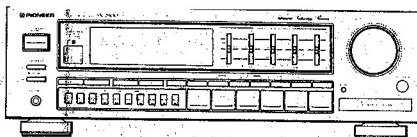


# Service Manual

**PIONEER**  
The Art of Entertainment



STEREO RECEIVER

# SX-2900

## SX-2800

## SX-1900

## SX-240

MODELS SX-2900, SX-2800, SX-1900 AND SX-240 HAVE FOLLOWING VERSIONS :

| Type  | Applicable model |         |         |        | Power requirement                         | Export destination                          |
|-------|------------------|---------|---------|--------|-------------------------------------------|---------------------------------------------|
|       | SX-2900          | SX-2800 | SX-1900 | SX-240 |                                           |                                             |
| KUC   | ○                | ○       | ○       | ○      | AC120V only                               | U.S.A. and Canada.                          |
| SD    | ○                | —       | ○       | —      | AC110V, 120-127V, 220V, 240V (switchable) | Kingdom of Saudi Arabia and General market. |
| KUCXJ | —                | —       | ○       | —      | AC120V only                               | U.S.A. and Canada.                          |

- This manual is applicable to the SX-2900/KUC, SD, SX-2800/KUC, SX-1900/KUC, SD and SX-240/KUC types.
- As to the SX-2900/SD, SX-2800/KUC, SX-1900/KUC, SD and SX-240/KUC types, refer to pages 31-34.
- As to the SX-1900/KUCXJ type, refer to applicable service manual.
- Ce manuel pour le service comprend les explications de réglage en français.
- Este manual de servicio trata del método ajuste escrito en español.

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## CONTENTS

|                                                 |    |                                                                            |    |
|-------------------------------------------------|----|----------------------------------------------------------------------------|----|
| 1. SAFETY INFORMATION .....                     | 2  | 6. RÉGLAGE .....                                                           | 27 |
| 2. EXPLODED VIEWS, PACKING AND PARTS LIST ..... | 3  | 6. AJUSTE .....                                                            | 29 |
| 3. SCHEMATIC DIAGRAM .....                      | 7  | 7. FOR SX-2900/SD, SX-2800/KUC, SX-1900/KUC, SD AND SX-240/KUC TYPES ..... | 31 |
| 4. P.C.BOARDS CONNECTION DIAGRAM .....          | 12 | 8. PANEL FACILITIES .....                                                  | 35 |
| 5. P.C.B 's PARTS LIST .....                    | 21 | 9. SPECIFICATIONS .....                                                    | 38 |
| 6. ADJUSTMENTS .....                            | 25 |                                                                            |    |

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.

### WARNING

Lead in solder used in this product is listed by the California Health and Welfare agency as a known reproductive toxicant which may cause birth defects or other reproductive harm (California Health & Safety Code, Section 25249.5).

When servicing or handling circuit boards and other components which contain lead in solder, avoid unprotected skin contact with the solder. Also, when soldering do not inhale any smoke or fumes produced.

## 1. SAFETY INFORMATION

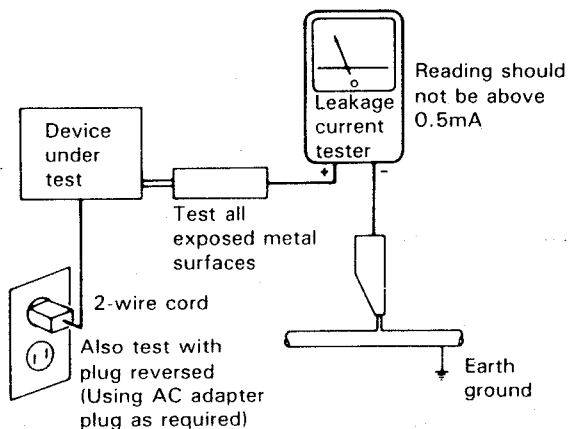
(FOR USA MODEL ONLY)

### 1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

#### LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5mA.



AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

### 2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a  $\Delta$  on the schematics and on the parts list in this Service Manual.

The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

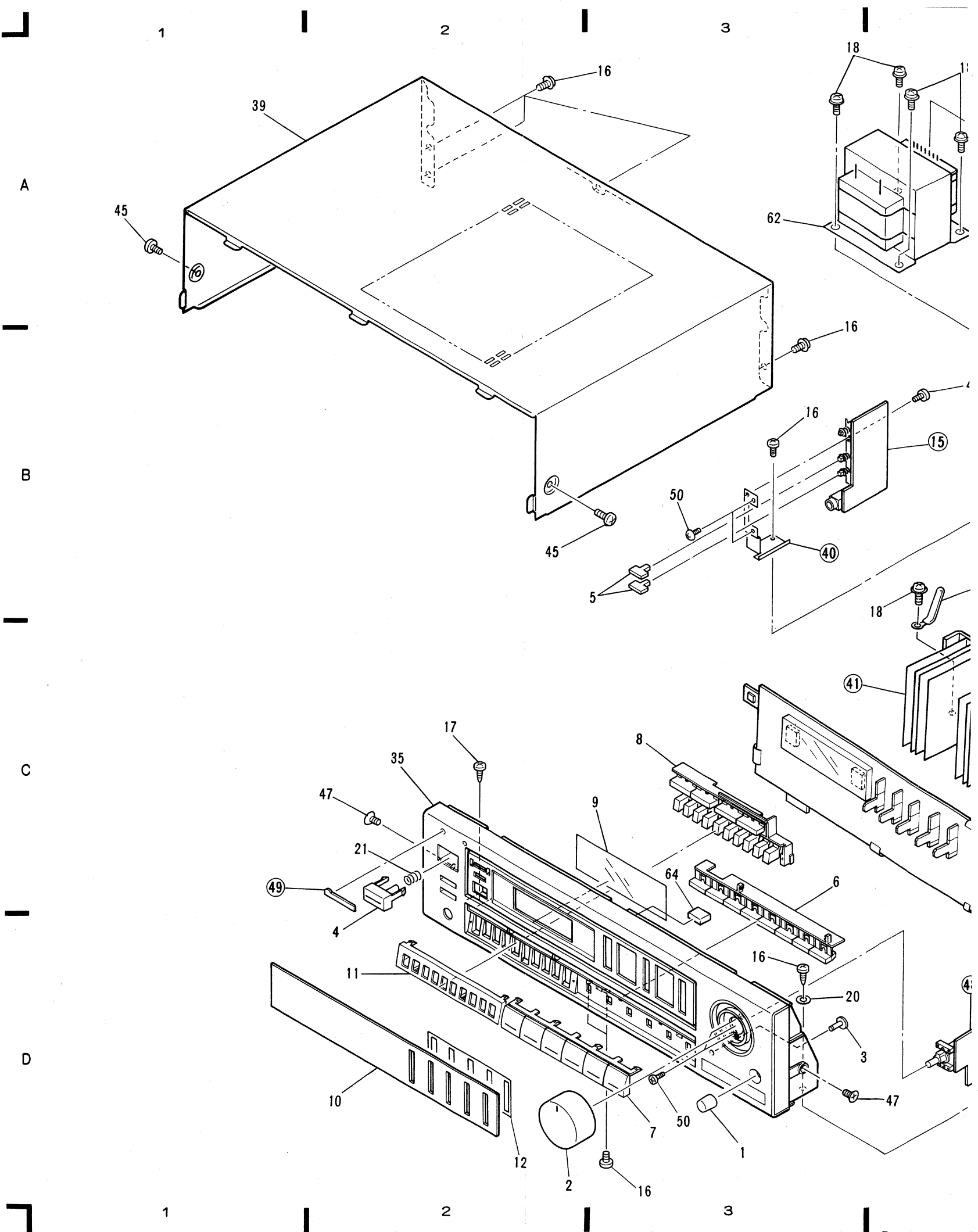
2. EXPLODED VIEWS, PACKING AND PARTS LIST

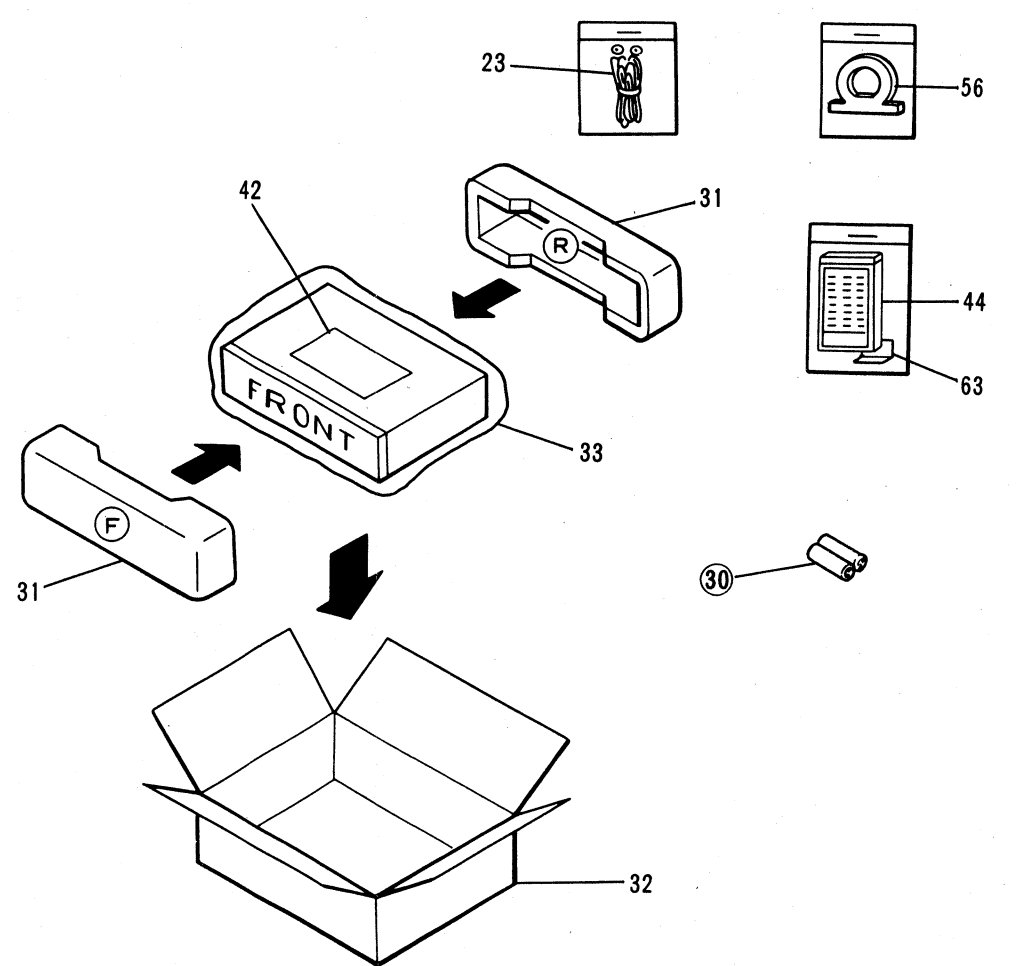
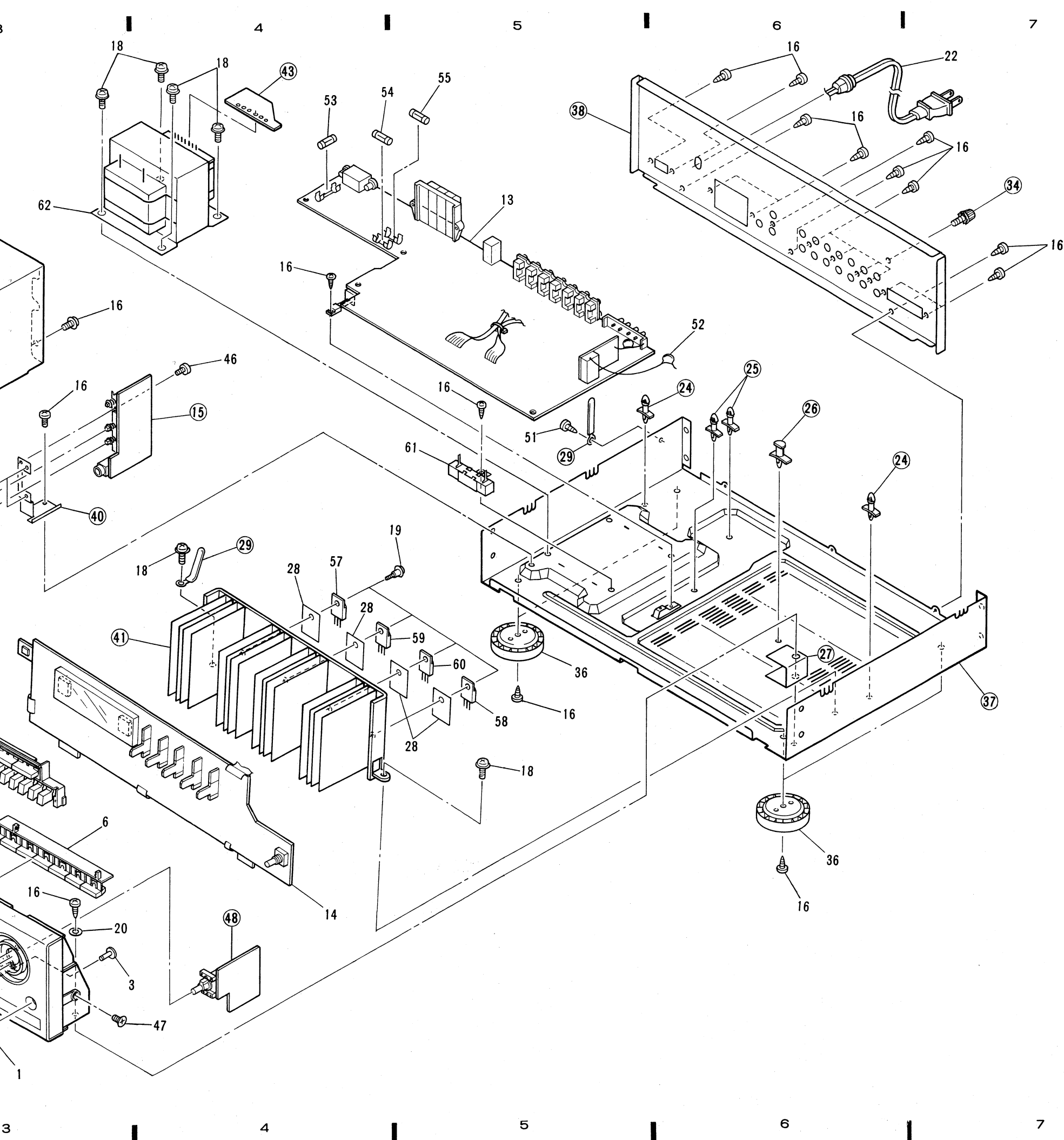
NOTES:

- Parts without part number cannot be supplied.
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by “●” are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

Parts list of Exterior and packing

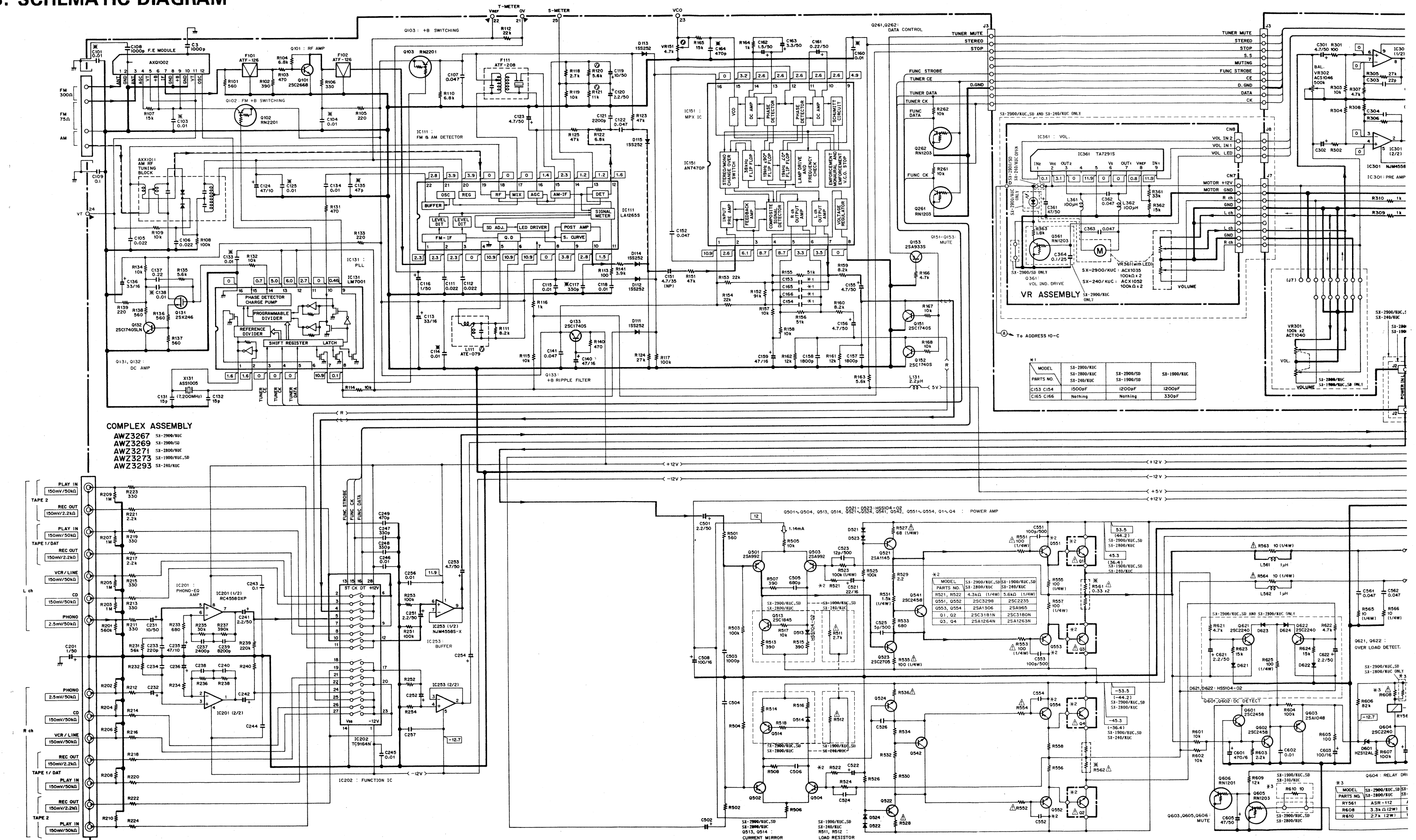
| Mark | No. | Description              | Parts No. | Mark | No. | Description                      | Parts No.    |
|------|-----|--------------------------|-----------|------|-----|----------------------------------|--------------|
|      | 1   | ROTARY KNOB (BALANCE)    | AAB1133   |      | 41  | HEAT SINK                        |              |
|      | 2   | MASTER VOL ASSY (VOLUME) | AAB1207   |      | 42  | OPERATING INSTRUCTIONS (English) | ARB1286      |
|      | 3   | TACT KNOB (RETURN)       | AAD1398   |      | 43  | TRANS ASSEMBLY                   |              |
|      | 4   | KNOB (POWER)             | AAD1661   |      | 44  | REMOTE CONTROL UNIT (CU-SX021)   | AXD1186      |
|      | 5   | SPEAKER KNOB (SPEAKERS)  | AAD1662   |      | 45  | SCREW                            | BBT30P060FZK |
|      | 6   | TUNER FUNCTION KNOB      | AAD1663   |      | 46  | SCREW                            | BPZ26P080FMC |
|      | 7   | FUNCTION KNOB            | AAD1664   |      | 47  | SCREW                            | CBZ30P060FZK |
|      | 8   | STATION KNOB             | AAD1924   |      | 48  | VR ASSEMBLY                      |              |
|      | 9   | PLATE                    | AAK1833   |      | 49  | NAME PLATE                       |              |
|      | 10  | ACRYLIC PANEL            | AAK2092   |      | 50  | SCREW                            | PMZ30P060FCU |
| ●    | 11  | STATION SASH             | AAP1111   |      | 51  | SCREW                            | VCZ30P060FCU |
| ●    | 12  | EQUALIZER SASH           | AAP1112   | ⚠    | 52  | CERAMIC CAPACITOR (C3)           | CKDYF102Z50  |
|      | 13  | COMPLEX ASSEMBLY         | AWZ3267   | ⚠    | 53  | FUSE (4A/125V, FU1)              | AEK-100      |
|      | 14  | CONTROL ASSEMBLY         | AWZ3268   | ⚠    | 54  | FUSE (1.25A/125V, FU3)           | AEK-120      |
|      | 15  | SP SWITCH ASSEMBLY       |           | ⚠    | 55  | FUSE (1.25A/125V, FU4)           | AEK-120      |
|      | 16  | SCREW                    | ABA-298   | ⚠    | 56  | LOOP ANTENNA                     | ATB1005      |
|      | 17  | SCREW (STEEL)            | ABA1009   | ⚠    | 57  | TRANSISTOR (Q1)                  | 2SC3181N     |
|      | 18  | SCREW                    | ABA1054   | ⚠    | 58  | TRANSISTOR (Q2)                  | 2SC3181N     |
|      | 19  | SCREW                    | ABA1082   | ⚠    | 59  | TRANSISTOR (Q3)                  | 2SA1264N     |
|      | 20  | WASHER                   | ABF1017   | ⚠    | 60  | TRANSISTOR (Q4)                  | 2SA1264N     |
| ⚠    | 21  | COIL SPRING              | ABH1064   |      | 61  | RESISTOR (750Ω/10W, R1)          | ACN1083      |
|      | 22  | AC POWER CORD            | ADG1057   | ⚠    | 62  | POWER TRANSFORMER (T1)           | ATS1248      |
|      | 23  | FM ANTENNA               | ADH1004   |      | 63  | BATTERY COVER                    | PZN1001      |
|      | 24  | PCB SUPPORT              |           |      | 64  | PVC SHEET                        | AED1117      |
|      | 25  | PCB SUPPORT              |           |      |     |                                  |              |
|      | 26  | PCB SUPPORT              |           |      |     |                                  |              |
|      | 27  | PVC PLATE                |           |      |     |                                  |              |
|      | 28  | SHEET                    | AEE1014   |      |     |                                  |              |
|      | 29  | CLAMPER                  |           |      |     |                                  |              |
|      | 30  | “AAA” DRY CELL           |           |      |     |                                  |              |
|      | 31  | STYROL PROTECTOR         | AHA1015   |      |     |                                  |              |
|      | 32  | PACKING CASE             | AHD1985   |      |     |                                  |              |
|      | 33  | PACKING SHEET            | AHG1016   |      |     |                                  |              |
|      | 34  | TERMINAL SCREW           |           |      |     |                                  |              |
|      | 35  | FRONT PANEL              | AMB1753   |      |     |                                  |              |
|      | 36  | INSULATOR ASSY           | AMR2140   |      |     |                                  |              |
|      | 37  | CHASSIS                  |           |      |     |                                  |              |
|      | 38  | REAR PANEL               |           |      |     |                                  |              |
|      | 39  | BONNET CASE              | ANE1215   |      |     |                                  |              |
|      | 40  | PCB INDICATOR HOLDER     |           |      |     |                                  |              |

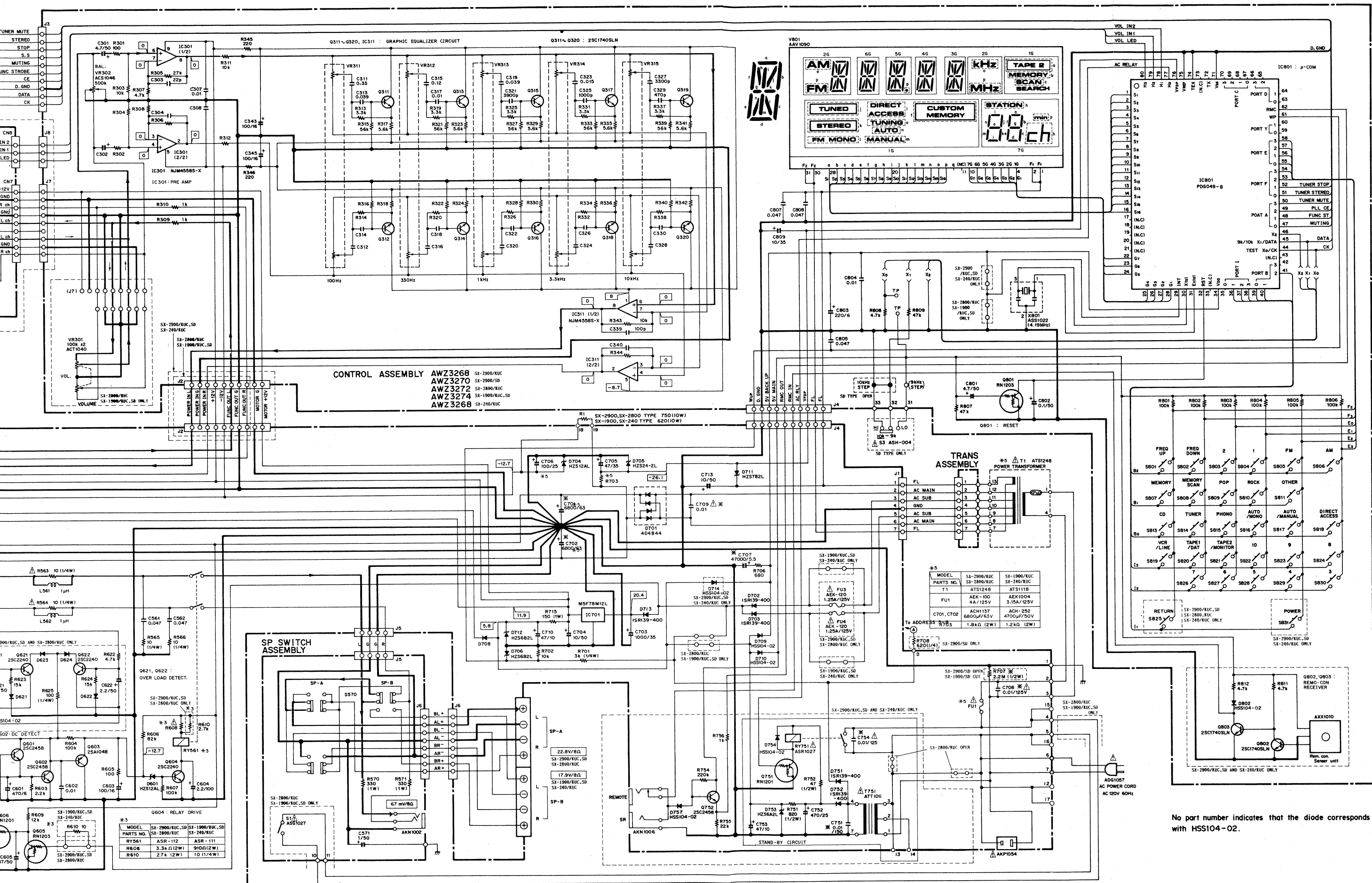


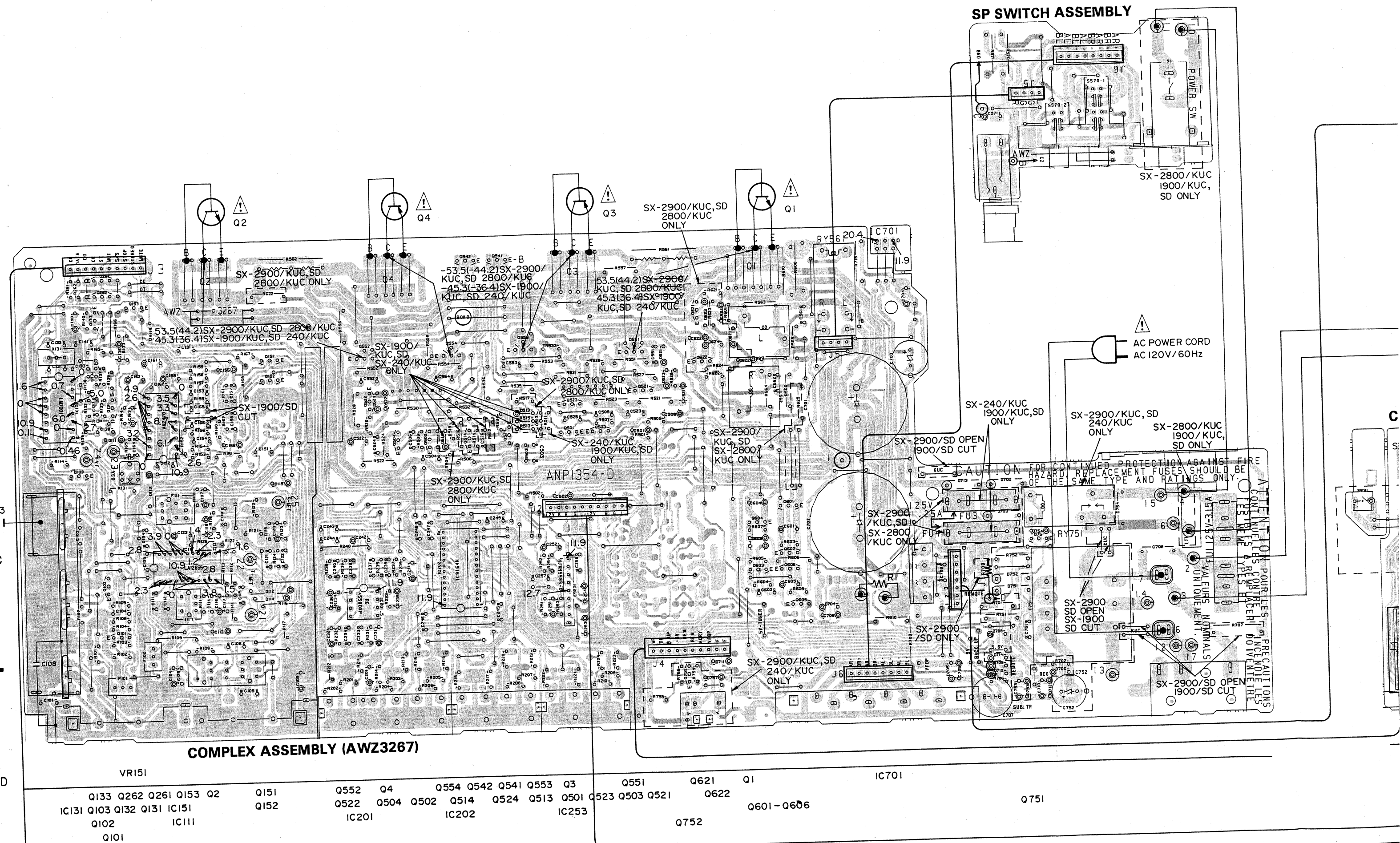


A  
B  
C  
D

## 3. SCHEMATIC DIAGRAM







## 1. RESISTORS

Indicated in  $\Omega$ , 1/4W, 1/8W,  $\pm 5\%$ , tolerance unless otherwise noted k: k $\Omega$ , M: M $\Omega$ , (F):  $\pm 1\%$ , (G):  $\pm 2\%$ , (K):  $\pm 10\%$ , (M):  $\pm 20\%$  tolerance.

## 2. CAPACITORS

Indicated in capacity ( $\mu$ F)/voltage (V) unless otherwise noted P:PF.

Indication without voltage is 50V except electrolytic capacitor.

## 3. VOLTAGE CURRENT

$\square$  V : Signal voltage at (65W+65W 8 $\Omega$ ) output (1kHz).

$\square$  : DC voltage (V) at no input signal.

Value in ( ) is DC voltage at rated power.

$\leftarrow$  mA : DC current at no input signal.

## 4. OTHERS

$\Rightarrow$  : Signal route

$\odot$  : Adjusting point

The  $\Delta$  mark found on some components parts indicates the importance of the safety factor of the parts.

Therefore, when replacing, be sure to use parts of identical designation.

\* marked capacitors and resistors have parts numbers.

This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.

## 5. SWITCHES

S2 VOLTAGE SELECTOR

110/120-127/220/240V

(SX-2900/SD, SX-1900/SD ONLY)

S3 SLIDE SW 10k/9k

(SX-2900/SD, SX-1900/SD ONLY)

S4 VOLTAGE SELECTOR

220-240V/110/127V

(SX-2900/SD ONLY)

SP SWITCH assembly

S570 SPEAKER (SP-A/SP-B)

S1 POWER

(SX-2800/KUC, SX-1900/KUC, SD ONLY)

CONTROL assembly

S801 FREQ UP

S802 FREQ DOWN

S803 2

S804 1

S805 FM

S806 AM

S807 MEMORY

S808 MEMORY SCAN

S809 POP

S810 ROCK

S811 OTHER

S813 CD

S814 TUNER

S815 PHONO

S816 AUTO/MONO

S817 AUTO/MANUAL

S818 DIRECT ACCESS

S819 VCR/LINE

S820 TAPE1/DAT

S821 TAPE2/MONITOR

S822 10

S823 9

S824 8

S825 RETURN (SX-2900/KUC, SD,

SX-2800/KUC,

SX-240/KUC ONLY)

S826 7

S827 6

S828 5

S829 4

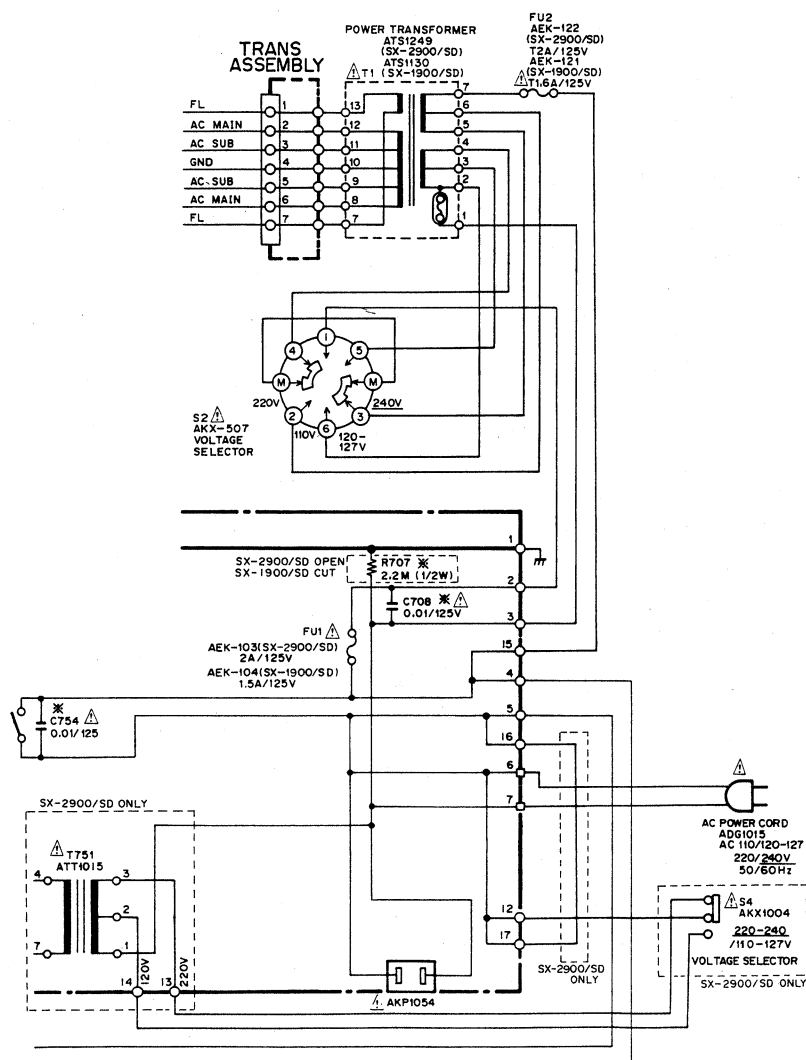
S830 3

S831 POWER (SX-2900/KUC, SD,

SX-240/KUC ONLY)

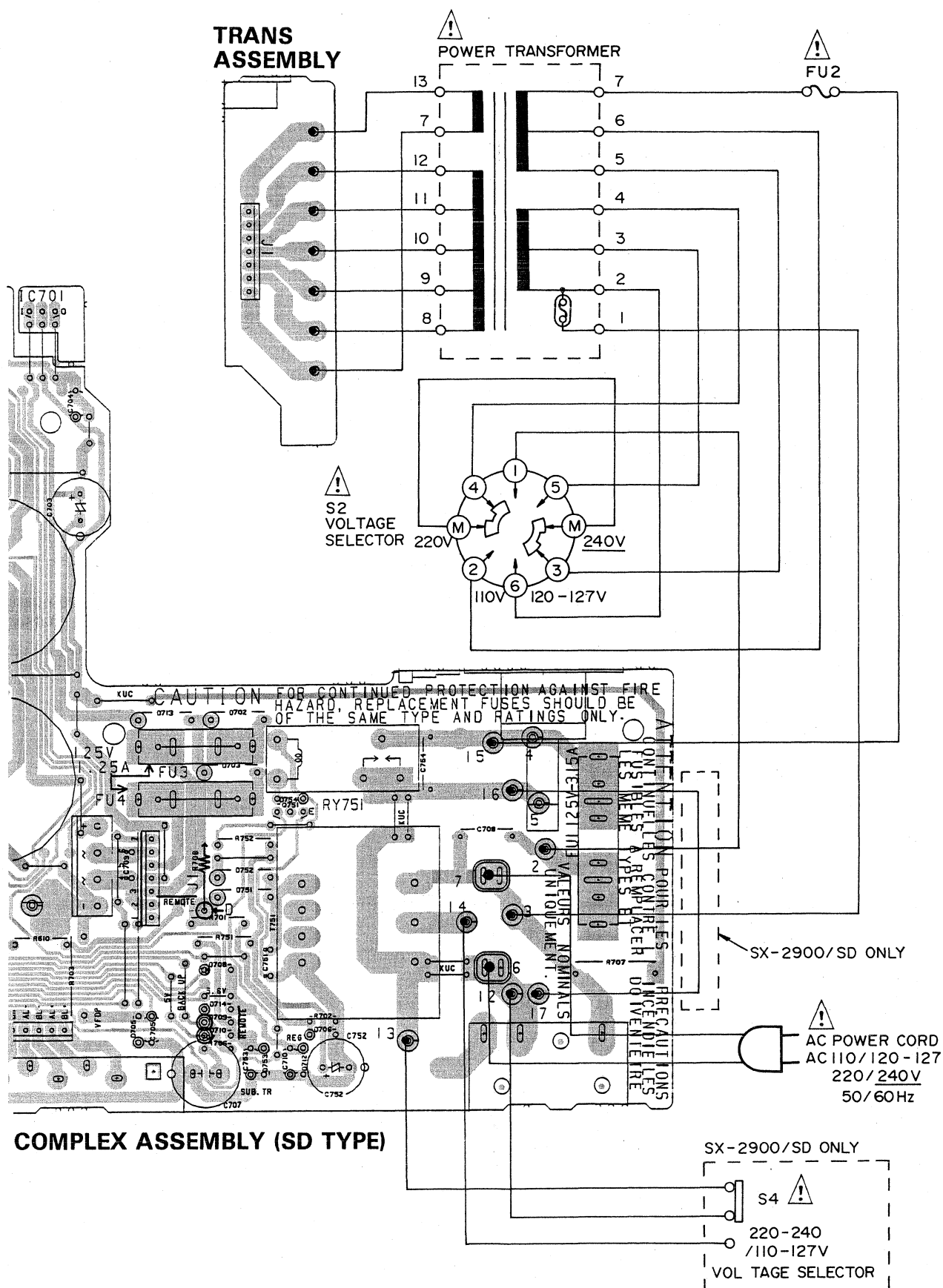
## SCHEMATIC DIAGRAM

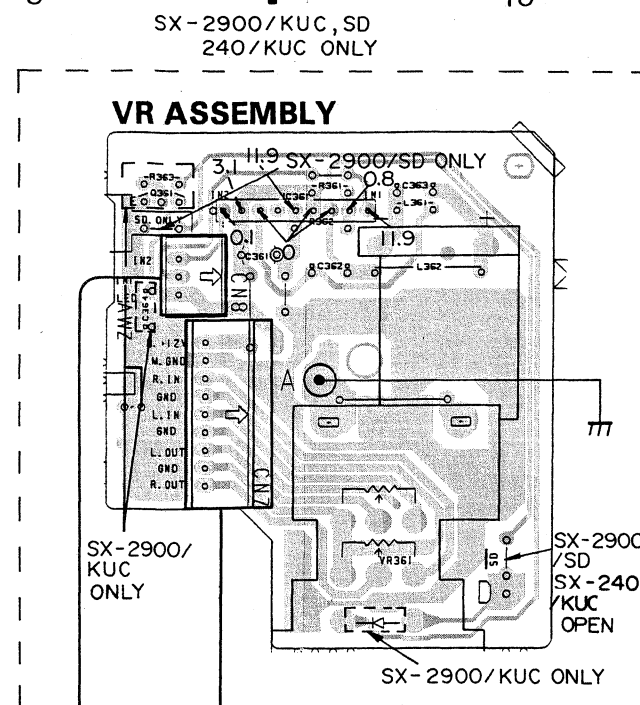
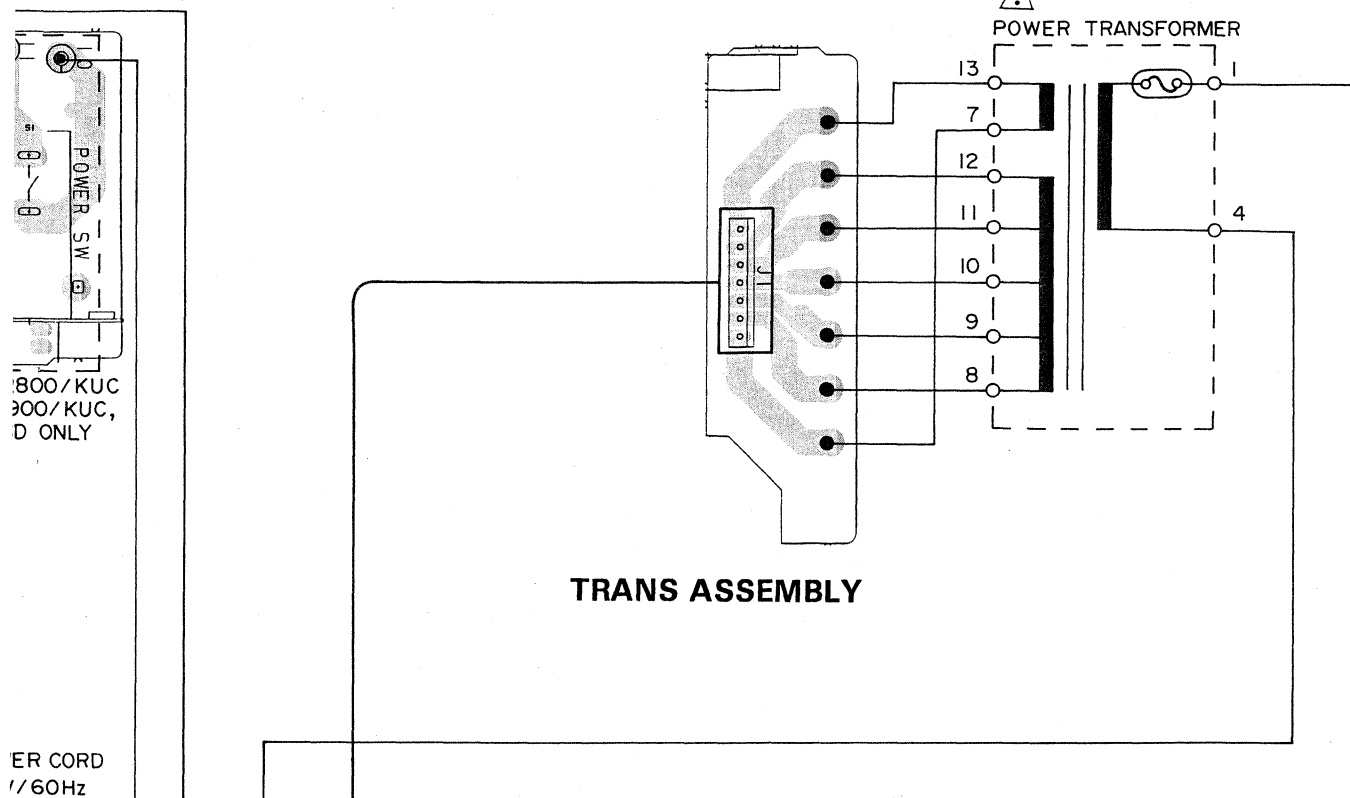
(For SX-2900/SD and SX-1900/SD types)



The underline indicates the switch position.

# 4. P.C.BOARDS CONNECTION DIAGRAM





## NOTE

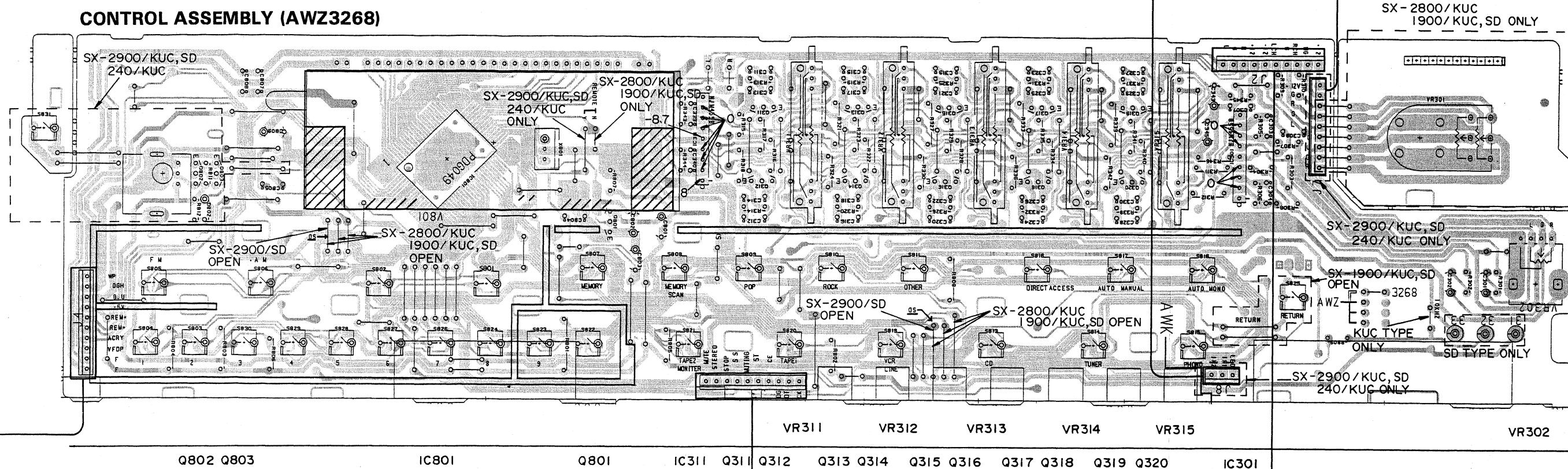
1. This P.C.B connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the following Table.

| P.C.B. pattern diagram indication | Corresponding part symbol | Part Name                |
|-----------------------------------|---------------------------|--------------------------|
| EO 0504                           |                           | Transistor               |
| Q215                              |                           | Radiator type transistor |
| D203                              |                           | Diode                    |
| R237                              |                           | Resistor                 |
| C513                              |                           | Capacitor (Polarity)     |
| C518                              |                           | Capacitor (Non-polarity) |

## Others

| P.C.B. pattern diagram indication | Part Name                                |
|-----------------------------------|------------------------------------------|
| IC                                | IC                                       |
| S                                 | Switch                                   |
| RY                                | Relay                                    |
| L                                 | Coil                                     |
| F                                 | Filter                                   |
| VR                                | Variable resistor or Semi-fixed resistor |

3. The capacitor terminal marked with @ (double circles) shows negative terminal.
4. The diode terminal marked with @ (double circles) shows cathode side.
5. The transistor terminal to which E is affixed shows the emitter.









## 5. P.C.B 's PARTS LIST

### NOTES:

- Parts without part number cannot be supplied.
- Parts marked by "●" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.
- The  $\Delta$  mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- When ordering resistors, first convert resistance values into code form as shown in the following examples.

Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

|              |                  |          |                                         |
|--------------|------------------|----------|-----------------------------------------|
| 560 $\Omega$ | $56 \times 10^1$ | 561..... | RD1/4PS $\square$ $\square$ $\square$ J |
| 47k $\Omega$ | $47 \times 10^3$ | 473..... | RD1/4PS $\square$ $\square$ $\square$ J |
| 0.5 $\Omega$ | 0R5.....         |          | RN2H $\square$ $\square$ $\square$ K    |
| 1 $\Omega$   | 010.....         |          | RS1P $\square$ $\square$ $\square$ K    |

Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors).

|                |                   |           |                                                   |
|----------------|-------------------|-----------|---------------------------------------------------|
| 5.62k $\Omega$ | $562 \times 10^1$ | 5621..... | RN1/4SR $\square$ $\square$ $\square$ $\square$ F |
|----------------|-------------------|-----------|---------------------------------------------------|

| Mark                      | No.                  | Description                                       | Parts No. | Mark                                | No.                  | Description | Parts No. |
|---------------------------|----------------------|---------------------------------------------------|-----------|-------------------------------------|----------------------|-------------|-----------|
| <b>SP SWITCH ASSEMBLY</b> |                      |                                                   |           | <b>OTHERS</b>                       |                      |             |           |
| <b>SWITCH</b>             |                      |                                                   |           | CN7                                 | CONNECTOR(9P)        | KPC9        |           |
| S570                      | PUSH SWITCH          | SUJ5LXYS                                          |           | CN8                                 | JUMPER CONNECTOR 3-P | KPC3        |           |
| <b>CAPACITOR</b>          |                      |                                                   |           | <b>◎ COMPLEX ASSEMBLY (AWZ3267)</b> |                      |             |           |
| C571                      | ELECTR.CAPACITOR     | CEAS010M50                                        |           | <b>SEMICONDUCTORS</b>               |                      |             |           |
| <b>RESISTORS</b>          |                      |                                                   |           | IC111                               | AM/FM IC             | LA1265S     |           |
| R570, 571                 | METAL OXIDE RESISTOR | RS1PMF331J                                        |           | IC131                               | PLL IC               | LM7001      |           |
| <b>OTHERS</b>             |                      |                                                   |           | IC151                               | MPX IC               | AN7470P     |           |
|                           | JACK (HEAD PHONE)    | AKN1002                                           |           | IC201                               | OP-AMP IC            | RC4558DXP   |           |
| <b>VR ASSEMBLY</b>        |                      |                                                   |           | IC202                               | E-SW IC              | TC9164N     |           |
| <b>SEMICONDUCTORS</b>     |                      |                                                   |           | IC253                               | OP-AMP IC            | NJM4558S-X  |           |
| IC361                     | MECHANISM DRIVER IC  | TA7291S                                           |           | IC701                               | REGULATOR IC         | M5F78M12L   |           |
| Q361                      | TRANSISTOR           | RN1203                                            |           | Q101                                | TRANSISTOR           | 2SC2668     |           |
| <b>COILS</b>              |                      |                                                   |           | Q102, 103                           | TRANSISTOR           | RN2201      |           |
| L361, 362                 | AXIAL INDUCTOR       | LAU101K                                           |           | Q131                                | N-FET                | 2SK246      |           |
| <b>CAPACITORS</b>         |                      |                                                   |           | Q132                                | TRANSISTOR           | 2SC1740SLN  |           |
| C361                      | ELECTR.CAPACITOR     | CEAS470M50                                        |           | Q133                                | TRANSISTOR           | 2SC1740S    |           |
| C362, 363                 | CERAMIC CAPACITOR    | CKDYF473Z50                                       |           | Q151, 152                           | TRANSISTOR           | 2SC1740S    |           |
| C364                      | CERAMIC CAPACITOR    | CKDYX104M25                                       |           | Q153                                | TRANSISTOR           | 2SA933S     |           |
| <b>RESISTORS</b>          |                      |                                                   |           | Q261, 262                           | TRANSISTOR           | RN1203      |           |
| VR361                     | VARIABLE RESISTOR    | ACX1035                                           |           | Q501-504                            | TRANSISTOR           | 2SA992      |           |
|                           | Other resistors      | RD1/8PM $\square$ $\square$ $\square$ $\square$ J |           | Q513, 514                           | TRANSISTOR           | 2SC1845     |           |
|                           |                      |                                                   |           | Q521, 522                           | TRANSISTOR           | 2SA1145     |           |
|                           |                      |                                                   |           | Q523, 524                           | TRANSISTOR           | 2SC2705     |           |
|                           |                      |                                                   |           | Q541, 542                           | TRANSISTOR           | 2SC2458     |           |
|                           |                      |                                                   |           | Q551, 552                           | TRANSISTOR           | 2SC3298     |           |
|                           |                      |                                                   |           | Q553, 554                           | TRANSISTOR           | 2SA1306     |           |
|                           |                      |                                                   |           | Q601, 602                           | TRANSISTOR           | 2SC2458     |           |
|                           |                      |                                                   |           | Q603                                | TRANSISTOR           | 2SA1048     |           |
|                           |                      |                                                   |           | Q604                                | TRANSISTOR           | 2SC2240     |           |

| Mark | No.       | Description | Parts No.  |
|------|-----------|-------------|------------|
|      | Q605      | TRANSISTOR  | RN1203     |
|      | Q606      | TRANSISTOR  | RN1201     |
|      | Q621, 622 | TRANSISTOR  | 2SC2240    |
|      | Q751      | TRANSISTOR  | RN1201     |
|      | Q752      | TRANSISTOR  | 2SC2458    |
|      | D111-115  | DIODE       | 1SS252     |
|      | D513, 514 | DIODE       | HSS104-02  |
|      | D521-524  | DIODE       | HSS104-02  |
|      | D601      | ZENER DIODE | HZS12AL    |
|      | D621-624  | DIODE       | HSS104-02  |
|      | D701      | DIODE       | 4D4B44     |
|      | D702, 703 | DIODE       | 1SR139-400 |
|      | D704      | ZENER DIODE | HZS12AL    |
|      | D705      | ZENER DIODE | HZS24-2L   |
|      | D706      | ZENER DIODE | HZS6B2L    |
|      | D708-710  | DIODE       | HSS104-02  |
|      | D711      | ZENER DIODE | HZS7B2L    |
|      | D712      | ZENER DIODE | HZS6B2L    |
|      | D713      | DIODE       | 1SR139-400 |
|      | D714      | DIODE       | HSS104-02  |
|      | D751, 752 | DIODE       | 1SR139-400 |
|      | D753      | ZENER DIODE | HZS6A2L    |
|      | D754, 757 | DIODE       | HSS104-02  |

**RELAYS**

|  |       |       |         |
|--|-------|-------|---------|
|  | RY561 | RELAY | ASR-112 |
|  | RY751 | RELAY | ASR1027 |

**COILS & TRANSFORMER**

|  |           |                   |         |
|--|-----------|-------------------|---------|
|  | F101, 102 | CERAMIC FILTER    | ATF-126 |
|  | F111      | CERAMIC FILTER    | ATF-208 |
|  | L111      | COIL              | ATE-079 |
|  | L131      | AXIAL INDUCTOR    | LAU2R2M |
|  | L561, 562 | COIL              | ATH1004 |
|  | T751      | POWER TRANSFORMER | ATT1011 |

**CAPACITORS**

|  |           |                   |             |
|--|-----------|-------------------|-------------|
|  | C101      | CERAMIC CAPACITOR | ACG1021     |
|  | C103, 104 | CERAMIC CAPACITOR | ACG1021     |
|  | C105, 106 | CERAMIC CAPACITOR | CKDYF223Z50 |
|  | C107      | CERAMIC CAPACITOR | CKDYF473Z50 |
|  | C108      | CERAMIC CAPACITOR | CKDYF102Z50 |
|  | C109      | CERAMIC CAPACITOR | CKDYX104M25 |
|  | C111, 112 | CERAMIC CAPACITOR | CKDYF223Z50 |
|  | C113      | ELECTR.CAPACITOR  | CEAS330M16  |
|  | C114      | CERAMIC CAPACITOR | ACG1021     |
|  | C115      | CERAMIC CAPACITOR | CKDYF103Z50 |
|  | C116      | ELECTR.CAPACITOR  | CEAS010M50  |
|  | C117      | CERAMIC CAPACITOR | ACG1018     |
|  | C118      | CERAMIC CAPACITOR | CKDYF103Z50 |
|  | C119      | ELECTR.CAPACITOR  | CEAS100M50  |
|  | C120      | ELECTR.CAPACITOR  | CEAS2R2M50  |

| Mark | No.       | Description          | Parts No.    |
|------|-----------|----------------------|--------------|
|      | C121      | CERAMIC CAPACITOR    | CKDYF222Z50  |
|      | C122      | CERAMIC CAPACITOR    | CKDYF473Z50  |
|      | C123      | ELECTR.CAPACITOR     | CEAS4R7M50   |
|      | C124      | ELECTR.CAPACITOR     | CEAS470M10   |
|      | C125      | CERAMIC CAPACITOR    | ACG1021      |
|      | C131, 132 | CERAMIC CAPACITOR    | CCDCH150J50  |
|      | C133      | CERAMIC CAPACITOR    | ACG1021      |
|      | C134      | CERAMIC CAPACITOR    | CKDYF103Z50  |
|      | C135      | CERAMIC CAPACITOR    | ACG1016      |
|      | C136      | ELECTR.CAPACITOR     | CEAS330M16   |
|      | C137      | AUDIO FILM CAPACITOR | CFTXA224J50  |
|      | C138      | CERAMIC CAPACITOR    | ACG1021      |
|      | C140      | ELECTR.CAPACITOR     | CEAS470M16   |
|      | C141      | CERAMIC CAPACITOR    | CKDYF473Z50  |
|      | C151      | ELECTR.CAPACITOR     | CEANP4R7M35  |
|      | C152      | CERAMIC CAPACITOR    | CKDYF473Z50  |
|      | C153, 154 | MYLOR FILM CAPACITOR | CQMA152J50   |
|      | C155, 156 | ELECTR.CAPACITOR     | CEAS4R7M50   |
|      | C157, 158 | CERAMIC CAPACITOR    | CKDYB182K50  |
|      | C159      | ELECTR.CAPACITOR     | CEAS470M16   |
|      | C160      | CERAMIC CAPACITOR    | ACG1021      |
|      | C161      | ELECTR.CAPACITOR     | CEASR22M50   |
|      | C162      | ELECTROLYTIC CAPACIT | CEAS1R5M50   |
|      | C163      | ELECTR.CAPACITOR     | CEAS3R3M50   |
|      | C164      | CAPACITOR            | ACE1039      |
|      | C201      | ELECTR.CAPACITOR     | CEAS010M50   |
|      | C231, 232 | ELECTR.CAPACITOR     | CEAS100M50   |
|      | C233, 234 | CERAMIC CAPACITOR    | CCCSL221J50  |
|      | C235, 236 | ELECTR.CAPACITOR     | CEAS470M10   |
|      | C237, 238 | MYLOR FILM CAPACITOR | CQMA242J50   |
|      | C239, 240 | MYLOR FILM CAPACITOR | CQMA822K50   |
|      | C241, 242 | ELECTR.CAPACITOR     | CEAS2R2M50   |
|      | C243-246  | CERAMIC CAPACITOR    | CKDYF103Z50  |
|      | C247, 248 | CERAMIC CAPACITOR    | CKCYB331K50  |
|      | C249      | CERAMIC CAPACITOR    | CKCYB471K50  |
|      | C251, 252 | ELECTR.CAPACITOR     | CEAS2R2M50   |
|      | C253, 254 | ELECTR.CAPACITOR     | CEAS4R7M50   |
|      | C256, 257 | CERAMIC CAPACITOR    | CKDYF103Z50  |
|      | C501, 502 | ELECTR.CAPACITOR     | CEAS2R2M50   |
|      | C503, 504 | CERAMIC CAPACITOR    | CKDYB102K50  |
|      | C505, 506 | CERAMIC CAPACITOR    | CKDYB681K50  |
|      | C508      | ELECTR.CAPACITOR     | CEAS101M16   |
|      | C521, 522 | ELECTR.CAPACITOR     | CEAS220M16   |
|      | C523, 524 | CERAMIC CAPACITOR    | CCCSL120K500 |
|      | C525, 526 | CERAMIC CAPACITOR    | CCCSL050C500 |

| Mark             | No.       | Description          | Parts No.    |
|------------------|-----------|----------------------|--------------|
|                  | C551-554  | CERAMIC CAPACITOR    | CCCSL101K500 |
|                  | C561, 562 | MYLOR FILM CAPACITOR | CQMA473K50   |
|                  | C601      | ELECTROLYTIC CAPACIT | CEAS471M6    |
|                  | C602      | CERAMIC CAPACITOR    | CKDYF103Z50  |
|                  | C603      | ELECTR.CAPACITOR     | CEAS101M16   |
|                  | C604      | ELECTROLYTIC CAPACIT | CEAS2R2M100  |
|                  | C605      | ELECTR.CAPACITOR     | CEAS4R7M50   |
|                  | C621, 622 | ELECTR.CAPACITOR     | CEAS2R2M50   |
|                  | C701, 702 | ELECTROLYTIC CAPACIT | ACH1137      |
|                  | C703      | ELECTROLYTIC CAPACIT | CEAS102M35   |
|                  | C704      | ELECTR.CAPACITOR     | CEAS100M50   |
|                  | C705      | ELECTROLYTIC CAPACIT | CEAS470M35   |
|                  | C706      | ELECTR.CAPACITOR     | CEAS101M25   |
|                  | C707      | CEA (47000/5.5V)     | ACH1037      |
| △                | C708      | CKA (0.01/AC400V)    | ACG1002      |
|                  | C709      | CKA (0.01/AC250V)    | ACG1005      |
|                  | C710      | ELECTR.CAPACITOR     | CEAS470M10   |
|                  | C751      | CKA (0.01/AC250V)    | ACG1005      |
|                  | C752      | ELECTROLYTIC CAPACIT | CEAS471M25   |
|                  | C753      | ELECTR.CAPACITOR     | CEAS470M10   |
| △                | C754      | CKA (0.01/AC400V)    | ACG1002      |
| <b>RESISTORS</b> |           |                      |              |
|                  | VR151     | VR (4.7K)            | ACP1024      |
|                  | R521, 522 | CARBON FILM RESISTOR | RD1/4PM432J  |
|                  | R523      | CARBON FILM RESISTOR | RD1/4PM104J  |
| △                | R527, 528 | CARBON FILM RESISTOR | RD1/4PMF680J |
|                  | R531, 532 | CARBON FILM RESISTER | RD1/4PM152J  |
| △                | R535, 536 | FUSLIBLE RESISTOR    | RFA1/4PS101J |
| △                | R551-554  | FUSLIBLE RESISTOR    | RFA1/4PS101J |
|                  | R555-558  | CARBON FILM RESISTOR | RD1/4PMF101J |
| △                | R561, 562 | RESISTOR (0.33, 5W)  | ACN-139      |
| △                | R563, 564 | CARBON FILM RESISTOR | RD1/4PMF100J |
|                  | R565, 566 | CARBON FILM RESISTOR | RD1/4PMF100J |
| △                | R608      | METAL OXIDE RESISTOR | RS2LMF332J   |
| △                | R610      | METAL OXIDE RESISTOR | RS2LMF272J   |
|                  | R625      | CARBON FILM RESISTOR | RD1/4PMF101J |

| Mark          | No.  | Description               | Parts No.   |
|---------------|------|---------------------------|-------------|
|               | R701 | CARBON FILM RESISTOR      | RD1/4PM302J |
| △             | R703 | METAL OXIDE RESISTOR      | RS2LMF182J  |
|               | R707 | RESISTOR (2.2M, 1/2W)     | ACN-209     |
| △             | R715 | METAL OXIDE RESISTOR      | RS1LMF151J  |
|               | R751 | CARBON FILM RESISTOR      | RD1/2PM821J |
|               | R752 | CARBON FILM RESISTOR      | RD1/2PM470J |
|               |      | Other resistors           | RD1/8PM□□□J |
| <b>OTHERS</b> |      |                           |             |
|               |      | ANTENNA TERMINAL 4-P      | AKA1009     |
|               |      | PIN JACK (4P)             | AKB1101     |
|               |      | PIN JACK (6P)             | AKB1121     |
|               |      | SPEAKER TERMINAL 8-P      | AKE-111     |
|               |      | JACK (2P)                 | AKN1006     |
| △             |      | AC OUTLET (1P)            | AKP1054     |
|               |      | 2 SERIAL F.E. MODULE ASSY | AXQ1002     |
|               |      | AM RF TUNING BLOCK        | AXX1011     |
| X131          |      | CRYSTAL RESONATOR         | ASS1005     |

**◎ CONTROL ASSEMBLY (AWZ3268)**
**SEMICONDUCTORS**

|            |                  |            |
|------------|------------------|------------|
| IC301, 311 | OP-AMP IC        | NJM4558S-X |
| IC801      | RECEIVER CONTROL | PDG049-B   |
| Q311-320   | TRANSISTOR       | 2SC1740SLN |
| Q801       | TRANSISTOR       | RN1203     |
| Q802, 803  | TRANSISTOR       | 2SC1740SLN |
| D802       | DIODE            | HSS104-02  |

**SWITCHES**

|          |        |         |
|----------|--------|---------|
| S801-811 | SWITCH | ASG1034 |
| S813-831 | SWITCH | ASG1034 |

**CAPACITORS**

|           |                      |             |
|-----------|----------------------|-------------|
| C301, 302 | ELECTR.CAPACITOR     | CEAS470M50  |
| C303, 304 | CERAMIC CAPACITOR    | CCCSL220J50 |
| C307, 308 | CERAMIC CAPACITOR    | CKDYF103Z50 |
| C311, 312 | AUDIO FILM CAPADITOR | CFTXA334J50 |
| C313, 314 | MYLOR FILM CAPACITOR | CQMA393K50  |

| Mark | No.       | Description             | Parts No.   |
|------|-----------|-------------------------|-------------|
|      | C315, 316 | AUDIO FILM<br>CAPACITOR | CFTXA124J50 |
|      | C317, 318 | MYLOR FILM<br>CAPACITOR | CQMA103K50  |
|      | C319, 320 | MYLOR FILM<br>CAPACITOR | CQMA393K50  |
|      | C321, 322 | MYLOR FILM<br>CAPACITOR | CQMA392K50  |
|      | C323, 324 | MYLOR FILM<br>CAPACITOR | CQMA153J50  |
|      | C325, 326 | CERAMIC CAPACITOR       | CKDYB102K50 |
|      | C327, 328 | MYLOR FILM<br>CAPACITOR | CQMA332K50  |
|      | C329, 330 | CERAMIC CAPACITOR       | CKDYB471K50 |
|      | C339, 340 | CERAMIC CAPACITOR       | CCCSL101J50 |
|      | C343, 345 | ELECTR. CAPACITOR       | CEAS101M16  |
|      | C801      | ELECTROLYTIC<br>CAPACIT | CEJA4R7M50  |
|      | C802      | ELECTROLYTIC<br>CAPACIT | CEJA0R1M50  |
|      | C803      | ELECTR. CAPACITOR       | CEJA221M6   |
|      | C804      | CERAMIC CAPACITOR       | CKDYF103Z50 |
|      | C805      | CERAMIC CAPACITOR       | CKDYF473Z50 |
|      | C807, 808 | CERAMIC CAPACITOR       | CKDYF473Z50 |
|      | C809      | ELECTROLYTIC<br>CAPACIT | CEJA100M35  |

#### RESISTORS

|           |                    |             |
|-----------|--------------------|-------------|
| VR302     | VARIABLE (500k-X1) | ACS1046     |
| VR311-315 | VR                 | ACU1020     |
|           | Other resistors    | RD1/8PM□□□J |

#### OTHERS

|      |                         |         |
|------|-------------------------|---------|
|      | FL SPACER               | AEB1120 |
|      | REMOTE RECEIVER<br>UNIT | AXX1010 |
| V801 | FL TUBE                 | AAV1090 |
| X801 | CERAMIC<br>OSCILLATOR   | ASS1022 |

#### TRANS ASSEMBLY

No parts are supplied with the TRANS ASSEMBLY.

## 6. ADJUSTMENTS

### TUNER SECTION

- Set the volume to "MIN".
- Set the FUNCTION to "TUNER".

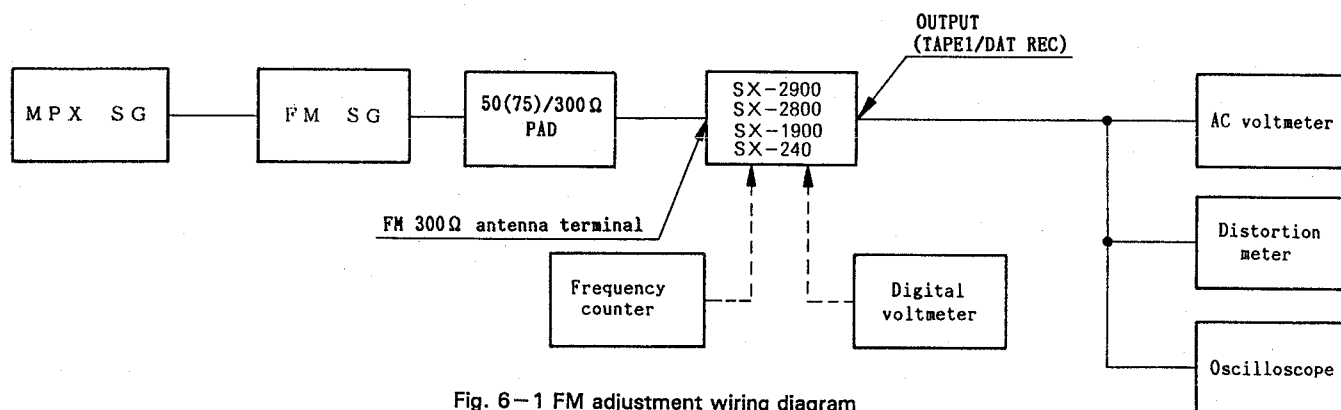


Fig. 6-1 FM adjustment wiring diagram

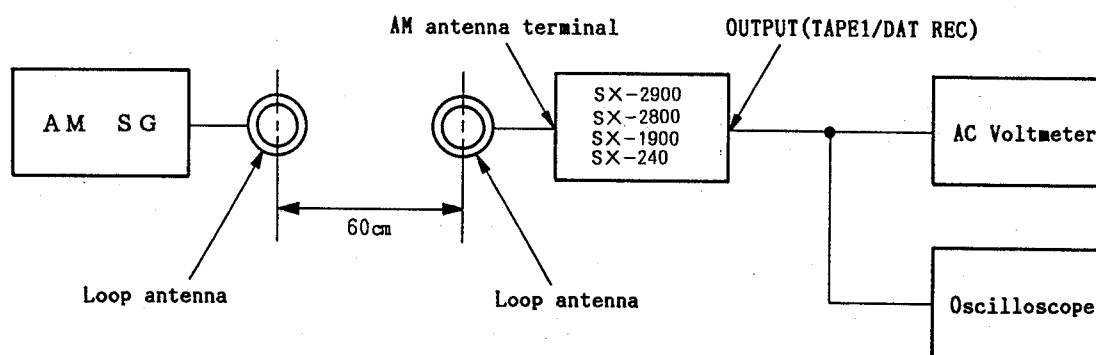


Fig. 6-2 AM adjustment wiring diagram

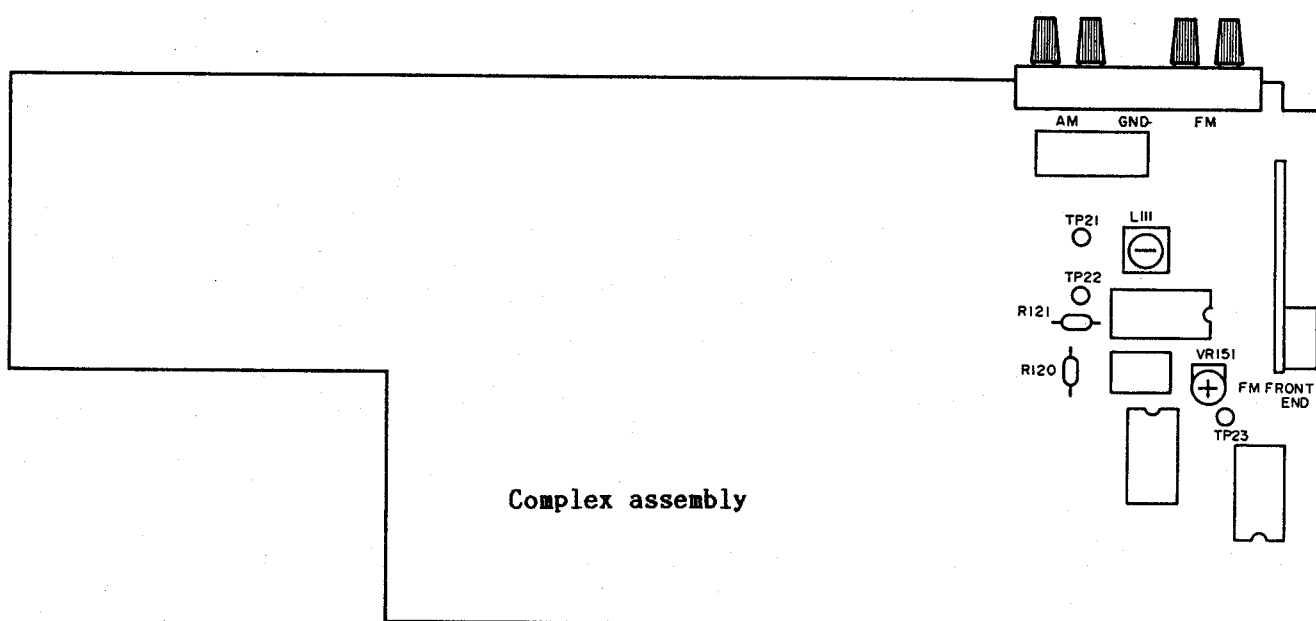


Fig. 6-3 Adjustment locations

## FM TUNER SECTION ADJUSTMENT

- For connections and points to be adjusted, refer to Fig. 6-1 and 6-3.
- Set the BAND selector to "FM".
- Perform VCO adjustment after turning the power ON, two minutes or more.

*Note: Stereo modulation: Main 1kHz L+R  $\pm 68.25$ Hz dev.  
Pilot 19kHz  $\pm 6.75$ kHz dev.*

| Step No. | Adjustment Title                                             | FM SG (1kHz $\pm 75$ kHz dev.) |                    | SX-2900,2800<br>1900,240<br>Reception Fre-<br>quency Display | Adjustment          |                                                                                                             |
|----------|--------------------------------------------------------------|--------------------------------|--------------------|--------------------------------------------------------------|---------------------|-------------------------------------------------------------------------------------------------------------|
|          |                                                              | Frequency (MHz)                | Level (dB $\mu$ V) |                                                              | Adjustment Location | Specifications                                                                                              |
| 1        | Detector coil T-meter adjustment<br>(MONO)                   | 98.0                           | 60                 | 98.0MHz                                                      | L111                | Adjust so that the DC voltage between TP21 and TP22 is 0 $\pm 50$ mv.                                       |
| 2        | Checking front end sensitivity<br>(MONO)                     | 98.0                           | —                  | 98.0MHz                                                      | —                   | Check that the practical sensitivity is 10 dB $\mu$ V or less.                                              |
| 3        | VCO adjustment<br>(MONO)                                     | 98.0<br>(No modulation)        | 60                 | 98.0MHz                                                      | VR151               | Adjust so that the frequency between TP23 and GND is 76 $\pm 0.5$ kHz.                                      |
| 4        | Checking stereo distortion<br>(STEREO)                       | 98.0                           | 60                 | 98.0MHz                                                      | —                   | Check that the stereo distortion is 1.5% or less.                                                           |
|          |                                                              | Stereo modulation (Note)       |                    |                                                              |                     |                                                                                                             |
| 5        | Checking separation<br>(STEREO)                              | 98.0                           | 60                 | 98.0MHz                                                      | —                   | Check that the separation is 25 dB or more (at 1kHz).                                                       |
| 6        | Check lighting level of<br>TUNED and STEREO IND.<br>(STEREO) | 98.0                           | —                  | 98.0MHz                                                      | R121<br>* 1         | FOR TUNED IND.<br>24 dB $\mu$ V $\pm 15$ dB.<br>FOR STEREO IND. $\pm 3$ dB of<br>TUNED IND. lighting level. |

\*1. Remove the R121 (11k $\Omega$ ) from the complex assembly if the Tuning indicator fails of light up.

## AM TUNER SECTION ADJUSTMENT

- For connections and points to be adjusted, refer to Fig. 6-2 and 6-3.
- Set the BAND selector to "AM"

| Step No. | Adjustment Title                      | AM SG                      |       | SX-2900,2800,<br>1900,240<br>Reception Fre-<br>quency Display | Adjustment          |                                                                  |
|----------|---------------------------------------|----------------------------|-------|---------------------------------------------------------------|---------------------|------------------------------------------------------------------|
|          |                                       | Frequency                  | Level |                                                               | Adjustment Location | Specifications                                                   |
| 1        | Checking front end sensitivity        | 1000kHz<br>(Modulation ON) | —     | 1000kHz                                                       | —                   | Check that the practical sensitivity is 75 dB $\mu$ V/m or less. |
| 2        | Check lighting level of<br>TUNED IND. | 1000kHz                    | —     | 1000kHz                                                       | R120<br>* 2         | 65dB $\mu$ V/m or less                                           |

\*2. Remove the R120 (5.6k $\Omega$ ) from the complex assembly if the Tuning indicator fails of light up.

## 6. RÉGLAGE

### SECTION TUNER

- Régler le volume sur "MIN".
- Régler le sélecteur de fonction sur "TUNER".

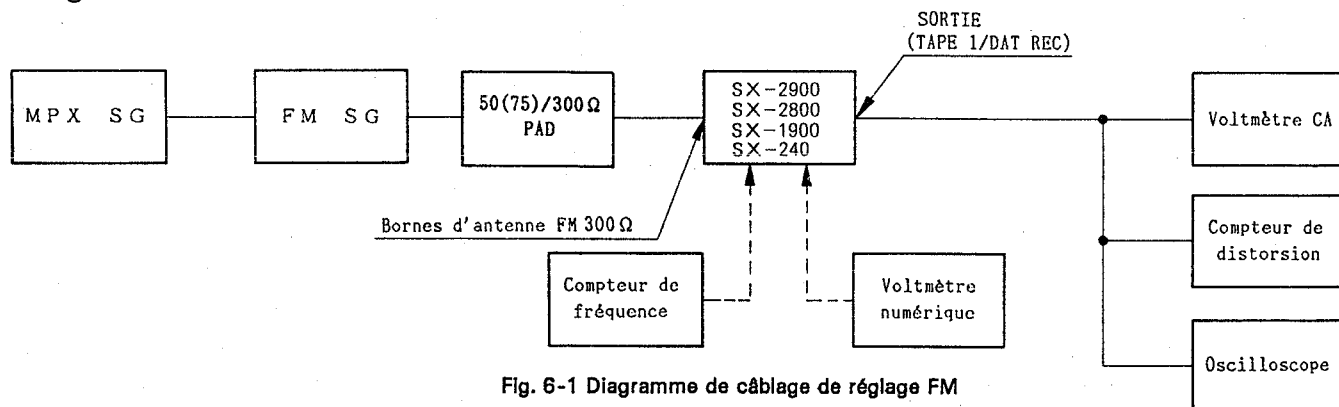


Fig. 6-1 Diagramme de câblage de réglage FM

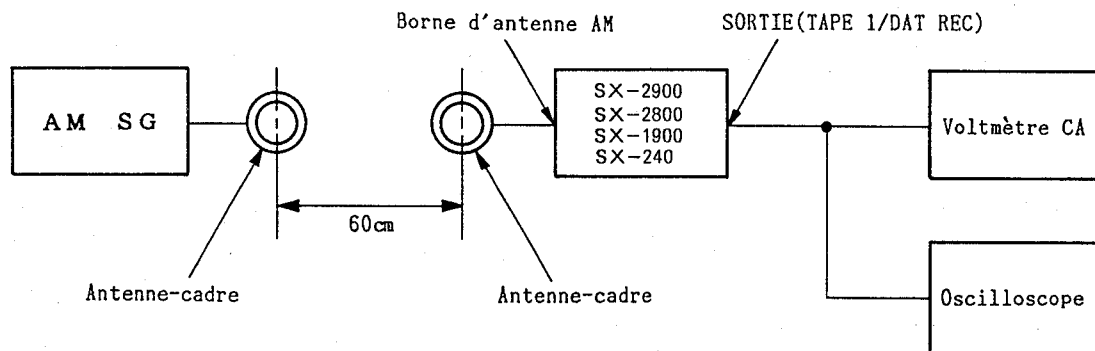


Fig. 6-2 Diagramme de câblage de réglage AM

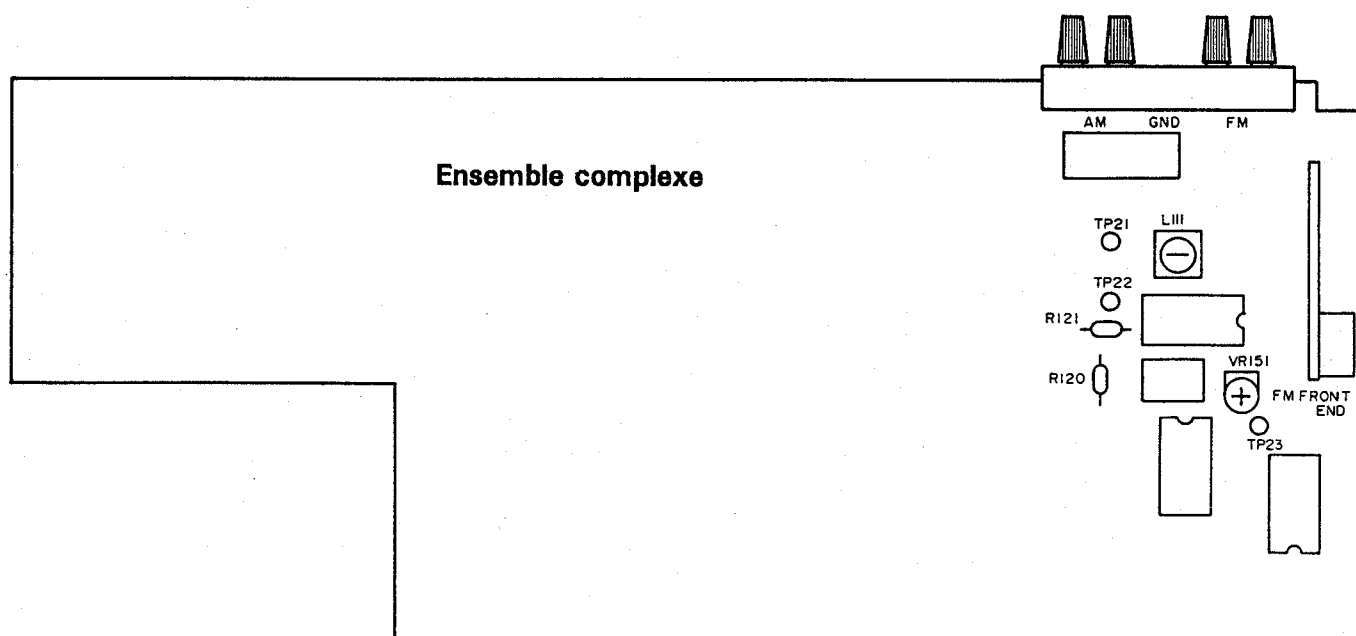


Fig. 6-3 Emplacements de réglage

## RÉGLAGE DE SECTION TUNER FM

- Se reporter aux figures 6-1 et 6-3 pour les connexions et points à régler.
- Placer le sélecteur de BANDE sur "FM".
- Effectuer le réglage d'oscillateur commandé par variation de tension (VCO) deux minutes ou plus après la mise sous tension (ON).

*Note: Modulation stéréo: Principal 1 kHz G+D  $\pm 68,25$  Hz d'écart  
Pilote 19 kHz  $\pm 6,75$  kHz d'écart*

| Etape<br>N° | Désignation de réglage                                                              | FM SG (1 kHz $\pm$ 75 kHz d'écart) |                       | SX-2900, 2800<br>1900, 240<br>Affichage de<br>fréquence de<br>réception | Réglage                   |                                                                                                                                  |
|-------------|-------------------------------------------------------------------------------------|------------------------------------|-----------------------|-------------------------------------------------------------------------|---------------------------|----------------------------------------------------------------------------------------------------------------------------------|
|             |                                                                                     | Fréquence<br>(MHz)                 | Niveau<br>(dB $\mu$ ) |                                                                         | Emplacement<br>de réglage | Spécifications                                                                                                                   |
| 1           | Réglage de compteur T de<br>bobine de détecteur<br>(MONO)                           | 98,0                               | 60                    | 98,0 MHz                                                                | L111                      | Régler pour que la tension CC<br>entre TP21 et TP22 soit de 0<br>$\pm$ 50 mV.                                                    |
| 2           | Contrôle de sensibilité<br>d'extrémité avant<br>(MONO)                              | 98,0                               | —                     | 98,0 MHz                                                                | —                         | Vérifier que la sensibilité<br>pratique est de 10 dB $\mu$ V ou<br>moins.                                                        |
| 3           | Réglage VCO<br>(MONO)                                                               | 98,0 (Sans<br>modulation)          | 60                    | 98,0 MHz                                                                | VR151                     | Régler pour que la fréquence<br>entre TP23 et la terre soit de 76<br>$\pm$ 0,5 kHz.                                              |
| 4           | Contrôle de distorsion<br>stéréo<br>(STEREO)                                        | 98,0                               | 60                    | 98,0 MHz                                                                | —                         | Vérifier que la distorsion stéréo<br>est 1,5 % ou moins.                                                                         |
|             |                                                                                     | Modulation stéréo (Note)           |                       |                                                                         |                           |                                                                                                                                  |
| 5           | Contrôle de séparation<br>(STEREO)                                                  | 98,0                               | 60                    | 98,0 MHz                                                                | —                         | Vérifier que la séparation est 25<br>dB ou plus (à 1 kHz).                                                                       |
| 6           | Contrôler l'intensité<br>d'éclairage du témoin<br>d'ACCORD et de STEREO<br>(STEREO) | 98,0                               | —                     | 98,0 MHz                                                                | R121<br>*1                | Pour témoin d'ACCORD 24 dBV<br>$\pm$ 15 dB<br>Pour témoin STEREO $\pm$ 3 dB de<br>l'intensité d'éclairage du témoin<br>d'ACCORD. |

\* 1. Déposer le R121 (11 k $\Omega$ ) de l'ensemble complexe si le témoin d'accord manque de s'allumer.

## REGLAGE DE SECTION TUNER AM

- Se reporter aux figures 6-2 et 6-3 pour les connexions et points à régler.
- Placer le sélecteur de BANDE sur "AM"

| Etape N° | Désignation de réglage                               | AM SG                         |        | SX-2900, 2800, 1900, 240<br>Affichage de fréquence de réception | Réglage                |                                                          |
|----------|------------------------------------------------------|-------------------------------|--------|-----------------------------------------------------------------|------------------------|----------------------------------------------------------|
|          |                                                      | Fréquence                     | Niveau |                                                                 | Emplacement de réglage | Spécifications                                           |
| 1        | Contrôle de sensibilité d'extrémité avant            | 1000 kHz (Modulation activée) | —      | 1000 kHz                                                        | —                      | Vérifier que la sensibilité pratique est 75 dB ou moins. |
| 2        | Contrôler l'intensité d'éclairage du témoin d'ACCORD | 1000 kHz                      | —      | 1000 kHz                                                        | R120 *2                | 65 dB $\mu$ V/m ou moins                                 |

\* 2. Déposer le R120 (5,6 k $\Omega$ ) de l'ensemble complexe si le témoin d'accord manque de s'allumer

## 6. AJUSTE

### SECCIÓN DEL SINTONIZADOR

- Ajuste el volumen a la posición "MIN".
- Ajuste la función (FUNCTION) a la posición "TUNER".

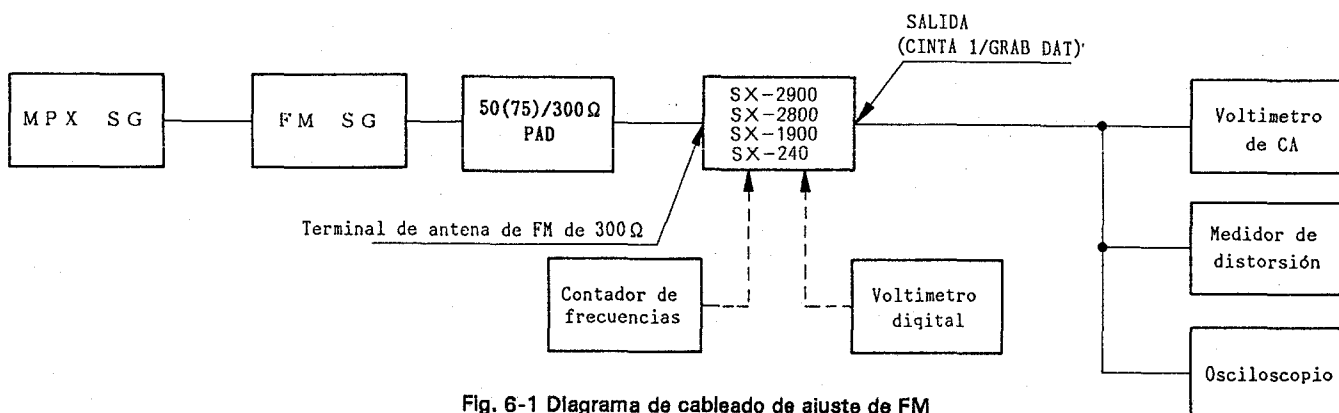


Fig. 6-1 Diagrama de cableado de ajuste de FM

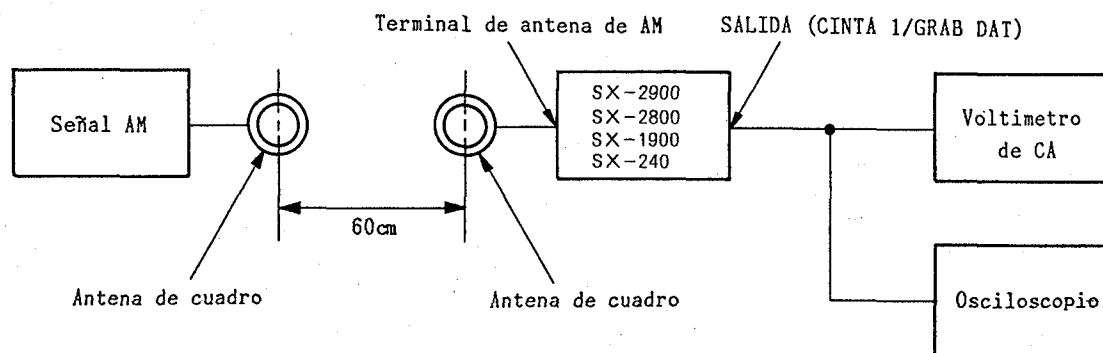


Fig. 6-2 Diagrama de cableado de ajuste de AM

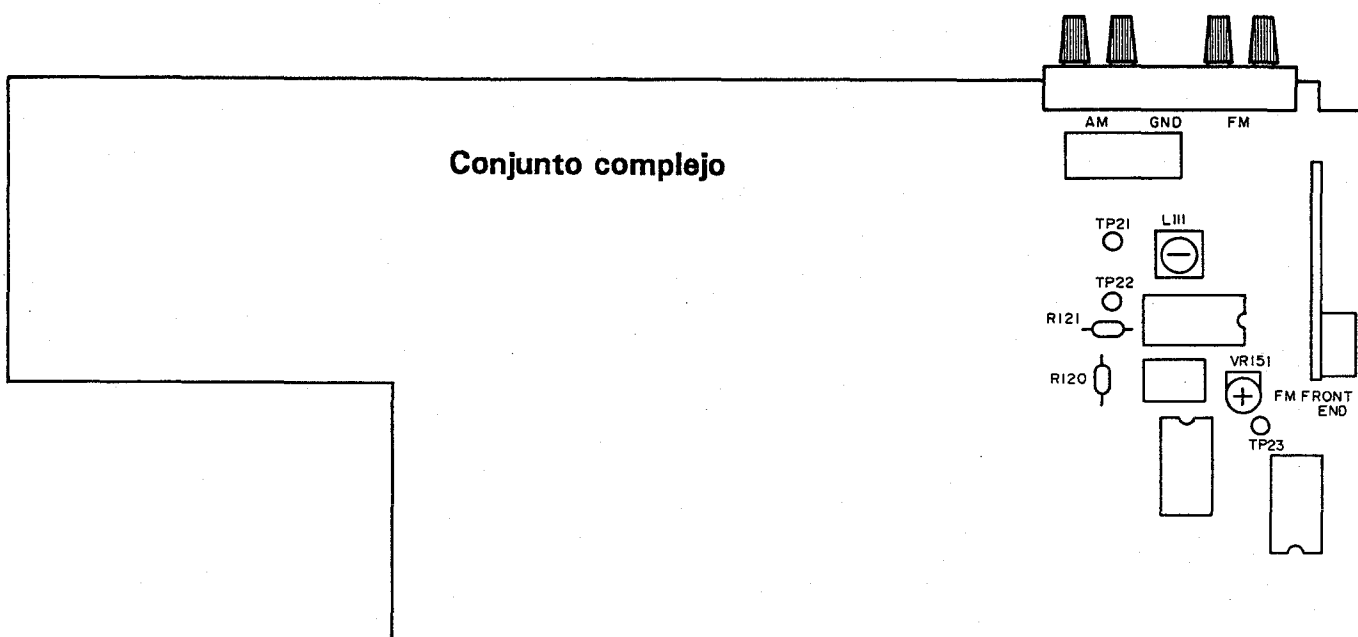


Fig. 6-3 Puntos de ajustes

## AJUSTE DE LA SECCIÓN DEL SINTONIZADOR DE FM

- Para las conexiones y puntos a ser ajustados, refiérase a las figuras 6-1 y 6-3.
- Ajuste el selector BAND a "FM".
- Realice el ajuste VCO luego de los dos minutos o más de haber encendido la unidad.

*Nota: Modulación estereofónica: Principal 1 kHz I+D  $\pm$  68,25 Hz de desviación.  
Señal piloto 19 kHz  $\pm$  6,75 kHz de desviación.*

| Paso | Título de ajuste                                                   | Señal de FM<br>(1 kHz $\pm$ 76 kHz de desviación) |                      | Presentación de<br>frecuencia de<br>recepción del<br>SX-2900, 2800,<br>1900, 240 | Ajuste             |                                                                                                                 |
|------|--------------------------------------------------------------------|---------------------------------------------------|----------------------|----------------------------------------------------------------------------------|--------------------|-----------------------------------------------------------------------------------------------------------------|
|      |                                                                    | Frecuencia<br>(MHz)                               | Nivel<br>(dB $\mu$ ) |                                                                                  | Punto de<br>ajuste | Especificaciones                                                                                                |
| 1    | Ajuste del medidor T de la bobina de detección (MONOFÓNICO)        | 98,0                                              | 60                   | 98,0 MHz                                                                         | L111               | Ajuste de modo que el voltaje de CC entre los terminales TP21 y TP22 sea 0 $\pm$ 50 mV.                         |
| 2    | Comprobación de sensibilidad de sección de sintonía (MONOFÓNICO)   | 98,0                                              | —                    | 98,0 MHz                                                                         | —                  | Compruebe que la sensibilidad real sea de 10 dB $\mu$ V o menos.                                                |
| 3    | Ajuste de VCO (MONOFÓNICO)                                         | 98,0 (Sin modulación)                             | 60                   | 98,0 MHz                                                                         | VR151              | Ajuste de modo que la frecuencia entre el terminal TP23 y masa (GND) sea 76 $\pm$ 0,5 kHz.                      |
| 4    | Comprobación de distorsión estereofónica (ESTÉREO)                 | 98,0                                              | 60                   | 98,0 MHz                                                                         | —                  | Compruebe que la distorsión estereofónica sea de 1,5 % o menos.                                                 |
|      |                                                                    | Modulación estereofónica (Nota)                   |                      |                                                                                  |                    |                                                                                                                 |
| 5    | Comprobación de separación (ESTÉREO)                               | 98,0                                              | 60                   | 98,0 MHz                                                                         | —                  | Compruebe que la separación sea de 25 dB o más (en 1 kHz).                                                      |
| 6    | Compruebe el nivel de iluminación de TUNED y STEREO IND. (ESTÉREO) | 98,0                                              | —                    | 98,0 MHz                                                                         | R121<br>*1         | Para TUNED IND. 24 dB $\mu$ V $\pm$ 15 dB<br>Para STEREO IND. $\pm$ 3 dB del nivel de iluminación de TUNED IND. |

\* 1. Si el indicador de sintonía no se enciende desconecte la resistencia R121 (11 k $\Omega$ ) del conjunto complejo.

## AJUSTE DE LA SECCIÓN DEL SINTONIZADOR DE AM

- Para las conexiones y puntos a ser ajustados, refiérase a las figuras 6-2 y 6-3.
- Ajuste el selector BAND a la posición "AM"

| Paso | Título de ajuste                                    | Señal de AM                 |            | Presentación de<br>frecuencia de<br>recepción del<br>SX-2900, 2800,<br>1900, 240 | Ajuste             |                                                                    |
|------|-----------------------------------------------------|-----------------------------|------------|----------------------------------------------------------------------------------|--------------------|--------------------------------------------------------------------|
|      |                                                     | Frecuencia                  | Modulación |                                                                                  | Punto de<br>ajuste | Especificaciones                                                   |
| 1    | Comprobación de sensibilidad de sección de sintonía | 1000 kHz<br>(Modulación ON) | —          | 1000 kHz                                                                         | —                  | Compruebe que la sensibilidad real sea de 75 dB $\mu$ B/m o menos. |
| 2    | Compruebe el nivel de iluminación de TUNED IND.     | 1000 kHz                    |            | 1000 kHz                                                                         | R120<br>*2         | 65 dB $\mu$ V/m o menos.                                           |

\* 2. Si el indicador de sintonía no se enciende desconecte la resistencia R120 (5,6 k $\Omega$ ) del conjunto complejo.

## 7. FOR SX-2900/SD, SX-2800/KUC, SX-1900/KUC, SD AND SX-240/KUC TYPES

### CONTRAST OF MISCELLANEOUS PARTS

#### NOTES:

- Parts without part number cannot be supplied.
- The  $\Delta$  mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "⊙" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

The SX-2900/SD, SX-2800/KUC, SX-1900/KUC, SD and SX-240/KUC types are the same as the SX-2900/KUC type with the exception of the following sections.

| Mark     | Symbol & Description                                           | Part No.             |                     |                      |                      |                     |                     | Remarks |
|----------|----------------------------------------------------------------|----------------------|---------------------|----------------------|----------------------|---------------------|---------------------|---------|
|          |                                                                | SX-2900/<br>KUC type | SX-2900/<br>SD type | SX-2800/<br>KUC type | SX-1900/<br>KUC type | SX-1900/<br>SD type | SX-240/<br>KUC type |         |
|          | SP SWITCH Assembly                                             | Non supply           | Non supply          | Non supply           | Non supply           | Non supply          | Non supply          | *1      |
|          | VR Assembly                                                    | Non supply           | Non supply          | .....                | .....                | .....               | Non supply          |         |
| ⊙        | COMPLEX Assembly                                               | AWZ3267              | AWZ3269             | AWZ3271              | AWZ3273              | AWZ3273             | AWZ3293             |         |
| ⊙        | CONTROL Assembly                                               | AWZ3268              | AWZ3270             | AWZ3272              | AWZ3274              | AWZ3274             | AWZ3268             |         |
| $\Delta$ | Q1, Q2 Transistor                                              | 2SC3181N             | 2SC3181N            | 2SC3181N             | 2SC3180N             | 2SC3180N            | 2SC3180N            |         |
| $\Delta$ | Q3, Q4 Transistor                                              | 2SA1264N             | 2SA1264N            | 2SA1264N             | 2SA1263N             | 2SA1263N            | 2SA1263N            |         |
| $\Delta$ | S2 Line voltage selector switch<br>(AC110V,120-127V,220V,240V) | .....                | AKX-507             | .....                | .....                | AKX-507             | .....               |         |
| $\Delta$ | S4 Line voltage selector switch<br>(AC110-127V/220V-240V)      | .....                | AKX1004             | .....                | .....                | .....               | .....               |         |
| $\Delta$ | S3 Slide switch (9k/10k)                                       | .....                | ASH-004             | .....                | .....                | ASH-004             | .....               |         |
| $\Delta$ | T1 Power transformer                                           | ATS1248              | ATS1249             | ATS1248              | ATS1118              | ATS1130             | ATS1118             |         |
| $\Delta$ | AC Power cord                                                  | ADG1057              | ADG1015             | ADG1057              | ADG1057              | ADG1015             | ADG1057             |         |
|          | R1 Resistor (750 $\Omega$ /10W, R1)                            | ACN1083              | ACN1083             | ACN1083              | .....                | .....               | .....               |         |
|          | R1 Resistor (620 $\Omega$ /10W, R1)                            | .....                | .....               | .....                | ACN1082              | ACN1082             | ACN1082             |         |
| $\Delta$ | FU1 Fuse (4A/125V)                                             | AEK-100              | .....               | AEK-100              | .....                | .....               | .....               |         |
| $\Delta$ | FU1 Fuse (3.15A/125V)                                          | .....                | .....               | .....                | AEK1004              | .....               | AEK1004             |         |
| $\Delta$ | FU1 Fuse (2A/125V)                                             | .....                | AEK-103             | .....                | .....                | .....               | .....               |         |
| $\Delta$ | FU1 Fuse (1.5A/125V)                                           | .....                | .....               | .....                | .....                | AEK-104             | .....               |         |
| $\Delta$ | FU2 Fuse (1.6A/125V)                                           | .....                | .....               | .....                | .....                | AEK-121             | .....               |         |
| $\Delta$ | FU2 Fuse (2A/125V)                                             | .....                | AEK-122             | .....                | .....                | .....               | .....               |         |
| $\Delta$ | FU3, FU4 Fuse (1.25A/125V)                                     | AEK-120              | AEK-120             | AEK-120              | .....                | .....               | .....               |         |
|          | Master VOL assembly                                            | AAB1207              | AAB1207             | .....                | .....                | .....               | AAB1207             |         |
|          | Master VOL knob                                                | .....                | .....               | AAB1134              | AAB1134              | AAB1134             | .....               |         |
|          | Tact knob                                                      | AAD1398              | AAD1398             | AAD1398              | .....                | .....               | AAD1398             |         |
|          | Insulator assembly                                             | AMR2140              | AMR2140             | .....                | .....                | .....               | .....               |         |
|          | Leg assembly                                                   | .....                | .....               | AEC1323              | AEC1323              | AEC-784             | AEC1323             |         |

| Mark | Symbol & Description                | Part No.             |                     |                      |                      |                     |                     | Remarks |
|------|-------------------------------------|----------------------|---------------------|----------------------|----------------------|---------------------|---------------------|---------|
|      |                                     | SX-2900/<br>KUC type | SX-2900/<br>SD type | SX-2800/<br>KUC type | SX-1900/<br>KUC type | SX-1900/<br>SD type | SX-240/<br>KUC type |         |
| ⚠    | Screw                               | ABA1009              | ABA1009             | .....                | .....                | .....               | .....               |         |
|      | Washer                              | ABF1017              | ABF1017             | .....                | .....                | .....               | .....               |         |
|      | Coil spring                         | ABH1064              | ABH1064             | .....                | .....                | .....               | ABH1064             |         |
|      | Front panel                         | AMB1753              | AMB1753             | AMB1752              | AMB1751              | AMB1751             | AMB1754             |         |
|      | Acrylic panel                       | AAK2092              | AAK2092             | AAK2091              | AAK2091              | AAK2091             | AAK2092             |         |
|      | Fuse holder                         | .....                | AKR-038             | .....                | .....                | AKR-038             | .....               |         |
|      | Screw (For S3, Slide switch)        | .....                | BMZ26P040FCU        | .....                | .....                | BMZ26P040FCU        | .....               |         |
|      | Nut (For VR301)                     | .....                | .....               | NK70FUC              | NK70FUC              | NK70FUC             | .....               |         |
|      | Packing case                        | AHD1985              | AHD1985             | AHD1984              | AHD1983              | AHD1983             | AHD1986             |         |
|      | Remote control unit (CU-SX021)      | AXD1186              | AXD1186             | .....                | .....                | .....               | AXD1186             |         |
|      | Operating instructions<br>(English) | ARB1286              | ARB1286             | ARB1285              | ARB1285              | ARB1285             | ARB1298             |         |
|      | Operating instructions              | .....                | ARC1240             | .....                | .....                | ARC1240             | .....               |         |

\*1: The SP SWITCH assembly of SX-2900/KUC, SD and SX-240/KUC types are identical assemblies.  
The SP SWITCH assembly of SX-1900/KUC and SX-1900/SD types are also identical assemblies.

### SP SWITCH Assembly (SX-2800/KUC, SX-1900/KUC and SD types)

The SP SWITCH Assembly (SX-2800/KUC, SX-1900/KUC and SD types) is the same as the SP SWITCH Assembly (SX-2900/KUC type) with the exception of the following sections.

| Mark | Symbol & Description | Part No.             |                      |                      |                     | Remarks |
|------|----------------------|----------------------|----------------------|----------------------|---------------------|---------|
|      |                      | SX-2900/<br>KUC type | SX-2800/<br>KUC type | SX-1900/<br>KUC type | SX-1900/<br>SD type |         |
| ⚠    | S1 Power switch      | .....                | ASG1027              | ASG1027              | ASG1027             |         |

### VR Assembly (SX-2900/SD and SX-240/KUC types)

The VR Assembly (SX-2900/SD and SX-240/KUC types) is the same as the VR Assembly (SX-2900/KUC type) with the exception of the following sections.

| Mark | Symbol & Description | Part No.         |                 |                 | Remarks |
|------|----------------------|------------------|-----------------|-----------------|---------|
|      |                      | SX-2900/KUC type | SX-2900/SD type | SX-240/KUC type |         |
|      | Q361                 | RN1203           | .....           | .....           |         |
|      | C364                 | CKDYX104M25      | .....           | .....           |         |
|      | R363                 | RD1/8PM182J      | .....           | .....           |         |
|      | VR361                | ACX1035          | ACX1035         | ACX1052         |         |

**COMPLEX Assembly (AWZ3269, AWZ3271, AWZ3273 and AWZ3293)**

The COMPLEX Assembly (AWZ3269, AWZ3271, AWZ3273 and AWZ3293) is the same as the COMPLEX Assembly (AWZ3267) with the exception of the following sections.

| Mark | Symbol & Description            | Part No.     |              |              |                |              | Remarks |
|------|---------------------------------|--------------|--------------|--------------|----------------|--------------|---------|
|      |                                 | AWZ3267      | AWZ3269      | AWZ3271      | AWZ3273        | AWZ3293      |         |
|      | Q513, Q514                      | 2SC1845      | 2SC1845      | 2SC1845      | .....          | .....        |         |
|      | Q551, Q552                      | 2SC3298      | 2SC3298      | 2SC3298      | 2SC2235        | 2SC2235      |         |
|      | Q553, Q554                      | 2SA1306      | 2SA1306      | 2SA1306      | 2SA965         | 2SA965       |         |
|      | Q621, Q622                      | 2SC2240      | 2SC2240      | 2SC2240      | .....          | .....        |         |
|      | Q751                            | RN1201       | RN1201       | .....        | .....          | RN1201       |         |
|      | Q752                            | 2SC2458      | 2SC2458      | .....        | .....          | 2SC2458      |         |
|      | D513, D514, D621 - D624,        | HSS104-02    | HSS104-02    | HSS104-02    | .....          | .....        |         |
|      | D714, D754, D757                | HSS104-02    | HSS104-02    | .....        | .....          | HSS104-02    |         |
|      | D751, D752                      | 1SR139-400   | 1SR139-400   | .....        | .....          | 1SR139-400   |         |
|      | D753                            | HZS6A2L      | HZS6A2L      | .....        | .....          | HZS6A2L      |         |
|      | RY751                           | ASR1027      | ASR1027      | .....        | .....          | ASR1027      |         |
|      | RY561                           | ASR-112      | ASR-112      | ASR-112      | ASR-111        | ASR-111      |         |
|      | T751 Power transformer          | ATT1011      | ATT1015      | .....        | .....          | ATT1011      |         |
|      | C153, C154                      | CQMA152J50   | CQMA122J50   | CQMA152J50   | CQMA122J50     | CQMA152J50   |         |
|      | C165, C166                      | .....        | .....        | .....        | *1 CKCYB331K50 | .....        |         |
|      | C621, C622                      | CEAS2R2M50   | CEAS2R2M50   | CEAS2R2M50   | .....          | .....        |         |
|      | C701, C702 (6800 $\mu$ F/DC83V) | ACH1137      | ACH1137      | ACH1137      | .....          | .....        |         |
|      | C701, C702 (4700 $\mu$ F/DC50V) | .....        | .....        | .....        | ACH-252        | ACH-252      |         |
|      | C751 (0.01 $\mu$ F/150V)        | ACG1005      | ACG1005      | .....        | .....          | ACG1005      |         |
|      | C752                            | CEAS471M25   | CEAS471M25   | .....        | .....          | CEAS471M25   |         |
|      | C753                            | CEAS470M10   | CEAS470M10   | .....        | .....          | CEAS470M10   |         |
|      | R511, R512                      | .....        | .....        | .....        | RD1/8PM272J    | RD1/8PM272J  |         |
|      | R513 - R516                     | RD1/8PM391J  | RD1/8PM391J  | RD1/8PM391J  | .....          | .....        |         |
|      | R517, R518                      | RD1/8PM103J  | RD1/8PM103J  | RD1/8PM103J  | .....          | .....        |         |
|      | R521, R522                      | RD1/4PM432J  | RD1/4PM432J  | RD1/4PM432J  | RD1/4PM562J    | RD1/4PM562J  |         |
| ⚠    | R608                            | RS2LMF332J   | RS2LMF332J   | RS2LMF332J   | RS2LMF911J     | RS2LMF911J   |         |
| ⚠    | R610                            | RS2LMF272J   | RS2LMF272J   | RS2LMF272J   | RD1/4PMF100J   | RD1/4PMF100J |         |
|      | R621, R622                      | RD1/8PM472J  | RD1/8PM472J  | RD1/8PM472J  | .....          | .....        |         |
|      | R623, R624                      | RD1/8PM153J  | RD1/8PM153J  | RD1/8PM153J  | .....          | .....        |         |
|      | R625                            | RD1/4PMF101J | RD1/4PMF101J | RD1/4PMF101J | .....          | .....        |         |
| ⚠    | R703                            | RS2LMF182J   | RS2LMF182J   | RS2LMF182J   | RS2LMF122J     | RS2LMF122J   |         |
|      | R707                            | ACN-209      | .....        | ACN-209      | *2 ACN-209     | ACN-209      |         |
|      | R708                            | .....        | RD1/4PM621J  | .....        | .....          | .....        |         |
|      | R751                            | RD1/2PM821J  | RD1/2PM821J  | .....        | .....          | RD1/2PM821J  |         |
|      | R752                            | RD1/2PM470J  | RD1/2PM470J  | .....        | .....          | RD1/2PM470J  |         |
|      | R754                            | RD1/8PM224J  | RD1/8PM224J  | .....        | .....          | RD1/8PM224J  |         |
|      | R755                            | RD1/8PM223J  | RD1/8PM223J  | .....        | .....          | RD1/8PM223J  |         |
|      | R756                            | RD1/8PM102J  | RD1/8PM102J  | .....        | .....          | RD1/8PM102J  |         |
|      | Jack (2P)                       | AKN1006      | AKN1006      | AKN1006      | .....          | AKN1006      |         |

\*1, \*2 : Cut the parts \*1 and \*2 when the specification of the SX-1900/SD applies.

**SX-2900/SD, -2800/KUC,  
-1900/KUC, SD, -240/KUC**

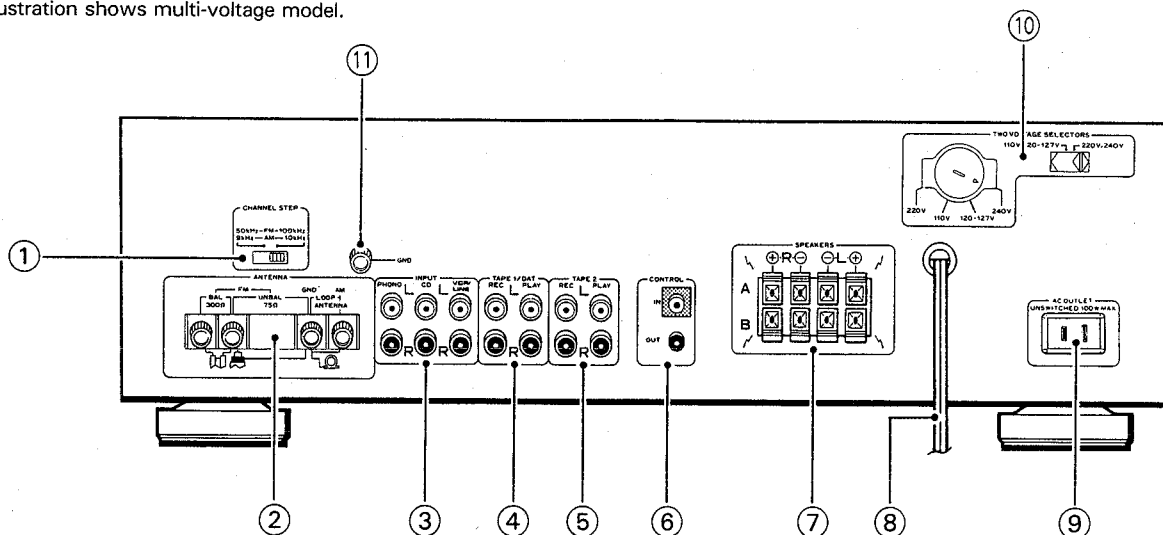
**CONTROL Assembly (AWZ3270, AWZ3272 and AWZ3274)**

The CONTROL Assembly (AWZ3270, AWZ3272 and AWZ3274) is the same as the CONTROL Assembly (AWZ3268) with the exception of the following sections.

| Mark | Symbol & Description | Part No.    |             |         |         | Remarks |
|------|----------------------|-------------|-------------|---------|---------|---------|
|      |                      | AWZ3268     | AWZ3270     | AWZ3272 | AWZ3274 |         |
|      | Q802, Q803           | 2SC1740SLN  | 2SC1740SLN  | .....   | .....   |         |
|      | D802                 | HSS104-02   | HSS104-02   | .....   | .....   |         |
|      | S825                 | ASG1034     | ASG1034     | ASG1034 | .....   |         |
|      | S831                 | ASG1034     | ASG1034     | .....   | .....   |         |
|      | VR301 (100k×2)       | .....       | .....       | ACT1040 | ACT1040 |         |
|      | R811, R812           | RD1/8PM472J | RD1/8PM472J | .....   | .....   |         |
|      | Remote receiver unit | AXX1010     | AXX1010     | .....   | .....   |         |

## 8. PANEL FACILITIES

• Illustration shows multi-voltage model.



### ① CHANNEL STEP switch

### ② FM/AM ANTENNA terminals

Use these antenna terminals for receiving FM and AM broadcasts.

### ③ INPUT jacks

**PHONO** ..... Connect to the output cables from a turntable.

**CD** ..... Connect to the output jacks of a compact disc player.

**VCR/LINE**...Connect to the output jacks of a video cassette recorder, etc.

### ④ TAPE 1/DAT jacks

Connect these jacks to the cassette deck or digital audio tape deck.

### ⑤ TAPE2 jacks

Connect these jacks to the cassette deck.

### ⑥ CONTROL IN/OUT jacks

**IN:** Connect this jack to other Pioneer components when using those components to control this unit.

**OUT:** Connect this jack to other Pioneer components when using the remote control of this unit to control the other components.

#### NOTE:

The receiver's remote sensor does not function when a plug is inserted in the IN jack. To operate, point the remote control unit at the remote sensor on the component to which the receiver's IN jack is connected.

### ⑦ SPEAKERS terminals

**A:** Connect to a first set of speakers.

**B:** Connect to a second set of speakers.

#### NOTE:

No sound will be heard through the speakers when both A and B switches are depressed if only one set of speakers has been connected to either A or B SPEAKERS terminals.

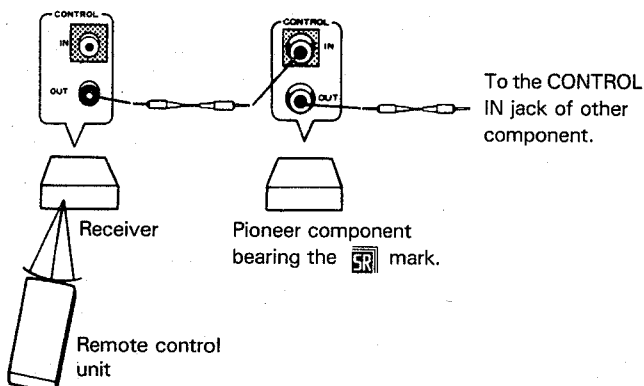
### ⑧ Power cord

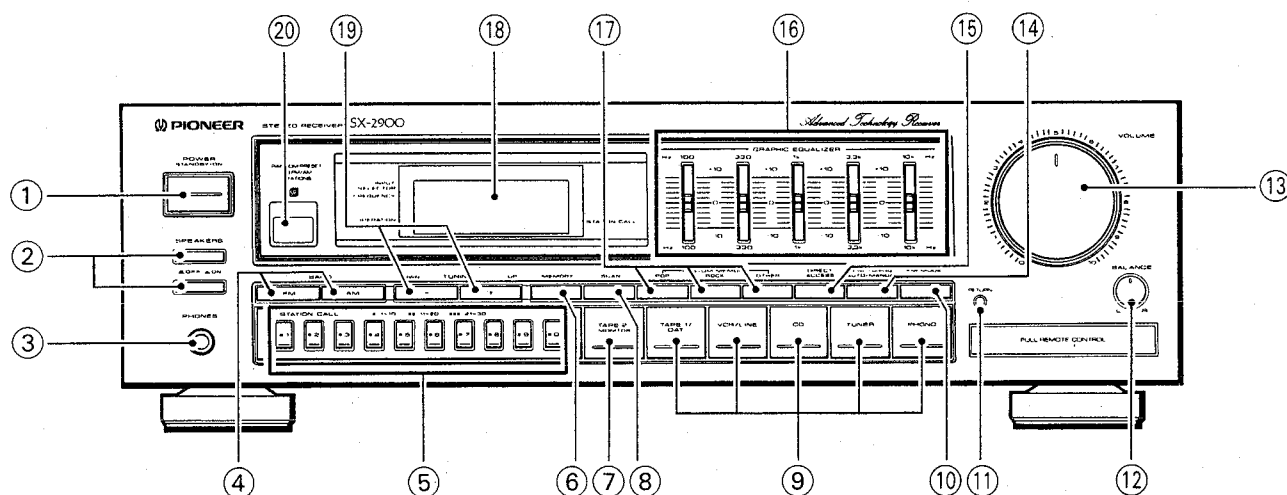
### ⑨ AC OUTLETS

### ⑩ VOLTAGE SELECTORS

### ⑪ GND terminal

Connect to the ground lead of a turntable.





## ① POWER (STANDBY/ON) switch

- The accessory remote control unit can also be used to operate STANDBY/ON and SLEEP function of this switch.
- The POWER switch selects the transformer secondary even in STANDBY position. The unit circuitry will work as long as the power cord is connected to a wall socket.
- When not using the unit for a long period, disconnected the power cord.

[FOR MULTI-VOLTAGE MODEL]

Even when the power is in STANDBY, the VOLUME control knob indicator remains lit.

### NOTE:

When the power is initially turned ON, muting will be applied to prevent sound from being output for about 5 seconds.

## ② SPEAKERS switches ( OFF, ON)

These are used to select the speaker through which you wish to listen.

**A:** When the speakers connected to A terminals are in use.

**B:** When the speakers connected to B terminals are in use.

- Turn both A and B speakers to OFF position when only the HEADPHONES are in use.

### NOTE:

No sound will be heard through the speakers when both A and B switches are depressed if only one set of speakers has been connected to either A or B SPEAKERS terminals.

## ③ PHONES jack

Connect the plug on your headphones to this jack. To listen to a program through the headphones, set both SPEAKERS A and B switches to the OFF position.

## ④ BAND Selector buttons

These buttons are used to select either AM or FM reception.

**AM:** Push this button for AM reception.

**FM:** Push this button for FM reception.

## ⑤ STATION CALL buttons

These buttons are used to preset and recall desired broadcasting stations.

## ⑥ MEMORY button

When the unit is in the frequency display mode, pressing this button will result in the memorization of the current broadcast band, reception frequency, and FM AUTO/MONO mode.

This button is also used to input custom memory names.

## ⑦ TAPE 2 MONITOR button

Press when listening to tape playback with the cassette deck 2.

## ⑧ SCAN button

This button is used for both station memory scan and custom memory scan.

## ⑨ Function buttons

Use to select playback source.

**[TAPE 1 /DAT]** — Press when listening to tape playback with the cassette deck 1 or digital audio tape deck.

**[VCR/LINE]** — Press when listening to programs from a component connected to the VCR/LINE terminals.

**[CD]** — Press when listening to compact disc playback with a CD player.

**[TUNER]** — Press when listening to AM or FM broadcasts with a tuner.

**[PHONO]** — Press when listening to record playback on a turntable.

## ⑩ FM MODE AUTO/MONO selector button

Use to select the auto stereo mode or monaural mode when listening to FM broadcasts. The monaural mode has been selected when the FM MONO indicator is lighted.

### Auto stereo mode:

Normally leave in this mode for reception. When a stereo FM broadcast is received, it will be automatically reproduced in stereo sound.

### Monaural mode:

When receiving distant stations or stations with weak broadcast signals, the input signal may be weak, thus resulting in increased noise during FM stereo broadcasts. In this event, setting the receiver to the monaural mode will reduce the noise. In this case, however, FM stereo broadcasts will be reproduced in monaural sound.

### NOTE:

This button has no effect on reception of AM broadcasts.

## ⑪ RETURN button

This is helpful during troubleshooting or when no sound is output.

Pressing this button returns the receiver to the following settings, the sound level being controlled by VOLUME control.

- TAPE 2 MONITOR OFF
- FUNCTION TUNER
- BAND FM\*

\* The last FM broadcast you were listening to will be received. When reception is not possible, search begins for frequency that can be received.

### NOTE:

If no sound is output after the RETURN button is pressed, make sure that SPEAKERS switches are turned on.

# **⑫ BALANCE control**

Should normally be left in the center position. Adjust balance if the sound is louder from one of the speakers. If the right side is louder, turn toward the L position and if the left side is louder, turn toward the R position.

# **⑬ VOLUME control**

Use to adjust volume level.

# **⑭ FM TUNING AUTO/MANUAL button**

Works during FM reception.

Use this button to select either the AUTO mode or the MANUAL mode. When the "AUTO" indicator is lit, the receiver is in the AUTO mode.

# **⑮ DIRECT ACCESS tuning button**

When this button is pressed, the STATION CALL buttons function as ten-key number buttons for direct input of the desired reception frequency. Press again to cancel this mode.

If the input station falls outside of the receiver's tuning range, the display section will display a message: "UPPER" if the frequency is too high and "LOWER" if it is too low.

# **⑯ GRAPHIC EQUALIZER controls**

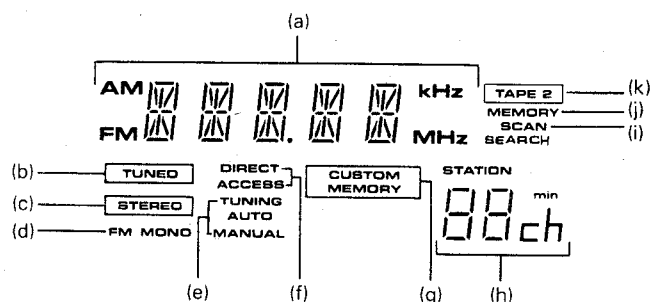
The equalizer is divided into five frequency ranges (100 Hz, 330 Hz, 1 kHz, 3.3 kHz, 10 kHz) to tailor music to the individual taste of the listener.

# **⑰ CUSTOM MEMORY buttons**

Stations can be assigned to STATION CALL buttons according to the genre of material broadcast (POP, ROCK, OTHER). You can recall a particular genre, and scan all the stations of that genre with Memory Scan until you reach the desired one.

# **⑱ OPERATION DISPLAY panel**

- (a) Indicates the function or frequency by the function switches.
- (b) TUNED indicator
- (c) FM STEREO indicator
- (d) FM MONO indicator
- (e) TUNING AUTO/MANUAL indicator
- (f) DIRECT ACCESS tuning indicator
- (g) CUSTOM MEMORY indicator
- (h) Indicates channel, STATION CALL number or sleep time.
- (i) SCAN indicator
- (j) MEMORY indicator
- (k) TAPE 2 monitor indicator.



# **⑲ TUNING buttons (DOWN, UP)**

**UP:** The FM or AM band is scanned in the direction of increasing frequency.

**DOWN:** The opposite operation to that of the UP button takes place.

# **⑳ Remote sensor window**

## 9. SPECIFICATIONS

### Amplifier Section

**Continuous Average Power Output is 65 watts\* per channel, min., at 8 ohms from 20 Hertz to 20,000 Hertz with no more than 0.07 % total harmonic distortion.\*\***

Continuous Power Output (both channel driven)\*\*

20 Hz — 20 kHz, T.H.D. 0.07 %, 8  $\Omega$ ..... 65 W + 65 W

Dynamic power output (with EIA test signal)

2/4/8  $\Omega$  ..... 145 W/130 W/90 W

Total Harmonic Distortion\*\*

1 kHz, 65 W, 8  $\Omega$ ..... 0.01 %

Input (Sensitivity/ Impedance)

PHONO ..... 2.5 mV/47 k $\Omega$

CD, VCR/LINE, TAPE 1/DAT, TAPE 2 ..... 150 mV/22 k $\Omega$

Phono Overload Level (T.H.D. 0.01 %, 1,000 Hz)

PHONO ..... 130 mV

Output Level

TAPE REC ..... 150 mV/2.2 k $\Omega$

Frequency Response

PHONO (RIAA Equalization) ..... 20 Hz to 20,000 Hz  $\pm$  0.5 dB

CD, VCR/LINE, TAPE 1/DAT, TAPE 2 ..... 10 Hz to 70,000 Hz  $\pm$  0.5 dB

Signal-to-Noise Ratio (IHF, short circuited, A network)

PHONO ..... 72 dB

CD, VCR/LINE, TAPE 1/DAT, TAPE 2 ..... 96 dB

Graphic Equalizer frequency band ..... 100 Hz, 330 Hz, 1 kHz,

3.3 kHz, 10 kHz,  $\pm$  8 dB

### FM Tuner Section

Frequency range ..... 87.5 MHz to 108 MHz

Usable Sensitivity ..... 10.8 dBf, IHF (0.95  $\mu$ V/75  $\Omega$ )

50 dB Quieting Sensitivity

MONO ..... 15.3 dBf (1.6  $\mu$ V/75  $\Omega$ )

STEREO ..... 37.1 dBf (19.5  $\mu$ V/75  $\Omega$ )

Signal-to-Noise Ratio

MONO ..... 78 dB (at 85 dBf)

STEREO ..... 75 dB (at 85 dBf)

Distortion

STEREO ..... 0.3 % (1 kHz)

Alternate Channel Selectivity ..... 55 dB (400 kHz)

Stereo Separation ..... 35 dB (1 kHz)

Frequency Response ..... 30 Hz to 15 kHz ( $\pm$  1 dB)

Antenna Input ..... 300  $\Omega$  balanced, 75  $\Omega$  unbalanced

### AM Tuner Section

Frequency range, when 10 kHz step ..... 530 kHz to 1,700 kHz

When 9 kHz step ..... 531 kHz to 1,602 kHz

Sensitivity

IHF, Loop antenna ..... 300  $\mu$ V/m

Selectivity ..... 20 dB

Signal-to-Noise Ratio ..... 50 dB

Antenna ..... AM Loop Antenna

### Miscellaneous

Power Requirements

U.S., Canadian model ..... AC 120 Volts, 60 Hz

Other destination models ..... ~ AC 110 V/ 120 V—127 V/  
220 V/ 240 V (switchable), 50/60 Hz

Power Consumption

U.S., Canadian models ..... 250 W (UL), 335 VA (CSA)

Other destination models ..... 395 W

AC Outlet ..... UNSWITCHED x 1 : 100W MAX

Dimensions ..... 420 (W) X 120 (H) X 336 (D) mm

16-9/16(W) X 4-3/4 (H) X 13-1/4 (D) in

Weight (without package) ..... 7.1 kg (15 lb 10 oz)

### Furnished Parts

FM T-type Antenna ..... 1

AM Loop Antenna ..... 1

Remote control unit ..... 1

Dry cell battery (size "AAA" (R03/UM-4)) ..... 2

Operating Instructions ..... 1

*\* Measured pursuant to the Federal Trade Commission's Trade Regulation rule on Power Output Claims for Amplifier.*

*\*\* Measured By Audio Spectrum Analyzer.*

### NOTE:

*Specifications and design subject to possible modification without notice due to improvements.*