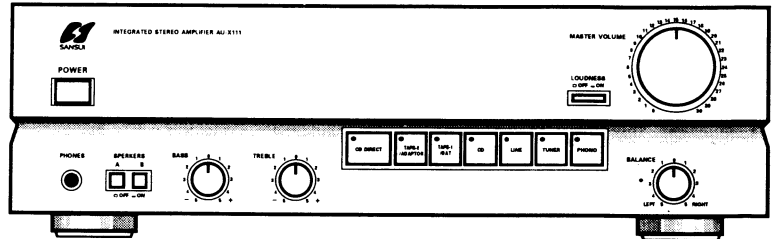




SERVICE MANUAL

AU-X111 INTEGRATED AMPLIFIER



CAUTION

1. Parts identified by the \triangle symbol on the schematic diagram and the parts list are critical for safety. Use only replacement parts that have critical characteristics recommended by the manufacturer.
2. Make leakage-current or resistance measurements to determine that exposed parts are acceptably insulated from the supply circuit before returning the appliance to the customer.

NOTICE

The symbols, UK, EU, EG, SS and XX <EXPORT> on the parts list and the schematic diagram mean followings respectively.

UK..... Manufactured for United Kingdom market.

EU..... Manufactured for European market.

EG..... Manufactured for F.R. Germany market.

SS..... Manufactured for Saudi Arabian market.

XX <EXPORT>..... Standard Version.

NON MARK..... Common Parts.

Specifications

Power output

Min. RMS, both channels driven, from 20 to 20,000 Hz, with no more than 0.03% total harmonic distortion.
30 watts per channel into 8 ohms.

DIN

40 watts per channel into 8 ohms.

Load impedance..... 4 to 16 ohms

Intermodulation distortion (60 Hz: 7 kHz = 4:1 SMPTE method)
..... less than 0.03% at rated power output

Frequency response (at 1 watt)

Overall (from CD)..... 10 to 70,000 Hz, +1 dB, -3 dB
RIAA curve deviation (PHONO-MM, 20 Hz to 20 kHz)
..... +0.5 dB, -0.5 dB

Input sensitivity and impedance (at 1 kHz)

PHONO (MM)..... 2.5 mV/47 kohms
(Max. input capability: 140 mV at 1 kHz, less than 0.1% total harmonic distortion)

CD, TUNER, LINE..... 150 mV/35 kohms

TAPE-1/DAT, TAPE-2/ADAPTOR... 150 mV/35 kohms

Output level (1,000 Hz)

TAPE/REC..... 150 mV into 47 kohms

Signal to noise ratio (short-circuit, A-network)

PHONO (MM)..... 78 dB

CD, TUNER, LINE..... 105 dB

Controls and Filter

BASS..... ± 8 dB at 50 Hz

TREBLE..... ± 8 dB at 10 kHz

LOUDNESS..... +6 dB at 50 Hz

(VOLUME: -30 dB position) +6 dB at 10 kHz

Power requirements..... AC 120 V/220 V/240 V,
50/60 Hz

Power consumption..... 165 watts

270 watts Maximum

Dimensions..... 430 mm (16-15/16") W

125mm (4-15/16") H

286 mm (11-5/16") D

Weight..... 5.0 kg (11.0 lbs) net

6.0kg (13.2 lbs) packed

* Design and specifications subject to change without notice for improvements.

* Due to local laws and regulations, this unit sold in some areas are not equipped with variable voltage selectors.

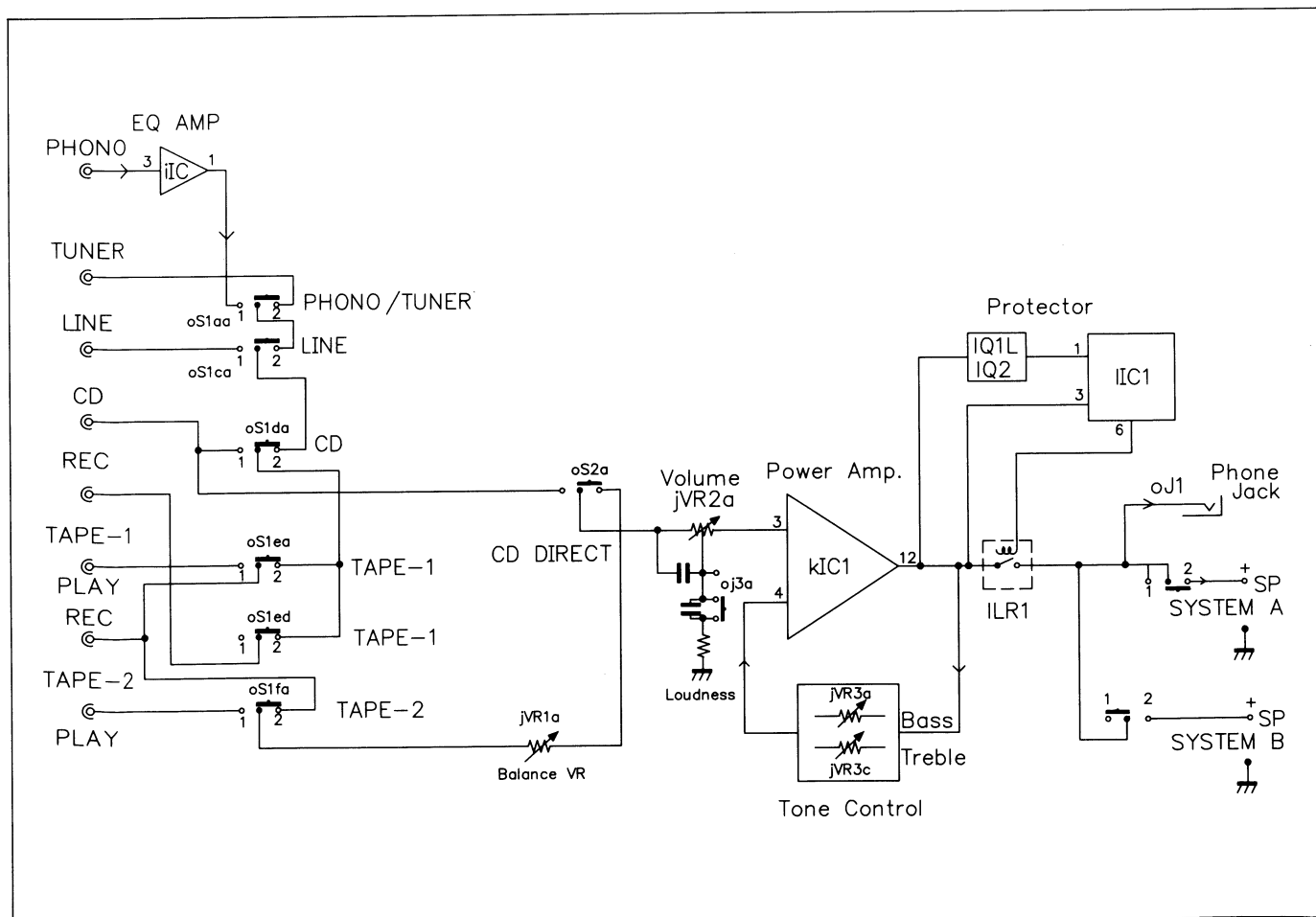
Note to use Service Manual

1. Some printed circuit boards are not supplied assembled. To separate these in this service manual, the stock numbers are not indicated for these boards. However, stock numbers for individual parts are indicated.
2. Since some capacitors and resistors are omitted from parts lists in this service manual, refer to the Common Parts List for capacitors and resistors, which was issued on June 1987.
3. Abbreviations in this service manual are as follows.

•Abbreviations List

| | |
|--------|---|
| N.I.R. | : Non-Inflammable Resistor |
| C.R. | : Carbon Resistor |
| Ce.R. | : Cement Resistor |
| M.R. | : Metal Film Resistor |
| F.R. | : Fusing Resistor |
| A.R. | : Array Resistor |
| C.C. | : Ceramic Capacitor |
| C.T. | : Ceramic Capacitor, Temperature Compensation |
| E.C. | : Electrolytic Capacitor |
| E.L. | : Low Leak Electrolytic Capacitor |
| E.B. | : Bi-Polar Electrolytic Capacitor |
| E.B.L. | : Low Leak Bi-Polar Electrolytic Capacitor |
| Ta.C. | : Tantalum Capacitor |
| F.C. | : Film Capacitor |
| M.P. | : Metalized Paper Capacitor |
| P.C. | : Polystyrene Capacitor |
| M.M.C. | : Metalized Mylar Capacitor |
| A.C. | : Array Capacitor |
| V.R. | : Variable Resistor |
| S.V.R. | : Semi Variable Resistor |
| SW. | : Switch |

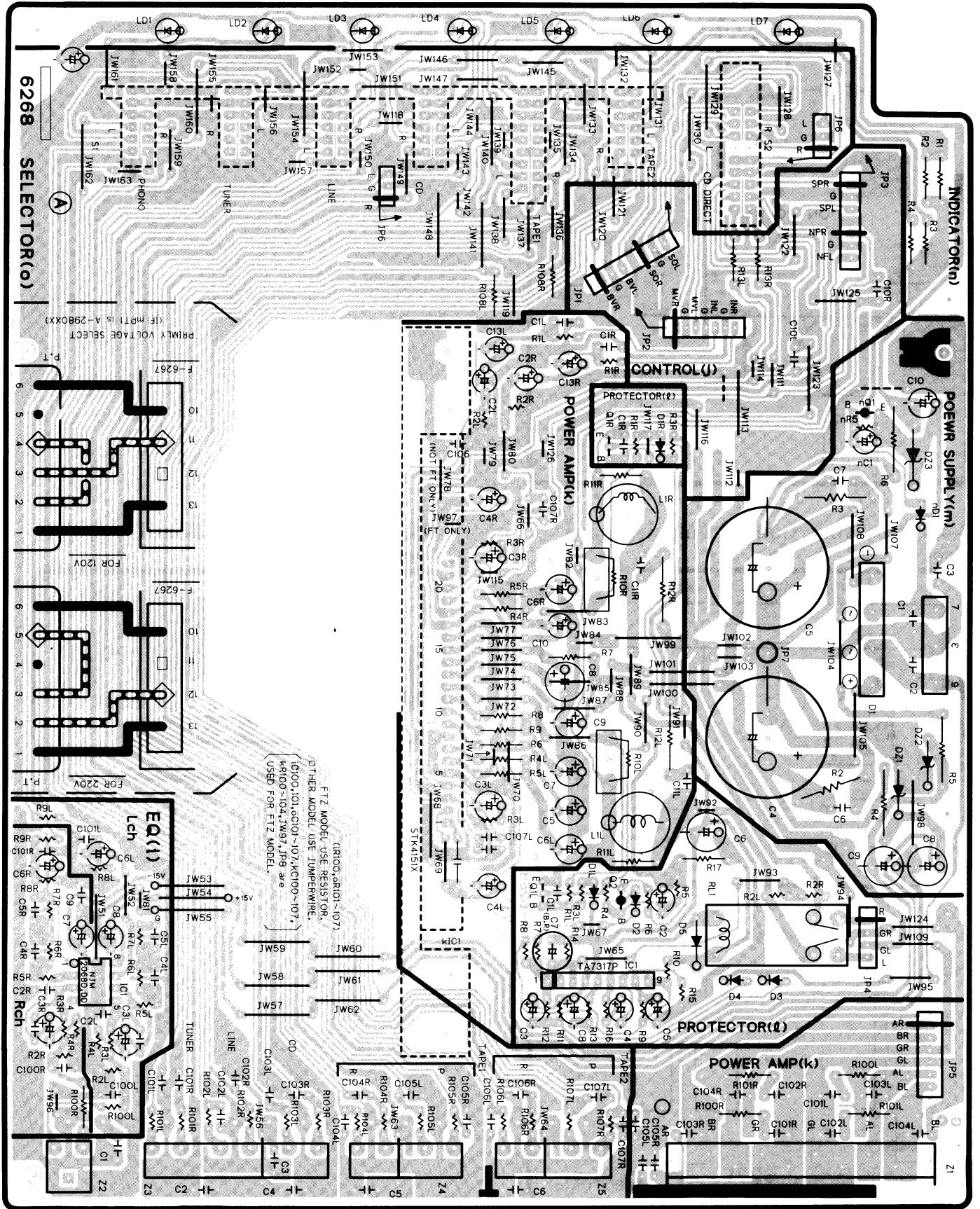
1. BLOCK DIAGRAM



2. PARTS LOCATION ON BOARD

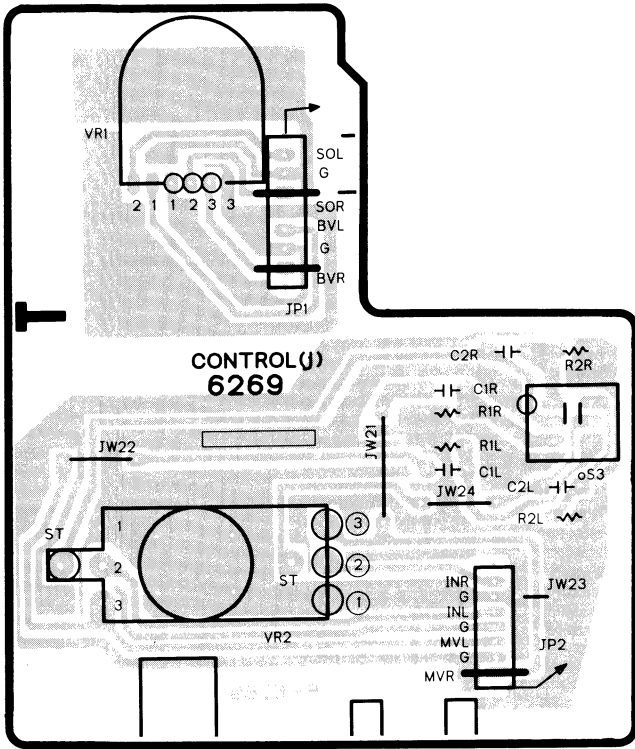
2-1. F-6268 Main Board

Component Side



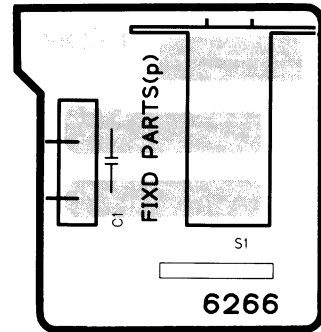
2-2. F-6269 Volume Board

Component Side



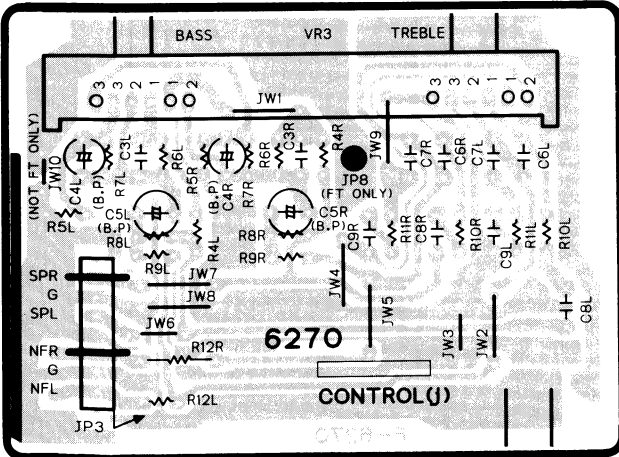
2-3. F-6266 Power Switch Board

Component Side



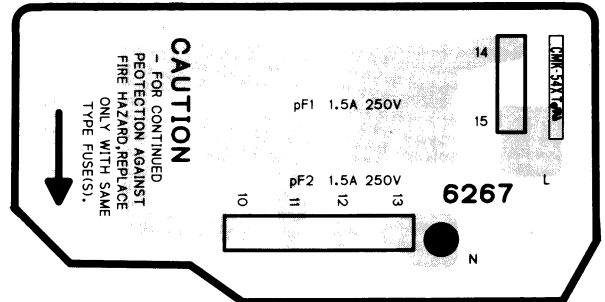
2-4. F-6270 Tone Control Volume Board

Component Side



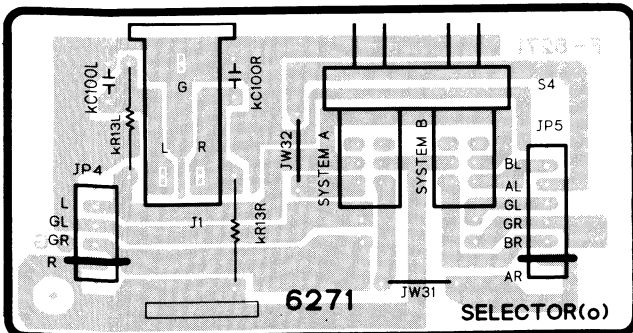
2-5. F-6267 Power Fuse Board

Component Side



2-6. F-6271 Headphone Jack Board

Component Side



3. PARTS LIST OF BOARD

3-1. F-6268 Main Board <Stock No. 01202601=XX, SS/01202605=EU, UK/01202608=EG>

| Parts No. | Stock No. | Description |
|--------------|--|--|
| •IC | | |
| iIC1 | 49263900 or 49264000 | NJM2068D NJM2068D-D |
| iC2 | 48663000 | 220pF 50V C. C. |
| iC100 | 48663400 | 470pF 50V C. C. <EG> |
| iC101 | 48662600 | 100pF 50V <EG> |
| △ kIC1 | 49480000 | STK4151-X |
| kC105 | 48663000 | 220pF 50V C. C. <EG> |
| kC106 | 48666200 | 0.01μF 50V C. C. <EG> |
| kC107 | 48662600 | 100pF 50V C. C. <EG> |
| kL1 | 46851901 | Filter Coil, 0.82μH |
| kr4, 5 | 46405000 | 3.3kΩ 1/2W N. I. R. |
| kr6 | 46403200 | 100Ω 1/2W N. I. R. |
| kr8, 9 | 46404400 | 1kΩ 1/2W N. I. R. |
| △ kr10 | 49283300 | 0.22Ω 3W Ce. R. |
| △ kr100, 101 | 46240800 | 4.7Ω 1W N. I. R. |
| •Transistor | | |
| lQ1 | 46391901 or 48058801 | 2SC2785 2SC1740S |
| lQ2 | 46392001 or 48058601 | 2SA1175 2SA933S |
| •IC | | |
| △ lIC1 | 46207600 | TA7317P |
| •Diode | | |
| lD1~4 | 46464100 | 1SS133 |
| lD5 | 48123600 | 11E2 |
| lC1 | 48426900 | 22000pF 25V C. C. |
| lC7 | 48101500 | 100μF 6.3V E. B. |
| lR17 | 46404200 | 680Ω 1/2W N. I. R. |
| lRL1 | 48183100 or 48183200 | Relay, DC 24V Relay |
| △ mD1 | 49482000 | RBA-402 |
| •Zener Diode | | |
| mDZ1 | 49306000 or 49306100 or 49306200 | 05AZ15-X 05AZ15-Y 05AZ15-Z |
| mDZ2 | 49306000 or 49306100 or 49306200 | 05AZ15-X 05AZ15-Y 05AZ15-Z |
| mDZ3 | 03171100 or 03171200 | RD18F B RD18F B3 |
| △ mR2, 3 | 46244600 | 6.8kΩ 1W N. I. R. |
| △ mR4, 5 | 46243800 | 1.5kΩ 1W N. I. R. |
| △ mR6 | 46625300 | 680Ω 2W N. I. R. |
| mC4 | 49114800 or 49505700 | 4700μF 42V E. C. <XX, SS> 5600μF 42V E. C. <XX, SS> |
| mC5 | 49114800 or 49505700 | 4700μF 42V E. C. <XX, SS> 5600μF 42V E. C. <XX, SS> |
| •Transistor | | |
| nQ1 | 46834200 | DTA144ES |
| •Diode | | |
| nD1 | 46464100 | 1SS133 |
| •LED | | |
| nLD1 | 49379000 | SEL2910A, PHONO |
| nLD2 | 49379000 | SEL2910A, TUNER |
| nLD3 | 49379000 | SEL2910A, LINE |
| nLD4 | 49379000 | SEL2910A, CD |
| nLD5 | 49379000 | SEL2910A, TAPE 1 |

<F-6268>

| Parts No. | Stock No. | Description |
|-----------|-----------|------------------------------------|
| nLD6 | 49378800 | SEL2210S, TAPE 2 |
| nLD7 | 49378800 | SEL2210S, CD DIRECT |
| oC2~6 | 48426900 | 2200pF 25V C. C. |
| oC101~103 | 48663400 | 470pF 50V C. C. <EG> |
| oC104 | 48663200 | 330pF 50V C. C. <EG> |
| oC105 | 48663400 | 470pF 50V C. C. <EG> |
| oC106 | 48663200 | 330pF 50V C. C. <EG> |
| oC107 | 48663400 | 470pF 50V C. C. <EG> |
| oS1 | 49481500 | Push, SW., FUNCTION |
| oS2 | 49481600 | Push, SW., CD DIRECT |
| oZ1 | 46947500 | 8P Speaker Terminal |
| oZ2 | 48528400 | 2P TERMINAL BOARD, PHONO |
| oZ3 | 48528600 | 6P TERMINAL BOARD, CD, LINE, TUNER |
| oZ4 | 48528500 | 4P TERMINAL BOARD, TAPE 1 |
| oZ5 | 48528500 | 4P TERMINAL BOARD, TAPE 2 |

3-2. F-6266 Power Switch Board

Component Side

| Parts No. | Stock No. | Description |
|-----------|-------------|-------------------|
| △ pC1 | 48732700 | 0.01μF 400V C. C. |
| △ | or 48733500 | 0.01μF 400V C. C. |
| △ | or 48734400 | 0.01μF 400V C. C. |
| △ pS1 | 46364300 | Push SW., POWER |

3-3. F-6267 Power Fuse Board

Component Side

| Parts No. | Stock No. | Description |
|-----------|-----------|----------------------------|
| △ pF1 | 07184800 | AC Fuse 1.25A <EU, UK, EG> |
| △ pF1 | 48721200 | AC Fuse 1.5A <XX, SS> |
| △ pF2 | 48721200 | AC Fuse 1.5A <XX, SS> |

3-4. F-6269 Volume Board

Component Side

| Parts No. | Stock No. | Description |
|-----------|-----------|------------------------|
| jVR1 | 49481000 | 250 KMN V. R., BALANCE |
| jVR2 | 49480900 | 150 KB×2 V. R., VOLUME |
| oS3 | 49481400 | Push Switch, LOUDNESS |

3-5. F-6270 Tone Control Volume Board

Component Side

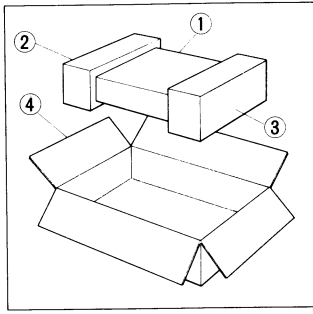
| Parts No. | Stock No. | Description |
|-----------|-----------|-------------------------|
| jC4 | 48103000 | 0.22μF 50V E. B. |
| jC5 | 48103700 | 4.7μF 50V E. B. |
| jVR3 | 49480800 | 50kΩ V. R. TONE CONTROL |

3-6. F-6271 Headphone Jack Board

Component Side

| Parts No. | Stock No. | Description |
|-----------|-----------|------------------|
| △ kR13 | 46242800 | 220Ω 1W N. I. R. |
| oS4 | 49481700 | Push SW., SYSTEM |
| oJ1 | 49495100 | Headphone Jack |

4. PACKING & ACCESSORY LIST

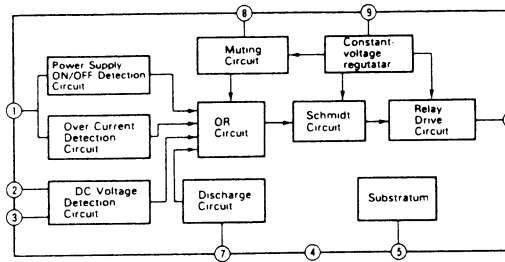


Parts List

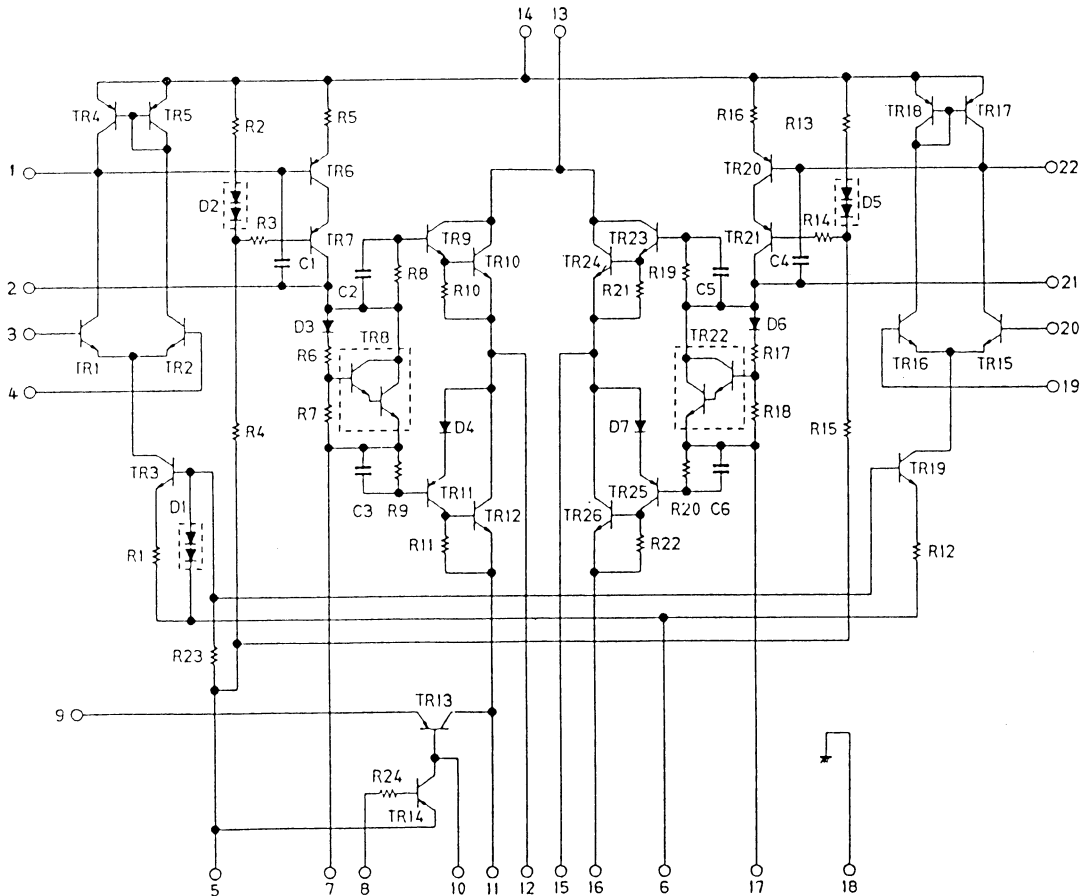
| Parts No. | Stock No. | Description |
|-----------|-----------|--------------------------|
| 1 | 47859100 | Vinyl Bag |
| 2 | 27831500 | Styrofoam Packing, left |
| 3 | 27831600 | Styrofoam Packing, right |
| 4 | 27831400 | Carton Case |
| | 19061900 | Operating Instructions |

5. INTERIOR BLOCK DIAGRAM OF IC

● TA7317P (Protector)

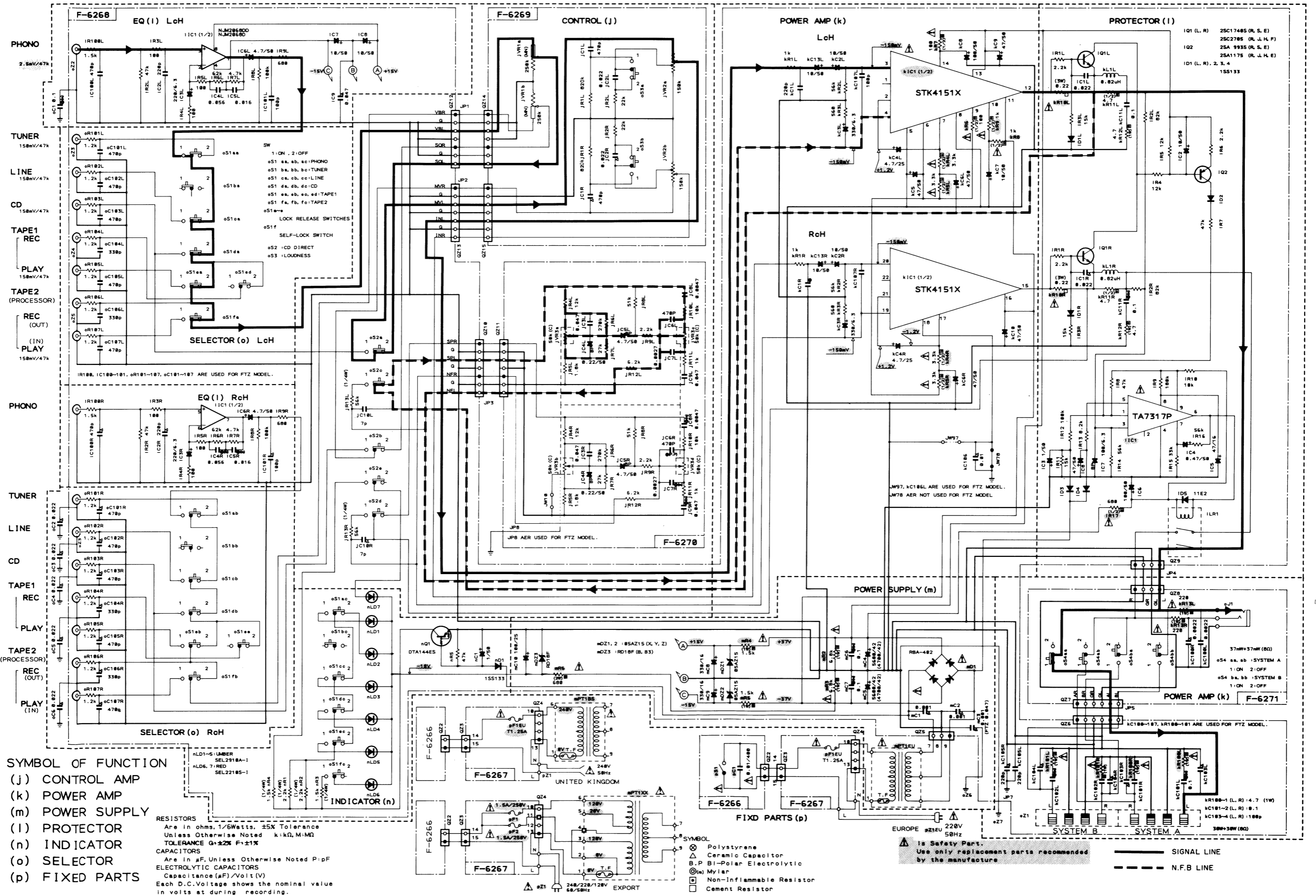


● STK4151X (Power Amp.)



6. SCHEMATIC DIAGRAM

• Design and specifications subject to change without notice for improvement.
 • La présentation et les spécifications sont susceptibles d'être modifiées sans préavis par suites d'améliorations éventuelles.
 • Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.



SYMBOL OF FUNCTION
 (j) CONTROL AMP
 (k) POWER AMP
 (m) POWER SUPPLY
 (I) PROTECTOR
 (n) INDICATOR
 (o) SELECTOR
 (p) FIXED PARTS

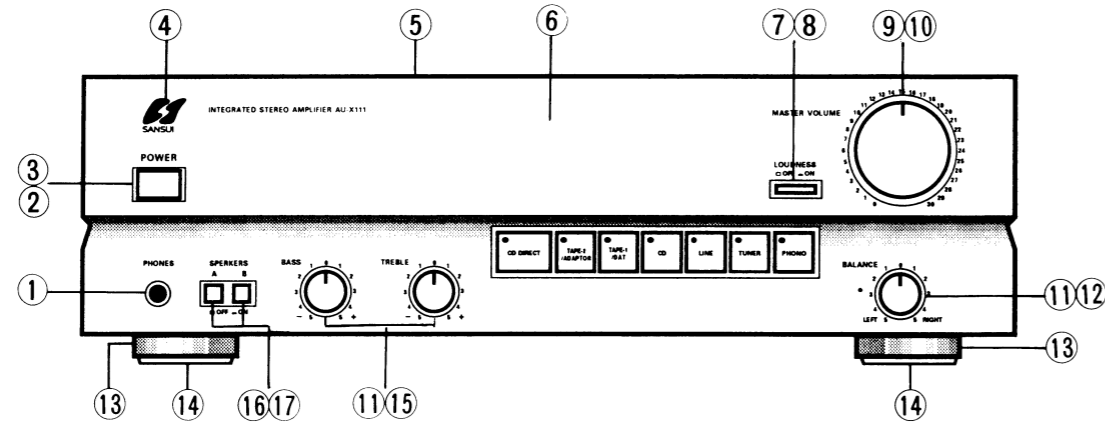
RESISTORS
 Are in ohms, 1/6Watts, ±5% Tolerance
 Unless Otherwise Noted k:kΩ, M:MΩ
 TOLERANCE G:±2% F:±1%

CAPACITORS
 Are in μF, Unless Otherwise Noted P:pF
ELECTROLYTIC CAPACITORS
 Capacitance (μF)/Volt (V)
 Each D.C. Voltage shows the nominal value
 in volts at during recording.

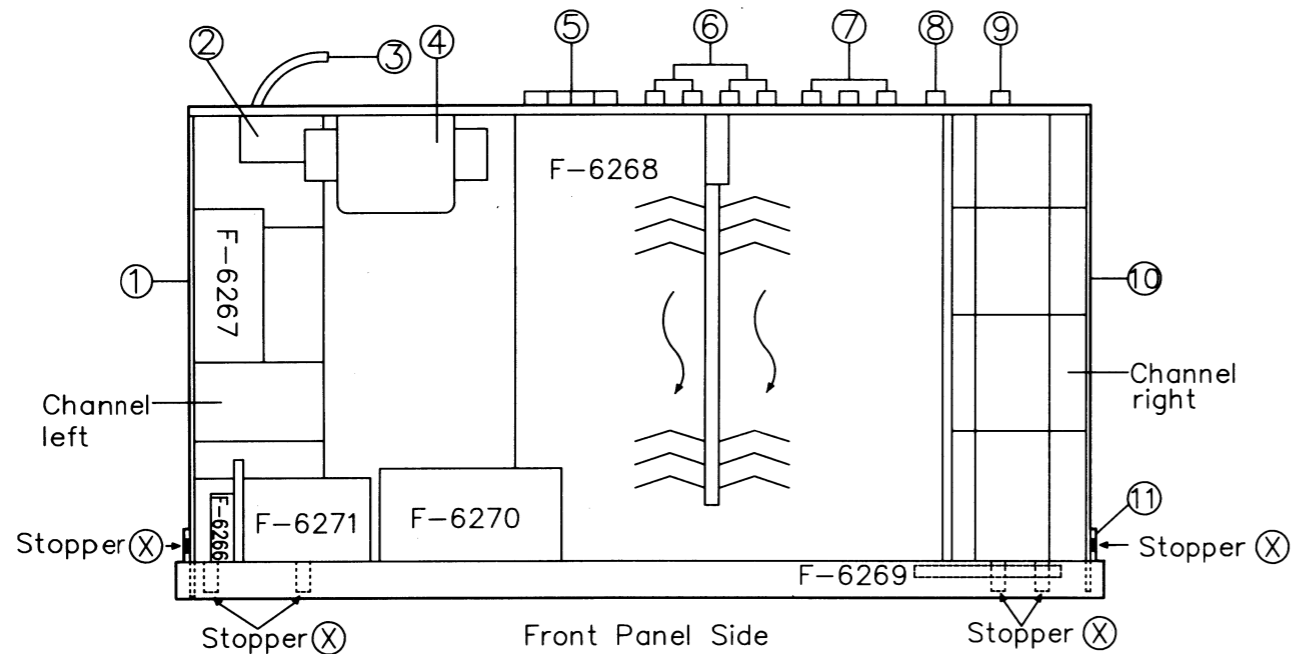
- 111E2
 - ISS133
 - RBA402
 - 05A215 RD18F
 - TA7317P
 - STK4151X
 - NJM2068D
 - 25A1175 25A933 25C1740
 - DTA144
 - 25C2785
- Dot or Slot or Line
- SIGNAL LINE
 - - - N.F.B LINE

7. OTHER PARTS

<Front View>



<Top View>



Parts List <Front View>

| Parts No. | Stock No. | Description |
|-----------|-----------|------------------------|
| 1 | 49495100 | Headphone Jack |
| △ 2 | 46364300 | Push SW., POWER |
| 3 | 27821500 | Knob, POWER |
| 4 | 27833300 | Logo Badge |
| 5 | 27835300 | Bonnet |
| 6 | 27826200 | Front Panel A, Outside |
| 7 | 49481400 | Push SW., LOUDNESS |
| 8 | 27821400 | Knob, LOUDNESS |
| 9 | 27821210 | Knob, VOLUME |
| 10 | 49480900 | VOLUME, 150kΩ |
| 11 | 27821300 | Knob, TONE/BALANCE |
| 12 | 49481000 | BALANCE Volume, 250kΩ |
| 13 | 27857010 | Ring for Leg |
| 14 | 27842000 | Leg Sheet |
| 15 | 49480800 | Tone Control VR., 50kΩ |
| 16 | 84580000 | Knob, SPEAKERS |
| 17 | 49481700 | Push SW., SPEAKERS |

Parts List <Top View>

| Parts No. | Stock No. | Description |
|-----------|-----------|----------------------------|
| 1 | 27820710 | Channel, left |
| 2 | 47157300 | AC Cord Cover |
| △ 3 | 46407700 | Power Supply Cord <XX> |
| △ 4 | 48837700 | Power Supply Cord <SS> |
| △ 5 | 49299300 | Power Supply Cord <EU, EG> |
| △ 6 | 49252900 | Power Supply Cord <UK> |
| △ 7 | 15036901 | Power Transformer <XX, SS> |
| △ 8 | 15036905 | Power Transformer <EU, EG> |
| △ 9 | 15036906 | Power Transformer <UK> |
| 10 | 46947500 | 8P Speaker Terminal |
| 11 | 48528500 | 4P Terminal, TAPE 1/TAPE 2 |
| 12 | 48528600 | 6P Terminal, CD/LINE/TUNER |
| 13 | 48528400 | 2P Terminal, PHONO |
| 14 | 22301510 | Ground Terminal |
| 15 | 27820810 | Channel, right |
| 16 | 27835800 | Front Panel B, inside |

(refer to Fig. 8-1 on page 7)

8. REPLACEMENT OF THE FRONT PANEL

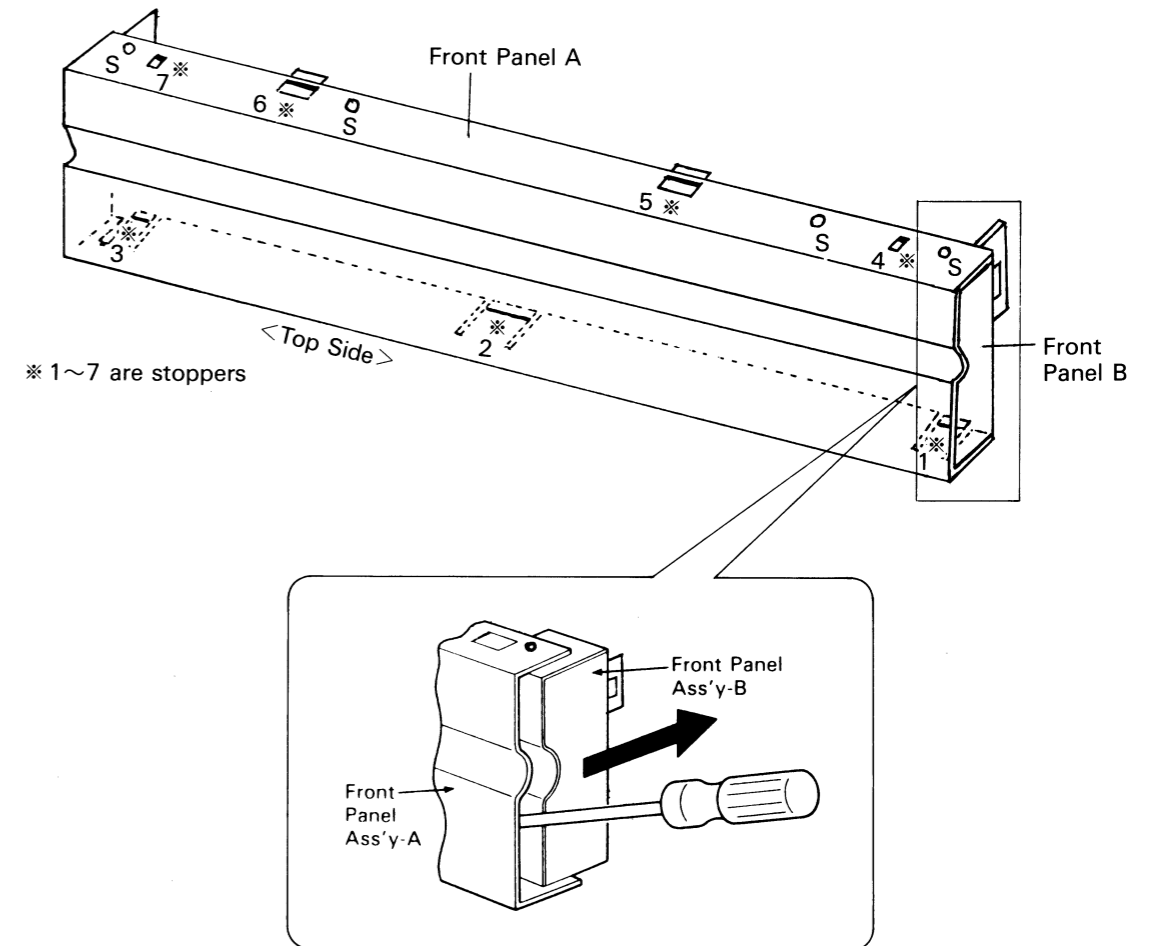
A. How to remove the Front Panel A and B

1. Remove the bonnet.
2. Remove the four fixing screws (S) of front panel.
3. Pull out the four knobs.
4. Loosen the four nuts to remove the volume.
5. Remove the four board, F-6271, F-6266, F-6270, F-6269 from front panel B.
6. Unhook six stoppers (X) to remove the front panel from set. (Refer to Top View on page 7)
7. Pull out the front panel A and B from channel right & left.

B. How to remove the Front Panel B from Front Panel A

1. Remove the front panel A and B from set.
2. Unhook a stopper 1.
3. Inset the flattype driver as Fig. 8-1.
4. To separate the front panel A and B, unhook six stoppers in order from ※2 to ※7, in all while pushing a front panel ass'y B to the arrow direction.

Fig. 8-1



SANSUI ELECTRIC CO., LTD.: 14-1, Izumi 2-chome, Suginami-ku Tokyo 168 Japan
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 SANSUI ELECTRONICS CORPORATION: 1250 Valley Brook Ave. Lyndhurst, N.J. 07071 U.S.A.
 17150 South Margay Ave. Carson, California 90746 U.S.A.
 SANSUI ELECTRONICS G.M.B.H.: Paul Ehrlich Strasse 8, 6074 Rödermark 2, West Germany

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(SM2-148)

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