q 502 Transistor                                                                       | DTC124ES   | L 602 Ferri-Inductor                  | LAU101K          |
| Q 601 Transistor                                                                       | DTC143TS   | L 603 Ferri-Inductor                  | LAU101K          |
| Q 602 Transistor                                                                       | DTC124ES   | L 701 Ferri-Inductor                  | LAU101K          |
| Q 603 Transistor                                                                       | 2SC1740S   | L 951 Choke Coil 600mH                | CTH1168          |
|                                                                                        |            | X 301 Crystal Resonator 7.200MHz      | CSS1379          |
| Q 608 Transistor                                                                       | DTA124ES   |                                       |                  |
| Q 609 Transistor                                                                       | DTC143TS   | X 601 Ceramic Resonator 4.194MHz      | CSS1047          |
| Q 610 Transistor                                                                       | DTC143TS   | X 701 Crystal Resonator 4.332MHz      | CSS1056          |
| Q 611 Transistor                                                                       | 2SC1740S   | VR 701 Semi-fixed 22kΩ(B)             | CCP1321          |
| Q 612 Transistor                                                                       | 2SC2412K   | FU 801 Fuse 2A                        | CEK1176          |
|                                                                                        |            |                                       | FM/AM Tuner Unit |
| Q 613 Transistor                                                                       | 2SC2412K   |                                       |                  |
| Q 701 Transistor                                                                       | DTC143TS   | RESISTORS                             |                  |
| Q 702 Transistor                                                                       | 2SC1740S   |                                       |                  |
| Q 703 Transistor                                                                       | 2SD1468S   | R 201                                 | RS1/10S273J      |
| Q 704 Transistor                                                                       | 2SD1468S   | R 202                                 | RS1/10S273J      |
|                                                                                        |            | R 203                                 | RS1/10S104J      |
| Q 801 Transistor                                                                       | 2SD2037    | R 204                                 | RS1/10S104J      |
| Q 802 Transistor                                                                       | 2SB1243    | R 205                                 | RS1/10S472J      |
| Q 803 Transistor                                                                       | 2SC2412K   |                                       |                  |
| Q 804 Transistor                                                                       | 2SD2396    | R 206                                 | RS1/10S472J      |
| Q 805 Transistor                                                                       | 2SA1048    | R 207                                 | RS1/10S470J      |
|                                                                                        |            | R 208                                 | RS1/10S470J      |
| Q 806 Transistor                                                                       | 2SC2412K   | R 209                                 | RS1/10S273J      |
| Q 807 Transistor                                                                       | 2SA1674    | R 210                                 | RS1/10S273J      |
| Q 808 Transistor                                                                       | 2SC2412K   |                                       |                  |
| Q 809 Transistor                                                                       | 2SA933S    | R 301                                 | RS1/10S272J      |
| Q 810 Transistor                                                                       | 2SB1242    | R 302                                 | RS1/10S272J      |
|                                                                                        |            | R 305                                 | RS1/10S0R0J      |
| Q 811 Transistor                                                                       | DTC143TK   | R 306                                 | RD1/4PU222J      |
| D 201 Diode                                                                            | 1SS270     | R 307                                 | RS1/8S222J       |
| D 302 Diode                                                                            | 1SS270     |                                       |                  |
| D 601 Diode                                                                            | 1SS270     | R 308                                 | RS1/8S222J       |
| D 602 Diode                                                                            | HZS7L(A1)  | R 309                                 | RS1/10S102J      |
|                                                                                        |            | R 310                                 | RS1/10S0R0J      |
| D 603 Diode                                                                            | 1SS270     | R 311                                 | RS1/8S272J       |
| D 604 Diode                                                                            | 1SS270     | R 312                                 | RD1/4PU222J      |
| D 605 Diode                                                                            | 1SS270     |                                       |                  |
| D 606 Diode                                                                            | 1SS270     | R 314                                 | RS1/8S392J       |
| D 607 Diode                                                                            | 1SS270     | R 315                                 | RS1/10S392J      |
|                                                                                        |            | R 316                                 | RS1/10S152J      |
| D 608 Diode                                                                            | 1SS270     | R 317                                 | RS1/10S103J      |
| D 609 Diode                                                                            | 1SS270     | R 318                                 | RS1/10S0R0J      |
| D 610 Diode                                                                            | 1SS270     |                                       |                  |
| D 611 Diode                                                                            | 1SS270     | R 319                                 | RS1/10S472J      |
| D 612 Diode                                                                            | HZS9L(A2)  | R 320                                 | RS1/10S682J      |
|                                                                                        |            | R 321                                 | RS1/10S222J      |
|                                                                                        |            | R 322                                 | RS1/10S472J      |
|                                                                                        |            | R 323                                 | RS1/10S682J      |

| ====Circuit Symbol and No.==Part Name | Part No.    | ====Circuit Symbol and No.==Part Name | Part No.     |
|---------------------------------------|-------------|---------------------------------------|--------------|
| R 324                                 | RD1/4PU102J | R 701                                 | RD1/4PU102J  |
| R 326                                 | RD1/4PU0R0J | R 702                                 | RD1/4PU102J  |
| R 328                                 | RS1/10S561J | R 703                                 | RS1/8S102J   |
| R 332                                 | RS1/10S103J | R 704                                 | RD1/4PU102J  |
| R 333                                 | RS1/8S393J  | R 705                                 | RS1/10S102J  |
| R 334                                 | RD1/4PU562J | R 706                                 | RS1/10S0R0J  |
| R 335                                 | RD1/4PU472J | R 707                                 | RS1/10S333J  |
| R 336                                 | RD1/4PU473J | R 708                                 | RS1/10S102J  |
| R 337                                 | RS1/10S473J | R 709                                 | RS1/10S562J  |
| R 338                                 | RD1/4PU104J | R 710                                 | RS1/10S222J  |
| R 339                                 | RS1/10S473J | R 711                                 | RS1/10S222J  |
| R 340                                 | RS1/10S473J | R 712                                 | RS1/10S562J  |
| R 341                                 | RS1/10S681J | R 713                                 | RS1/10S684J  |
| R 342                                 | RS1/10S681J | R 714                                 | RS1/8S103J   |
| R 343                                 | RD1/4PU681J | R 715                                 | RS1/10S224J  |
| R 344                                 | RD1/4PU681J | R 716                                 | RS1/10S224J  |
| R 345                                 | RD1/4PU222J | R 717                                 | RS1/10S222J  |
| R 346                                 | RS1/8S472J  | R 718                                 | RS1/10S222J  |
| R 349                                 | RD1/4PU102J | R 719                                 | RS1/10S223J  |
| R 350                                 | RS1/10S510J | R 720                                 | RS1/10S223J  |
| R 351                                 | RS1/10S0R0J | R 721                                 | RS1/10S105J  |
| R 352                                 | RS1/10S0R0J | R 722                                 | RS1/10S224J  |
| R 353                                 | RS1/10S0R0J | R 723                                 | RS1/10S562J  |
| R 354                                 | RD1/4PU102J | R 724                                 | RS1/10S681J  |
| R 355                                 | RS1/8S0R0J  | R 725                                 | RD1/4PU681J  |
| R 403                                 | RS1/10S272J | R 726                                 | RS1/10S681J  |
| R 404                                 | RS1/10S272J | R 727                                 | RS1/10S102J  |
| R 405                                 | RS1/10S151J | R 801                                 | RD1/4PU102J  |
| R 406                                 | RS1/10S151J | R 802                                 | RS1/10S472J  |
| R 407                                 | RS1/10S221J | R 803                                 | RS1/10S101J  |
| R 408                                 | RS1/10S221J | R 804                                 | RD1/4PU332J  |
| R 501                                 | RD1/4PU103J | R 805                                 | RS1/10S103J  |
| R 502                                 | RS1/10S153J | R 806                                 | RD1/4PU102J  |
| R 503                                 | RS1/10S221J | R 807                                 | RD1/4PU122J  |
| R 504                                 | RS1/10S101J | R 808                                 | RS1/10S103J  |
| R 505                                 | RS1/8S103J  | R 809                                 | RS1/10S102J  |
| R 601                                 | RS1/10S104J | R 810                                 | RD1/4PU473J  |
| R 602                                 | RS1/8S104J  | R 812                                 | RS1/10S103J  |
| R 604                                 | RS1/10S473J | R 813                                 | RS1/10S102J  |
| R 610                                 | RD1/4PU473J | R 814                                 | RS1/10S473J  |
| R 612                                 | RS1/8S473J  | R 816                                 | RS1/10S472J  |
| R 613                                 | RS1/10S473J | R 817                                 | RS1/10S223J  |
| R 614                                 | RS1/10S473J | R 818                                 | RS1/10S222J  |
| R 615                                 | RS1/10S222J | R 819                                 | RS1/10S472J  |
| R 616                                 | RS1/10S222J | R 820                                 | RD1/4PU102J  |
| R 617                                 | RS1/10S222J | R 821                                 | RD1/4PU1R5J  |
| R 618                                 | RD1/4PU103J | R 822                                 | RD1/4PU1R5J  |
| R 619                                 | RS1/8S473J  | R 823                                 | RD1/4PU1R0J  |
| R 620                                 | RS1/10S473J | R 824                                 | RS1/10S103J  |
| R 621                                 | RD1/4PU104J | R 825                                 | RS1/10S103J  |
| R 622                                 | RS1/10S473J | CAPACITORS                            |              |
| R 623                                 | RD1/4PU473J |                                       |              |
| R 624                                 | RS1/10S332J |                                       |              |
| R 625                                 | RS1/10S102J |                                       |              |
| R 630                                 | RD1/4PU152J |                                       |              |
| R 631                                 | RS1/10S102J | C 201                                 | CKSQYB681K50 |
| R 632                                 | RS1/10S124J | C 202                                 | CKSQYB681K50 |
| R 652                                 | RS1/10S104J | C 203                                 | CEJA2R2M50   |
| R 653                                 | RS1/10S104J | C 204                                 | CEJA2R2M50   |
| R 655                                 | RS1/10S223J | C 205                                 | CKSQYB333K50 |
| R 656                                 | RS1/10S103J | C 206                                 | CKSQYB333K50 |
| R 657                                 | RD1/4PU472J | C 207                                 | CEJA101M10   |
| R 658                                 | RS1/10S473J | C 208                                 | CEJA101M10   |
| R 659                                 | RS1/10S223J | C 209                                 | CEJA1R0M50   |
| R 660                                 | RD1/4PU473J | C 210                                 | CEJA1R0M50   |
| R 661                                 | RS1/10S473J | C 211                                 | CEJA101M10   |
| R 662                                 | RD1/4PU223J | C 301                                 | CKSQYB223K50 |
| R 663                                 | RD1/4PU473J | C 302                                 | CKSQYB223K50 |
| R 664                                 | RS1/10S222J | C 303                                 | CKSQYB223K50 |
| R 673                                 | RS1/10S0R0J | C 307                                 | CKSQYB103K50 |

28

====Circuit Symbol and No.==Part Name

Part No.

Unit Number : CWM6274 (KEH-1930R/X1M/EW)  
Unit Name : Keyboard Unit

## MISCELLANEOUS

|     |     |                           |         |
|-----|-----|---------------------------|---------|
| IC  | 901 | IC                        | PD6293A |
| D   | 901 | Diode                     | STZ6R2N |
| L   | 901 | Ferri-Inductor            | LAU101K |
| X   | 901 | Ceramic Resonator 4.97MHz | CSS1422 |
| IL  | 901 | Lamp 14V 40mA             | CEL1479 |
| IL  | 902 | Lamp 14V 40mA             | CEL1479 |
| IL  | 903 | Lamp 14V 40mA             | CEL1479 |
| IL  | 904 | Lamp 14V 40mA             | CEL1479 |
| LCD | 901 | LCD                       | CAW1512 |

## RESISTORS

|   |     |             |
|---|-----|-------------|
| R | 901 | RS1/10S222J |
| R | 902 | RS1/10S222J |
| R | 903 | RS1/10S472J |
| R | 906 | RS1/10S473J |
| R | 907 | RS1/10S473J |
| R | 908 | RS1/10S473J |
| R | 909 | RS1/10S473J |
| R | 910 | RS1/10S473J |
| R | 911 | RS1/10S473J |
| R | 912 | RS1/10S473J |
| R | 914 | RS1/10S0R0J |
| R | 916 | RS1/10S0R0J |

## CAPACITORS

|   |     |              |
|---|-----|--------------|
| C | 901 | CEAL100M16   |
| C | 904 | CKSQYB104K16 |
| C | 905 | CKSQYB102K50 |
| C | 906 | CCSCH101J50  |

Unit Number : CWE1466  
Unit Name : FM/AM Tuner Unit

## MISCELLANEOUS

|    |     |                |              |
|----|-----|----------------|--------------|
| IC | 1   | IC             | PA4023B      |
| IC | 2   | IC             | PA4024A      |
| Q  | 1   | Transistor     | 2SC2412K     |
| Q  | 2   | Transistor     | DTC124EU     |
| Q  | 3   | FET            | 3SK263       |
| Q  | 31  | Transistor     | 2SC2412K     |
| Q  | 154 | Transistor     | DTC124EU     |
| Q  | 165 | Transistor     | 2SC2412K     |
| Q  | 201 | FET            | 2SK932       |
| Q  | 202 | Transistor     | 2SC2412K     |
| Q  | 203 | Transistor     | DTC124EU     |
| D  | 4   | Diode          | 1SV250       |
| D  | 5   | Diode          | KV1410-F1    |
| D  | 7   | Diode          | KV1410-F1    |
| D  | 8   | Diode          | KV1410-F1    |
| D  | 201 | Diode          | MA157        |
| D  | 202 | Diode          | MA157        |
| D  | 231 | Diode          | SVC253       |
| L  | 2   | Coil           | CTC1133      |
| L  | 3   | Inductor       | LCTB2R2K2125 |
| L  | 4   | Coil           | CTC1133      |
| L  | 5   | Coil           | CTC1132      |
| L  | 6   | Inductor       | LCTBR15K1608 |
| L  | 51  | Ferri-Inductor | LAU150K      |
| L  | 201 | Ferri-Inductor | LAU4R7K      |
| L  | 202 | Ferri-Inductor | LAU330K      |
| L  | 203 | Inductor       | CTF1287      |
| L  | 208 | Inductor       | LAU121K      |
| L  | 231 | Inductor       | LCTA3R3J3225 |
| T  | 31  | Coil           | CTE1116      |

====Circuit Symbol and No.==Part Name

Part No.

|    |     |                              |          |
|----|-----|------------------------------|----------|
| T  | 51  | Coil                         | CTC1136  |
| TC | 1   | Trimmer                      | CCL1046  |
| CF | 51  | Ceramic Filter               | CTF1442  |
| CF | 52  | Ceramic Filter               | CTF1442  |
| CF | 53  | Ceramic Filter               | CTF1442  |
| CF | 232 | Ceramic Filter               | CTF1348  |
| X  | 151 | Radiator 918.5Hz             | CSS1365  |
| X  | 231 | Crystal Resonator 10.26MHz   | CSS1111  |
| VR | 154 | Semi-fixed 150kΩ(B)          | CCP1213  |
| AR | 1   | Capacitor with Discharge Gap | DSP-201M |

## RESISTORS

|   |     |             |
|---|-----|-------------|
| R | 1   | RS1/16S0R0J |
| R | 4   | RS1/16S154J |
| R | 5   | RS1/16S391J |
| R | 6   | RS1/16S223J |
| R | 7   | RS1/16S123J |
| R | 8   | RS1/16S332J |
| R | 9   | RS1/16S473J |
| R | 10  | RS1/16S223J |
| R | 11  | RS1/16S124J |
| R | 13  | RS1/16S563J |
| R | 15  | RS1/16S271J |
| R | 16  | RS1/16S104J |
| R | 17  | RS1/16S332J |
| R | 18  | RS1/16S332J |
| R | 31  | RS1/16S470J |
| R | 32  | RS1/16S822J |
| R | 33  | RS1/16S822J |
| R | 34  | RS1/16S331J |
| R | 35  | RS1/16S331J |
| R | 51  | RS1/16S271J |
| R | 52  | RS1/16S560J |
| R | 55  | RS1/16S102J |
| R | 56  | RS1/16S823J |
| R | 61  | RS1/16S392J |
| R | 62  | RS1/16S393J |
| R | 101 | RS1/16S272J |
| R | 102 | RS1/16S682J |
| R | 103 | RS1/16S333J |
| R | 104 | RS1/16S334J |
| R | 105 | RS1/16S683J |
| R | 107 | RS1/16S222J |
| R | 151 | RS1/16S222J |
| R | 152 | RS1/16S393J |
| R | 154 | RS1/16S104J |
| R | 155 | RS1/16S273J |
| R | 156 | RS1/16S243J |
| R | 157 | RS1/16S203J |
| R | 160 | RS1/16S222J |
| R | 161 | RS1/16S563J |
| R | 162 | RS1/16S105J |
| R | 163 | RS1/16S222J |
| R | 202 | RS1/16S223J |
| R | 203 | RS1/16S225J |
| R | 204 | RS1/16S103J |
| R | 206 | RS1/16S220J |
| R | 207 | RS1/16S101J |
| R | 208 | RS1/16S102J |
| R | 209 | RS1/16S471J |
| R | 214 | RS1/16S822J |
| R | 215 | RS1/16S822J |
| R | 217 | RS1/16S102J |
| R | 231 | RS1/16S272J |
| R | 232 | RS1/16S473J |
| R | 237 | RS1/16S103J |
| R | 238 | RS1/16S104J |

| ====Circuit Symbol and No.==Part Name | Part No.     | ====Circuit Symbol and No.==Part Name | Part No.     |
|---------------------------------------|--------------|---------------------------------------|--------------|
| R 239                                 | RS1/16S104J  | C 206                                 | CKSQYB104K16 |
| R 240                                 | RS1/16S332J  | C 207                                 | CCSRCH560J50 |
| R 241                                 | RS1/16S202J  | C 209                                 | CKSQYB104K16 |
| R 243                                 | RS1/16S123J  | C 211                                 | CCSRCH101J50 |
| R 244                                 | RS1/16S103J  | C 212                                 | CEJA470M6R3  |
| R 247                                 | RS1/16S123J  | C 213                                 | CKSRYB103K25 |
| CAPACITORS                            |              | C 216                                 | CCSRCH101J50 |
| C 1                                   | CCSQCH6R0D50 | C 217                                 | CEJA1R5M50   |
| C 2                                   | CCSRCK2R0C50 | C 219                                 | CCSRCH471J50 |
| C 4                                   | CCSRCH820J50 | C 220                                 | CKSRYB103K25 |
| C 6                                   | CCSRCH820J50 | C 230                                 | CKSRYB103K25 |
| C 8                                   | CKSRYB103K25 | C 231                                 | CCSRCH330J50 |
| C 9                                   | CKSQYB104K16 | C 232                                 | CCSRCH150J50 |
| C 10                                  | CCSRCKR50C50 | C 233                                 | CKSQYB104K16 |
| C 11                                  | CEJA1R0M50   | C 234                                 | CEJA330M10   |
| C 13                                  | CKSRYB222K50 | C 235                                 | CKSRYB332K50 |
| C 14                                  | CCSRCH220J50 | C 236                                 | CKSQYB473K16 |
| C 16                                  | CCSRCH8R0D50 | C 237                                 | CCSRCH120J50 |
| C 17                                  | CKSRYB222K50 | C 239                                 | CKSRYB472K50 |
| C 18                                  | CKSRYB103K25 | C 240                                 | CEJAR47M50   |
| C 19                                  | CKSRYB222K50 | C 241                                 | CKSQYB104K16 |
| C 20                                  | CKSRYB222K50 | C 242                                 | CEJAR47M50   |
| C 21                                  | CEJA100M16   | C 243                                 | CEJAR33M50   |
| C 22                                  | CCSRTH9R0D50 | C 244                                 | CKSQYB473K16 |
| C 23                                  | CCSRTH120J50 | C 245                                 | CKSRYB123K25 |
| C 24                                  | CCSRCH471J50 | C 246                                 | CKSQYB473K16 |
| C 25                                  | CKSRYB103K25 | C 250                                 | CCSRCH471J50 |
| C 31                                  | CKSRYB103K25 |                                       |              |
| C 32                                  | CKSQYB472K50 |                                       |              |
| C 33                                  | CCSRCH5R0C50 |                                       |              |
| C 34                                  | CKSQYB104K16 |                                       |              |
| C 36                                  | CCSRRH201J50 |                                       |              |
| C 51                                  | CKSRYB223K25 |                                       |              |
| C 52                                  | CKSRYB103K25 |                                       |              |
| C 54                                  | CCSRCH470J50 |                                       |              |
| C 55                                  | CKSQYB223K25 |                                       |              |
| C 56                                  | CKSQYB104K16 |                                       |              |
| C 57                                  | CKSRYB472K50 |                                       |              |
| C 58                                  | CEJA330M10   |                                       |              |
| C 59                                  | CKSRYB103K25 |                                       |              |
| C 61                                  | CCSRCH270J50 |                                       |              |
| C 62                                  | CKSRYB103K25 |                                       |              |
| C 63                                  | CEJAR15M50   |                                       |              |
| C 101                                 | CEJANP100M10 |                                       |              |
| C 102                                 | CKSRYB182K50 |                                       |              |
| C 103                                 | CKSRYB682K25 |                                       |              |
| C 104                                 | CEJA2R2M50   |                                       |              |
| C 105                                 | CKSRYB103K25 |                                       |              |
| C 106                                 | CCSRCH151J50 |                                       |              |
| C 107                                 | CKSRYB103K25 |                                       |              |
| C 151                                 | CKSRYB472K50 |                                       |              |
| C 152                                 | CKSQYB104K16 |                                       |              |
| C 153                                 | CEJA3R3M50   |                                       |              |
| C 154                                 | CKSQYB104K16 |                                       |              |
| C 157                                 | CEJA3R3M50   |                                       |              |
| C 158                                 | CKSYB474K16  |                                       |              |
| C 159                                 | CEJA220M6R3  |                                       |              |
| C 160                                 | CKSQYB104K16 |                                       |              |
| C 161                                 | CKSQYB104K16 |                                       |              |
| C 162                                 | CEJA3R3M50   |                                       |              |
| C 163                                 | CKSRYB102K50 |                                       |              |
| C 170                                 | CCSRCH100D50 |                                       |              |
| C 201                                 | CCSRCH471J50 |                                       |              |
| C 202                                 | CCSRCH100D50 |                                       |              |
| C 203                                 | CKSRYB332K50 |                                       |              |
| C 204                                 | CKSQYB473K16 |                                       |              |
| C 205                                 | CKSQYB473K16 |                                       |              |

D

Unit Number :  
Unit Name : Cassette PCB

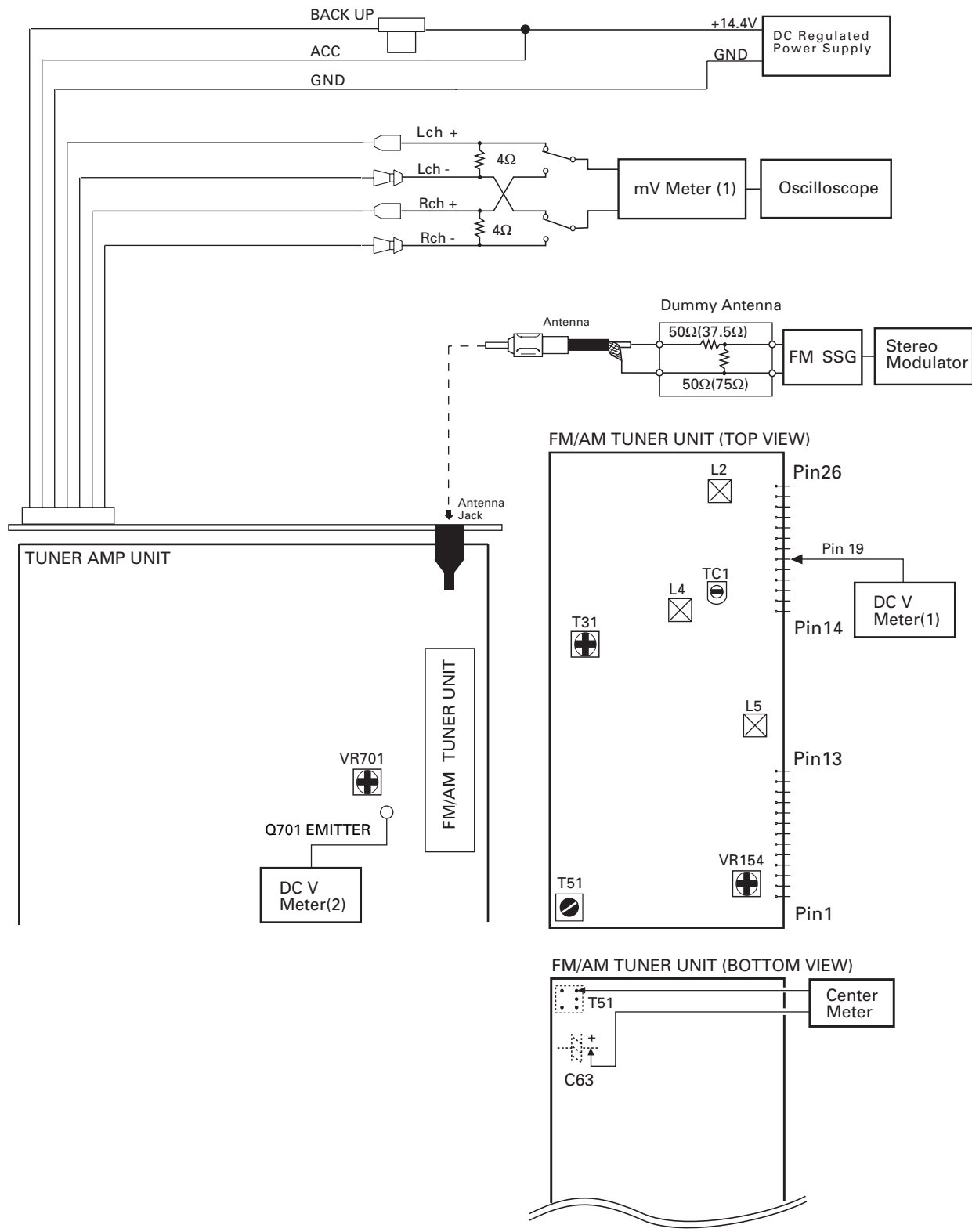
|     |                 |             |
|-----|-----------------|-------------|
| S 1 | Switch(LOAD)    | ESN1016     |
| S 2 | Switch(MUTE)    | ESN1017     |
| S 3 | Switch(FWD/REV) | ESH1006     |
| S 4 | Switch(EJECT)   | ESG1006     |
| R 1 |                 | RD1/4HM472J |

Miscellaneous Parts List

|        |            |         |
|--------|------------|---------|
| M 1    | Motor Unit | EXA1467 |
| HD 1   | Head Assy  | EXA1466 |
| FU 951 | Fuse 10A   | CEK1136 |

6. ADJUSTMENT

● Connection Diagram



**FM ADJUSTMENT**

Modulation M: MONO MOD., 400Hz 30%(22.5kHz Dev.) or 400Hz 100%(75kHz Dev.)

S: STEREO MOD., 1kHz, L or R=30%(20.25kHz+7.5kHz Dev.)

NOTE: Before proceeding to further adjustments after switching power ON, let the tuner run for ten minutes to allow the circuits to stabilize.

|               | No. | FM SSG                                                 |            | Displayed<br>Frequency(MHz) | Adjustment<br>Point | Adjustment Method<br>(Switch Position)        |
|---------------|-----|--------------------------------------------------------|------------|-----------------------------|---------------------|-----------------------------------------------|
|               |     | Frequency(MHz)                                         | Level(dBf) |                             |                     |                                               |
| TUN Volt      | 1   | •••••                                                  | •••••      | 108.0                       | L5                  | DC V Meter(1) : 6V                            |
| IF            | 2   | 98.1 M                                                 | 60—100     | 98.1                        | T51                 | Center Meter : 0                              |
| ANT Coil      | 3   | 98.1 M                                                 | 5          | 98.1                        | L2                  | mV Meter(1) : Maximum                         |
| RF Coil       | 4   | 98.1 M                                                 | 5          | 98.1                        | L4                  | mV Meter(1) : Maximum                         |
| RF<br>Trimmer | 5   | 129.3 M                                                | 60—80      | 107.9                       | TC1                 | mV Meter(1) : Minimum                         |
|               | 6   | RF Coil and RF Trimmer shall be adjusted twice or more |            |                             |                     |                                               |
| IFT           | 7   | 98.1 M                                                 | 5          | 98.1                        | T31                 | mV Meter(1) : Maximum<br>(STEREO MODE)        |
| ARC           | 8   | 98.1 S                                                 | 40         | 98.1                        | VR154               | mV Meter(1) : Separation 5dB<br>(STEREO MODE) |

**RDS SL ADJUSTMENT**

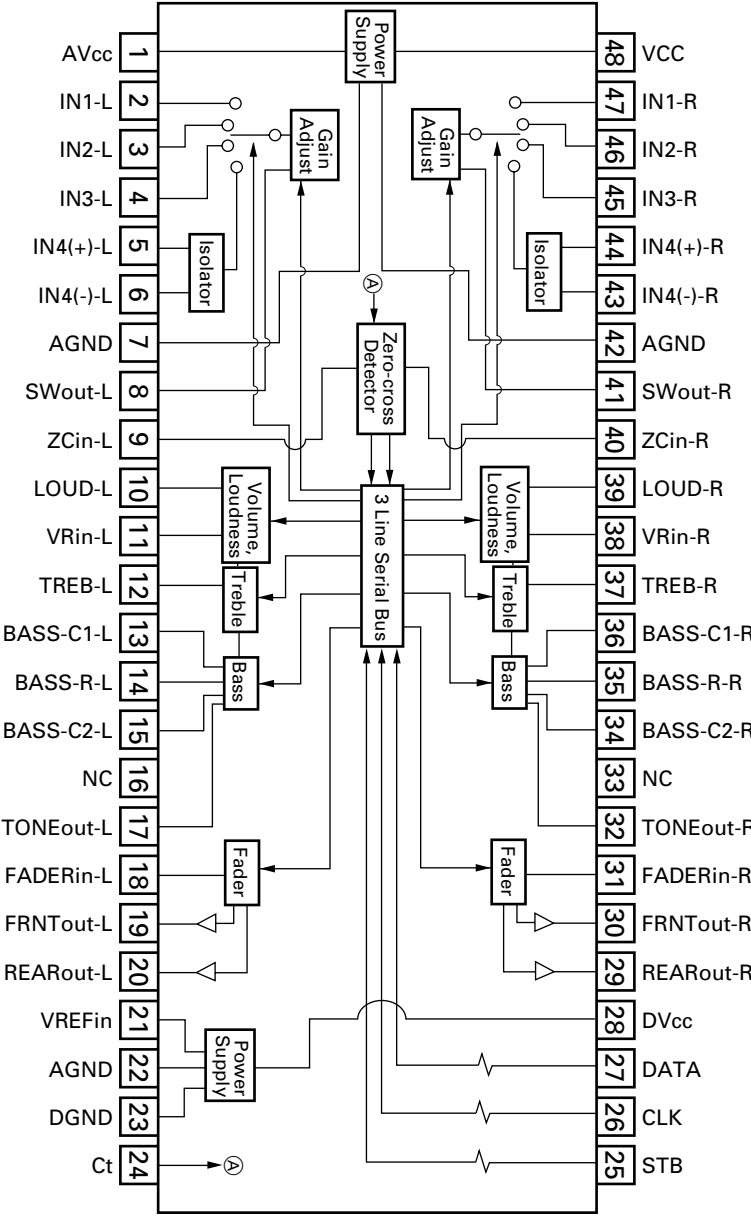
|  | No. | FM SSG         |            | Displayed<br>Frequency(MHz) | Adjustment<br>Point | Adjustment Method<br>(Switch Position) |
|--|-----|----------------|------------|-----------------------------|---------------------|----------------------------------------|
|  |     | Frequency(MHz) | Level(dBf) |                             |                     |                                        |
|  | 1   | 104.0 S        | 35         | 104.0                       | VR701               | DC V Meter(2) : 1.75V+0.05,-0.35       |

7. GENERAL INFORMATION

7.1 PARTS

7.1.1 IC

SN761029DL



## ● Pin Functions(PE5016A)

| Pin No. | Pin Name | I/O | Format | Function and Operation                    |
|---------|----------|-----|--------|-------------------------------------------|
| 1       | RDT      | I   |        | RDS data input                            |
| 2       | NC       |     |        | Not used                                  |
| 3       | ADPW     |     |        | A/D converter power                       |
| 4       | GND      |     |        | GND                                       |
| 5       | DRST     | O   | C      | RDS decoder reset output                  |
| 6       | MDSENS   | I   |        | Modulation detect input                   |
| 7       | AVREF1   |     |        | (Connect to VDD)                          |
| 8       | KYDT     | I   |        | Key data input                            |
| 9       | DPDT     | O   | C      | Display data output                       |
| 10      | DSSENS   | I   |        | Grille detach sense input                 |
| 11      | TUNPDI   | I   |        | PLL IC data input                         |
| 12      | TUNPDO   | O   | C      | PLL IC data output                        |
| 13      | TUNPCK   | O   | C      | PLL IC clock output                       |
| 14      | TUNPCE   | O   | C      | PLL IC chip enable output                 |
| 15      | CURRO    | O   |        | Tuner voltage FIX output                  |
| 16      | NC       |     |        | Not used                                  |
| 17      | SK       | I   |        | SK signal input                           |
| 18      | MUTCNT   | I   |        | NF mute control input                     |
| 19-21   | NC       |     |        | Not used                                  |
| 22      | SWVDD    | O   | C      | Grille power supply control output        |
| 23      | NC       |     |        | Not used                                  |
| 24      | VDT      | O   | C      | Data output for electronic volume         |
| 25      | VCK      | O   | C      | Clock output for electronic volume        |
| 26      | VST      | O   | C      | Strobe pulse output for electronic volume |
| 27      | SYSPW    | O   | C      | System power supply control output        |
| 28      | MUTE     | O   | C      | System mute output                        |
| 29      | DMINH    | O   | C      | Mechanism mute cancel output              |
| 30,31   | NC       |     |        | Not used                                  |
| 32      | EW/BEW   | I   |        | Model select input                        |
| 33      | GND      |     |        | GND                                       |
| 34-36   | NC       |     |        | Not used                                  |
| 37      | TMUTE    | O   |        | Tuner mute output                         |
| 38      | FM       | O   | C      | FM power control output                   |
| 39      | AM       | O   | C      | AM power control output                   |
| 40-44   | NC       |     |        | Not used                                  |
| 45      | PEE      | O   | C      | Beep tone output                          |
| 46      | NC       |     |        | Not used                                  |
| 47      | RDS57K   | I   |        | 57kHzBP-OUT sense input                   |
| 48,49   | NC       |     |        | Not used                                  |
| 50      | EJECT    | I   |        | Eject key input                           |
| 51      | TAPLD    | I   |        | Tape loading input                        |
| 52      | MECPW    | O   | C      | Cassette mechanism power output           |
| 53      | MCMUT    | I   |        | Mechanism mute input                      |
| 54      | NOR/REV  | I   |        | Normal reverse input                      |
| 55-59   | NC       |     |        | Not used                                  |
| 60      | RESET    | I   |        | Reset input                               |
| 61      | LDET     | I   |        | PLL lock sense input                      |
| 62      | RCK      | I   |        | RDS clock input                           |
| 63      | CLKIN    | I   |        | Clock input                               |
| 64      | ASENS    | I   |        | ACC power sense input                     |
| 65      | BSENS    | I   |        | Back up power sense input                 |
| 66      | SD       | I   |        | SD input                                  |
| 67      | ST       | I   |        | FM stereo input                           |
| 68      | VDD      |     |        | Power supply                              |
| 69      | X2       |     |        | Oscillator output                         |
| 70      | X1       |     |        | Oscillator input                          |
| 71      | GND      |     |        | GND                                       |
| 72      | NC       |     |        | Not used                                  |

| Pin No. | Pin Name | I/O | Format | Function and Operation                  |
|---------|----------|-----|--------|-----------------------------------------|
| 73      | TESTIN   | I   |        | Test program mode input                 |
| 74      | AVDD     |     |        | A/D converter analog power supply (VDD) |
| 75      | AVREF0   |     |        | (A/D converter standard voltage input)  |
| 76      | SL       | I   |        | Signal level input                      |
| 77      | CL       | I   |        | Composite level input                   |
| 78      | NL       | I   |        | Noise level input                       |
| 79      | TL       | I   |        | Trigger level input                     |
| 80      | RDSLK    | I   |        | RDS LK signal input                     |

### ● Pin Functions (PD6293A)

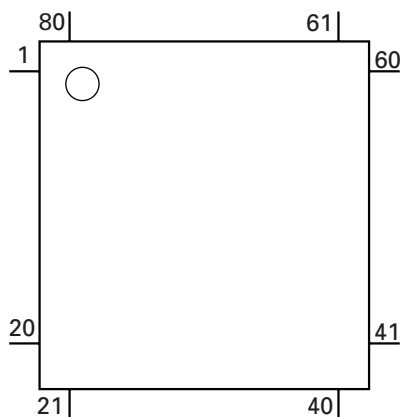
| Pin No. | Pin Name | I/O | Function and Operation            |
|---------|----------|-----|-----------------------------------|
| 1-5     | SEG4-0   | O   | LCD segment output 4-0            |
| 6-8     | COM1-3   | O   | Common driver output 1-3          |
| 9       | COM0     | O   | Common driver output 0            |
| 10      | LCDB     |     | LCD bias power supply             |
| 11-14   | KS3-0    | O   | Key strobe output 3-0             |
| 15,16   | KDT0,1   | I   | Key data input 0,1                |
| 17      | REM      | I   | Remote control reception          |
| 18      | DPDT     | I   | Display data input                |
| 19      | NC       |     | Not used                          |
| 20      | KYDT     | O   | Key data output                   |
| 21      | MODA     |     | GND                               |
| 22      | X0       |     | Crystal oscillator connection pin |
| 23      | X1       |     | Crystal oscillator connection pin |
| 24      | VSS      |     | GND                               |
| 25,26   | KDT2,3   | I   | Key data input 2,3                |
| 27,28   | KST5,4   | O   | Key strobe output 5,4             |
| 29-55   | SEG39-13 | O   | LCD segment output 39-13          |
| 56      | VCC      |     | 5V                                |
| 57-64   | SEG12-5  | O   | LCD segment output 12-5           |

IC's marked by\* are MOS type.

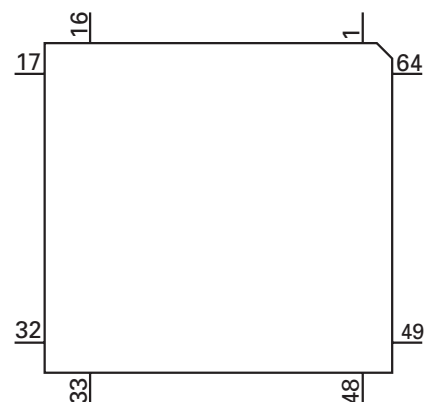
Be careful in handling them because they are very liable to be damaged by electrostatic induction.

| Format | Meaning |
|--------|---------|
| C      | C MOS   |

\*PE5016A



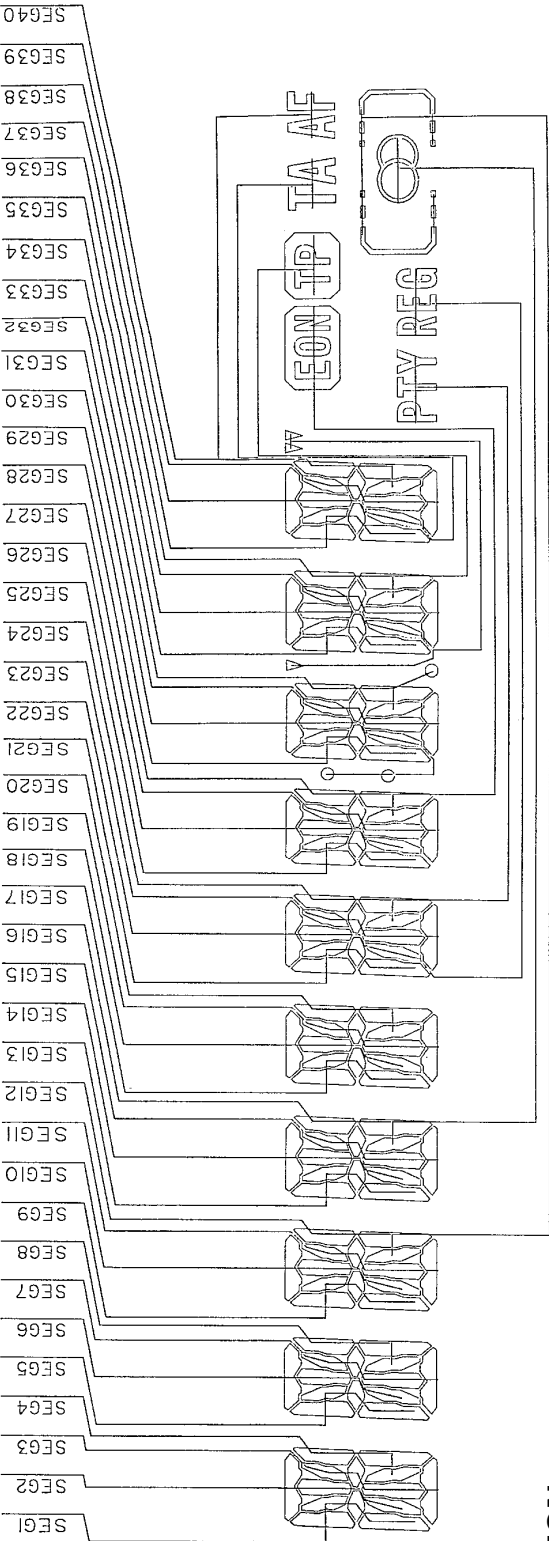
\*PD6293A



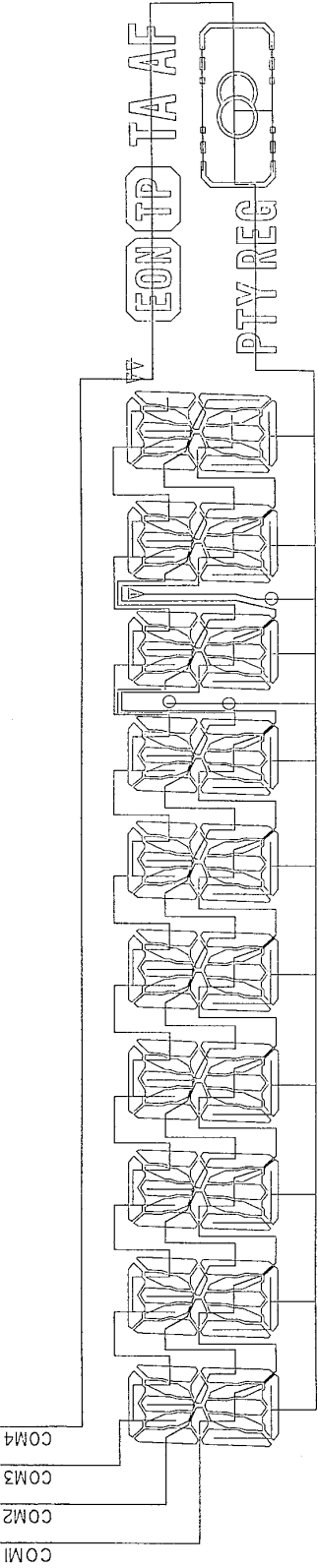
7.1.2 DISPLAY

● CAW1512

SEGMENT



COMMON



## 7.2 DISASSEMBLY

### ● Remove the Case(not shown)

- 1.Remove the three screws.
- 2.Remove the Case.

### ● Remove the Cassette Mechanism Assy (not shown)

- 1.Remove the four screws.
- 2.Disconnect the connector, and then remove the Cassette Mechanism Assy.

### ● Remove the Panel Unit(Fig.1)

- 1** Disengage the stopper at two locations indicated by arrow.
- 2** Remove the Panel Unit.

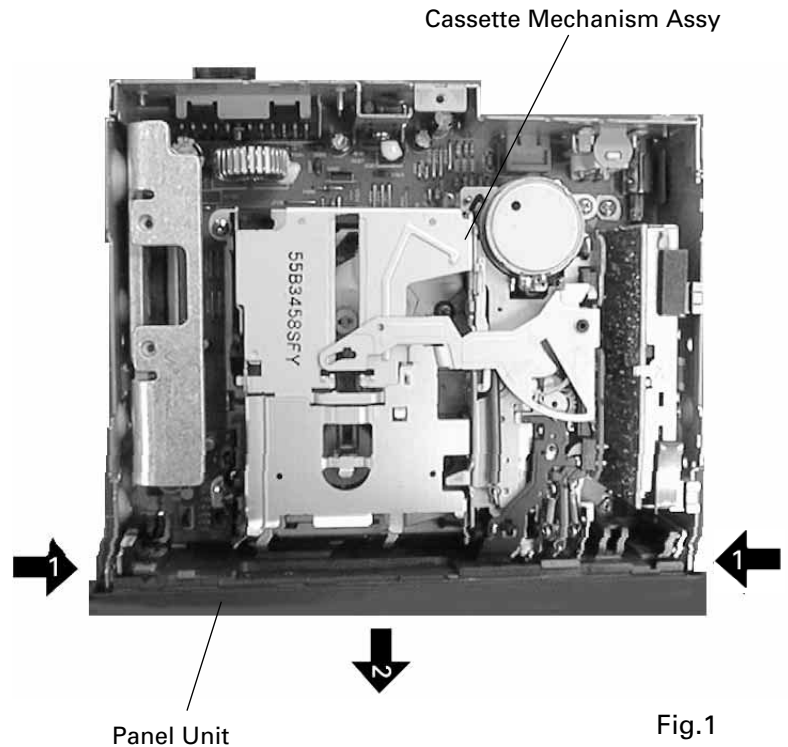
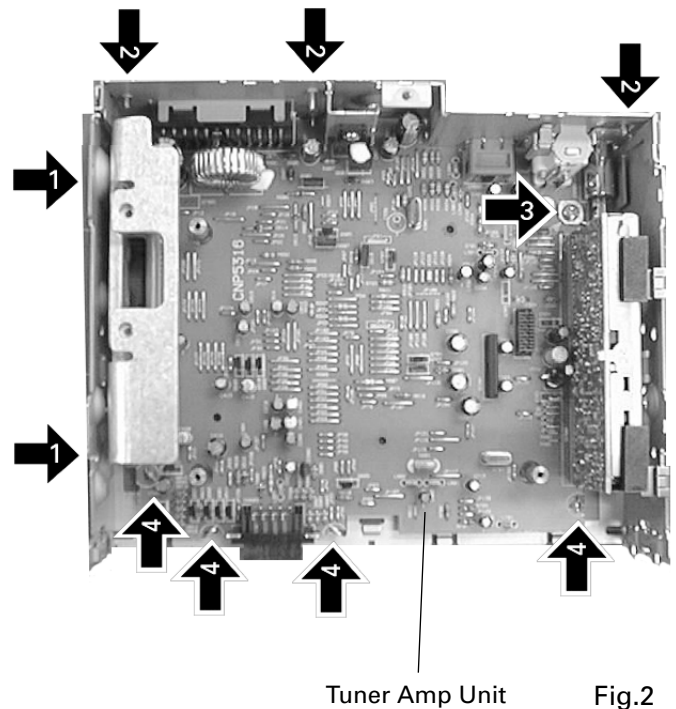


Fig.1

### ● Remove the Tuner Amp Unit(Fig.2)

- 1** Remove the two screws.
- 2** Remove the three screws.
- 3** Remove the screw.
- 4** Unbend the tabs at four locations indicated by arrow until straight. Remove the Tuner Amp Unit.



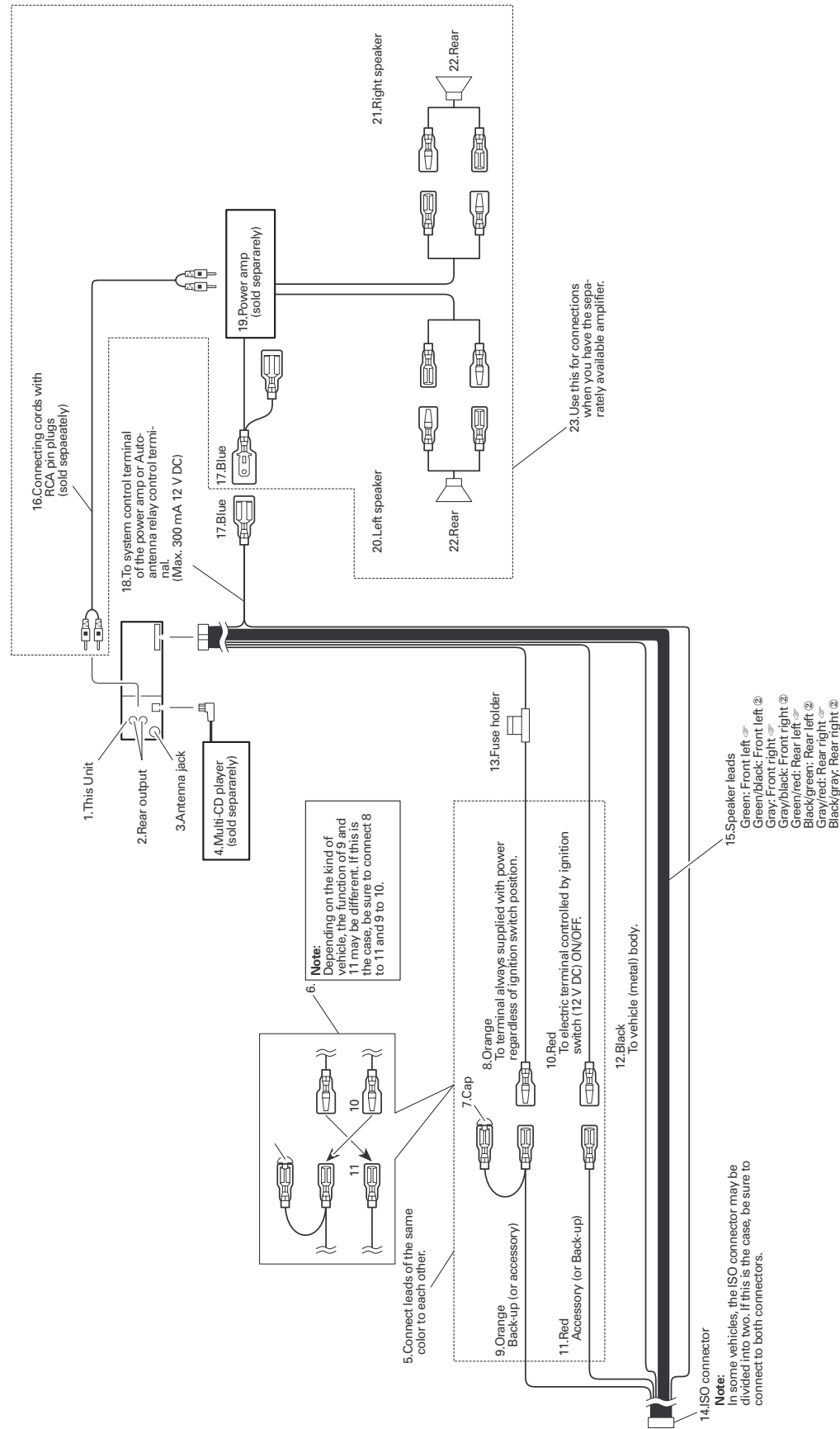
Tuner Amp Unit

Fig.2

8. OPERATIONS AND SPECIFICATIONS

**CAUTION**

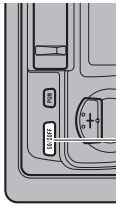
- Cords for this product and those for other products may be different colors even if they have the same function. When connecting this product to another product, refer to the supplied Installation manuals of both products and connect cords that have the same function.



Tuner Operation

Basic Operation of Tuner

1. Select Tuner.

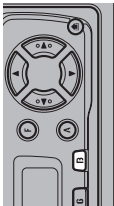


Each press changes the Source ...

The program service name or frequency appears on the display. ("OO" indicator lights when a stereo station is selected.)



2. Select the desired band.



F1 → FI → MW/LW



3. Tune the receiver to a higher or lower frequency.



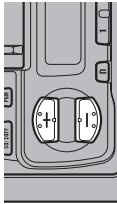
This product's tuner lets you select the tuning by changing the length of the time you press the button.

|                              |                     |
|------------------------------|---------------------|
| Manual Tuning (step by step) | 0.3 seconds or less |
| Seek Tuning                  | 0.3 – 2 seconds     |
| Manual Tuning (continuously) | 2 seconds or more   |

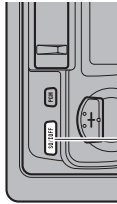
Note:

- To select a weak broadcasting station that cannot be tuned in with the Seek Tuning function, tune in with Manual Tuning.

4. Raise or lower the volume.



5. Turn the source OFF.



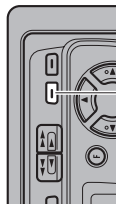
Hold for 1 second



AF Function Switching

This product's AF function can be switched ON and OFF. AF should be switched OFF for normal tuning operations.

- Switch AF OFF.



Hold for 2 seconds

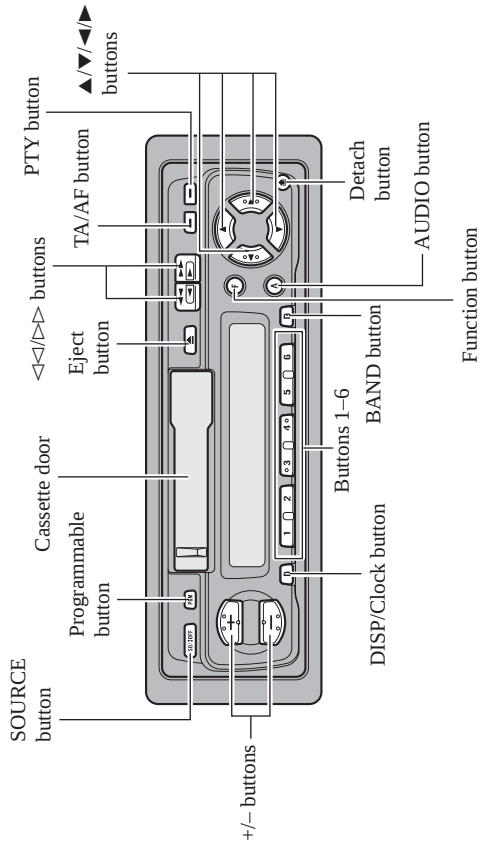


"AF" disappears

To switch AF ON, repeat the preceding operation.

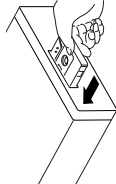
Note:

- You can also switch the AF Function ON/OFF in the Function Menu.

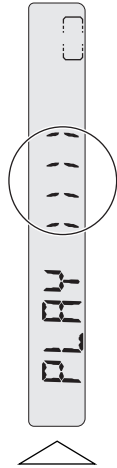
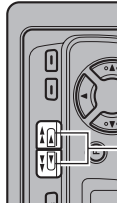


Basic Operation of Cassette Player

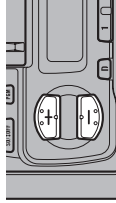
1. Insert the cassette tape.



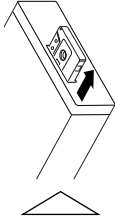
2. Switch tape playback from side A to side B, or vice versa.



3. Raise or lower the volume.



4. Remove the cassette tape.



Note:

- The Tape function can be turned ON/OFF with the cassette tape remaining in this product.

