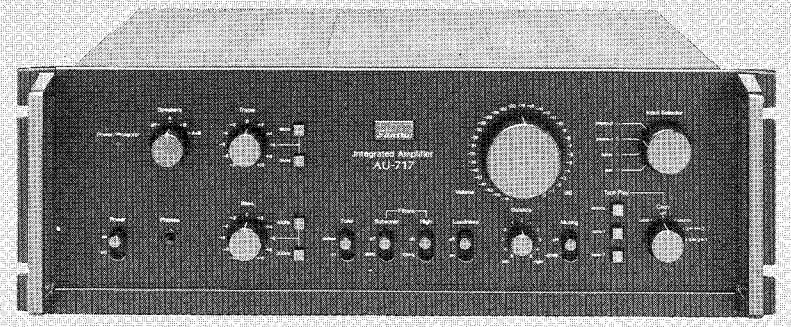
# SERVICE MANUAL

## INTEGRATED STEREO AMPLIFIER

# SANSUI AU-517/717



Sansui

SANSUI ELECTRIC CO., LTD.

## SPECIFICATIONS

### AU-517

**Power output**
Min. RMS, both channels driven, from 20 to 20,000 Hz, with no more than 0.025% total harmonic distortion
65 watts per channel into 8 ohms
**Load impedance** . . . . . 8 ohms
**Power bandwidth** . . . . . 20 to 20,000 Hz at or below rated min. RMS power output and total harmonic distortion
**Total harmonic distortion** (POWER AMP IN) . . . . . less than 0.025% at or below rated min. RMS power output
**Intermodulation distortion** (70 Hz:7 kHz = 4:1 SMPTE method) . . . . . less than 0.025%
**Frequency response** (at 1 watt) (POWER AMP IN) . . . . . 0 to 200,000 Hz +0 dB –3 dB
**RIAA curve deviation** (PHONO) . . . . . +0.2 dB –0.2 dB (20 to 20,000 Hz)
**Damping factor** . . . . . approximately 60 at 8 ohms load

**Input sensitivity and impedance** (1 kHz, for rated power output)
PHONO . . . . . 2.5 mV/47 kilohms
(Max. input capability: 320 mV at 1 kHz, less than 0.01% harmonic distortion)
AUX, TAPE . . . . . 150 mV/47 kilohms
**Output level** (1,000 Hz)
TAPE REC (pin jack) . . . . . 150mV/47 kilohms
PRE OUT . . . . . 1V/47 kilohms
**Channel separation** (1 kHz, at rated power output)
PHONO . . . . . better than 60 dB
AUX . . . . . better than 65 dB
**Hum and noise** (short-circuit, A-network)
PHONO . . . . . 78 dB
AUX . . . . . 100 dB
**Controls**
BASS . . . . . +10 dB (50 Hz)
TREBLE . . . . . +10 dB (15 kHz)
SUBSONIC FILTER . . . . . –3 dB (16 Hz), 6 dB/oct
LOUDNESS (–30 dB) . . . . . 9 dB at 50 Hz
7 dB at 10 kHz

**Power requirements**
Power voltage . . . . . 100, 120, 220, 240V (50/60Hz)
120V (Usable 110 – 130V)
60 Hz (for U.S.A. & Canada only)
**Power consumption**
Maximum consumption . . . . 660 watts
Rated consumption . . . . . 345 watts 420 VA
**Dimentions** . . . . . 430 mm (16-15/16") W
168 mm (6-5/8") H
389 mm (15-3/8") D
**Weight** . . . . . 16.5 kg (36.4 lbs) net
18.5 kg (40.8 lbs) packed

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

# 1. SPCIFICATIONS

## AU-717

**Power output**
Min. RMS, both channels driven, from 20 to 20,000 Hz, with no more than 0.025% total harmonic distortion
85 watts per channel into 8 ohms

**Load impedance** . . . . . 8 ohms

**Power bandwidth** . . . . . 20 to 20,000 Hz at or below rated min. RMS power output and total harmonic distortion

**Total harmonic distortion** (POWER AMP IN)
. . . . . less than 0.025% at or below rated min. RMS power output

**Intermodulation distortion** (70 Hz: 7 kHz = 4:1 SMPTE method)
. . . . . less than 0.025%

**Frequency response** (at 1 watt) (POWER AMP IN)
. . . . . 0 to 200,000 Hz +0 dB -3 dB

**RIAA curve deviation** (PHONO) . . . . +0.2 dB –0.2 dB (20 to 20,000 Hz)

**Damping factor** . . . . . approximately 60 at 8 ohms load

**Input sensitivity and impedance** (1 kHz, for rated power output)
PHONO . . . . . 2.5 mV/47 kilohms
(Max. input capability; 350 mV at 1 kHz, less than 0.01% total harmonic distortion)
AUX, TAPE . . . . . 150 mV/47 kilohms

**Output level** (1,000 Hz)
TAPE REC (pin jack) . . . . . 150 mV/47 kilohms
PRE OUT . . . . . 1 V/47 kilohms

**Channel separation** (1 kHz, at rated power output)
PHONO . . . . . better than 60 dB
AUX . . . . . better than 65 dB

**Hum and noise** (short-circuit, A-network)
PHONO . . . . . 78 dB
AUX . . . . . 100 dB

**Controls**
BASS . . . . . ±10 dB (50 Hz)
Tone selector . . . . . 200, 400 Hz
TREBLE . . . . . ±10 dB (15 kHz)
Tone selector . . . . . 3, 6 kHz
SUBSONIC FILTER . . . . . –3 dB (16 Hz), 6 dB/oct
HIGH FILTER . . . . . –3 dB (10 kHz), 6 dB/oct
MUTING . . . . . –20 dB
LOUDNESS (–30 dB) . . . . . 9 dB at 50 Hz
7 dB at 10 kHz

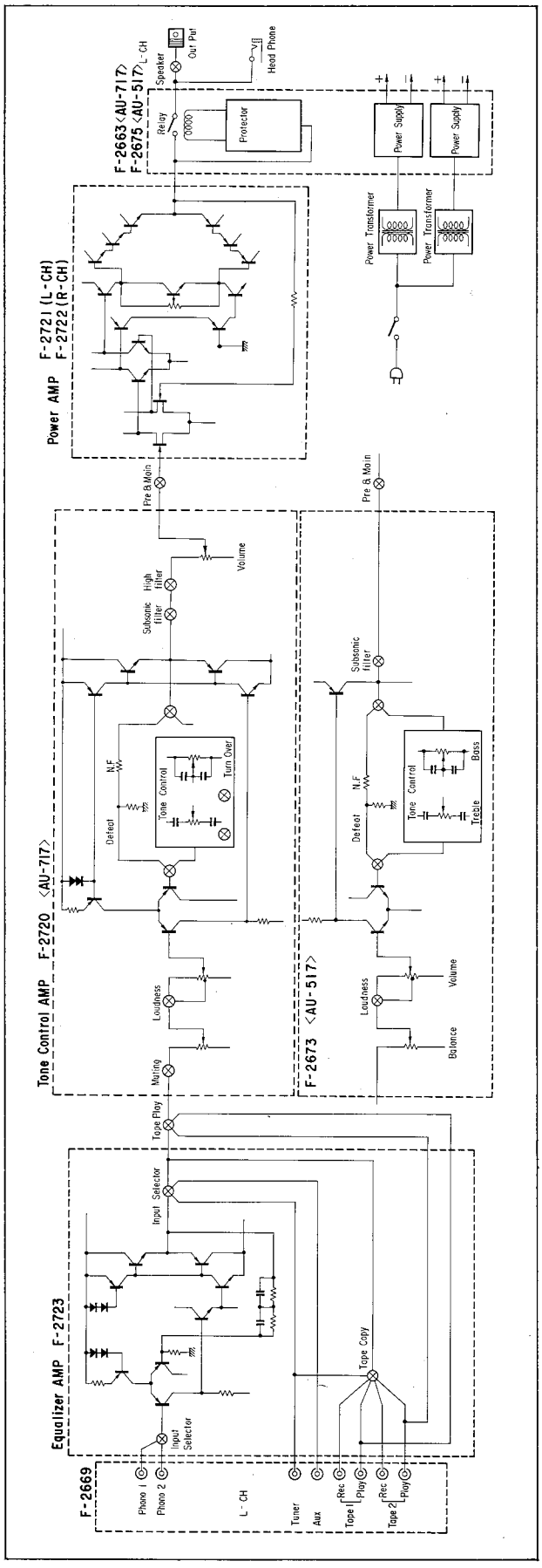
**Power requirements**
Power voltage . . . . . 100, 120, 220, 240V (50/60 Hz)
120V (Usable 110 — 130V) 60 Hz (for U.S.A. & Canada only)

**Power consumption**
Maximum consumption . . . . . 735 watts
Rated consumption . . . . . 425 watts 500 VA

**Dimentions** . . . . . 430 mm (16-15/16") W
168 mm (6-5/8") H
389 mm (15-3/8") D

**Weight** . . . . . 17.8 kg (39.2 lbs) net
19.8 kg (43.7 lbs) packed

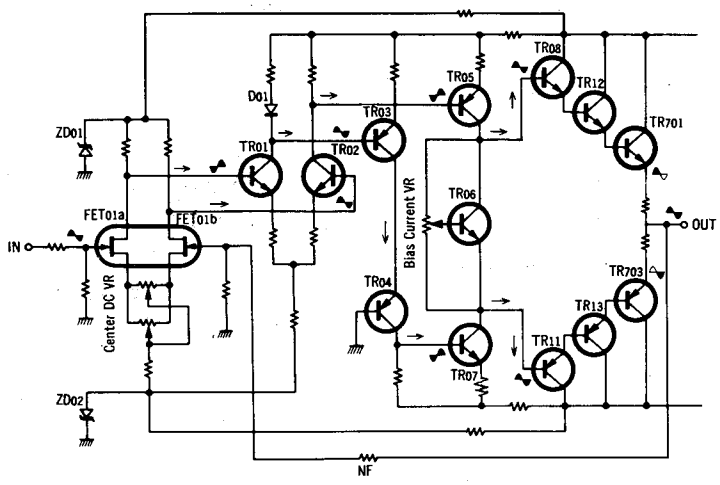
# 2. BLOCK DIAGRAM






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# 3. ADVANTAGE AND OPERATION OF POWER AMPLIFIER CIRCUITRY SECTION




## 3-1. Advantage

◇There is neccessity not to decrease the phase response till DC range in order to increase the music signal response of extremely low frequency range. Therefore, this amplifier is employing no capacitors except ones for phase compensation, and has an almost perfect transient characteristics.

◇The first stage FET (2SK97) is a dual FET of even characteristics and has a large Gm and no-leakage current at normal temparature.
To avoid the influence by temperature drift, such as center voltage (0V) deviation, this FET is used as differential amplifier and operates at cross point which is the optimum point of drain current (at about 3mA) against the temperature drift.

◇Transistors, TR05 and TR07, the push-pull pre-driver stage functions as current differential amplifier that the stabilized operation can be obtained. In addition, the collector current of these transistors is enough high to make linearity excellent.

◇Since this Amplifier employs phase advancer circuits [C06, C08, C15, R29, C16 and R30], which have not been frequently used, to compensate the phase characteristics on high frequency range and is also made to have enough current on each stage to increase the through-rate, the performance on high frequency range is conspicuously improved.

◇To avoid the voltage deviation, regulated power supply circuit composed of ZD01, ZD02 is employed.

## 3-2. Operation

The use of differential amplification at first stage dual FET, (FET01, FET02) and connection of the FET to the differential amplifier composed of TR01, TR02, make possible to obtain enough gain and remarkable low distortion.
The output signals of TR01 and TR02 are untiphase.
The output signal of TR02 adds to TR05, on the other hand, the output phase of TR01 is inverted by TR03, then, it becomes input signal of TR04 and TR07 which are cascoded connection.
The output signals at TR05 and TR07 are inphase that the operation of this stage is push-pull drive and current differential amplification. The power amplifier of the final stage is composed of SEPP (Single Ended Push-Pull) symmetry comple mentary in 3-stage darlington connection type.
TR09 and TR10 are composing current limiter circuit to protect power transistor from break-down by overload.

# 4. ADJUSTMENTS

## 4-1. Driver Circuit Board Adjnstments (See the picture of top view on page 3.)

Note: 1. Master Volume.....Minimum
2. Room Temperature.....
3. For adjustment, run the unit for more than 3 minutes after the power is switched on.

| STEP | SUBJECT | EQUIPMENT | MEASURE OUTPUT | ADJUST | ADJUST FOR | CONDITION |
|---|---|---|---|---|---|---|
| 1. | DC 0V L-CH | DC Volt Meter | Speaker Terminal | F-2721 VR01, VR02 | DC 0V±5mV | ◦ Set VR01 and VR02 to center position. ◦ Then, for the purpose of proceeding the accurate adjustment, set the voltage to 0 volt by VR01 first and VR02 next. |
| 2. | DC 0V R-CH | Same as above | Same as above | F-2722 VR01, VR02 | DC 0V±5mV | |
| 3. | Bias Current L-CH | Same as above | TP Terminal (+) (−) of F-2721 | F-2721 VR03 | DC 20mV±1mV | ◦ By turning VR03 counterclockwise, the bias current is decreased gradually. |
| 4. | Bias Current R-CH | Same as above | TP Terminal (+) (−) of F-2722 | F-2722 VR03 | DC 20mV±1mV | |

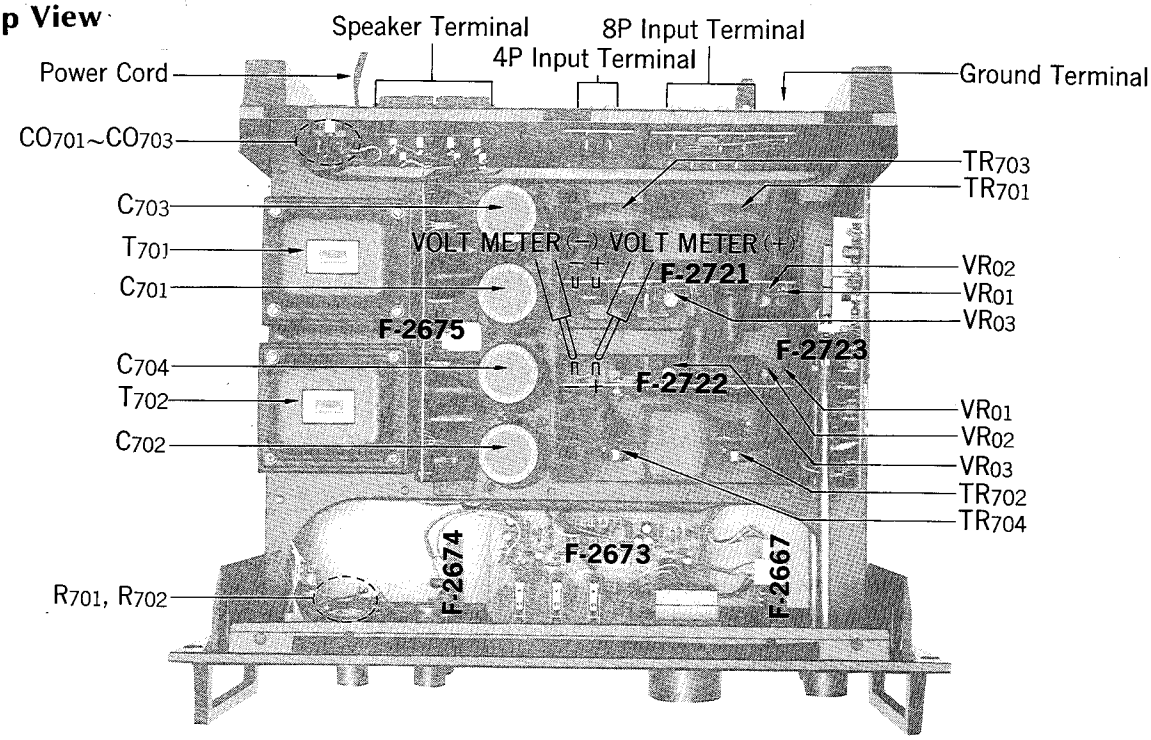


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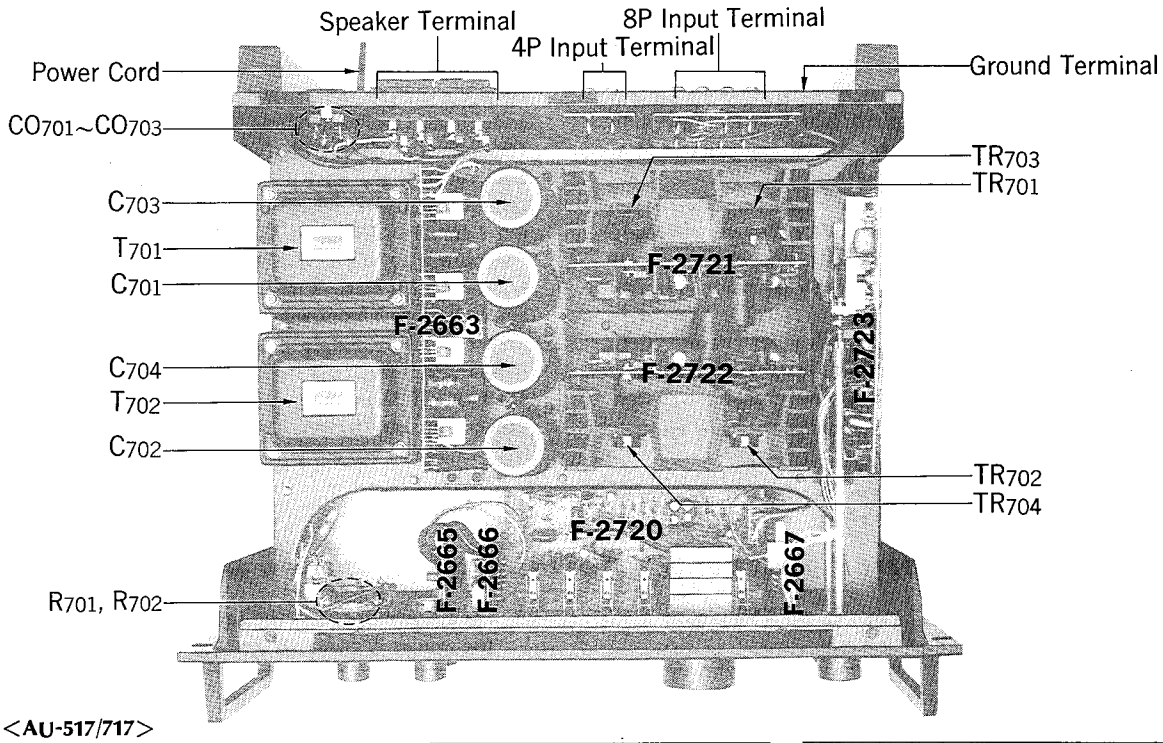
# 5. OTHER PARTS

## 5-1. Top View

〈AU-517〉




〈AU-717〉



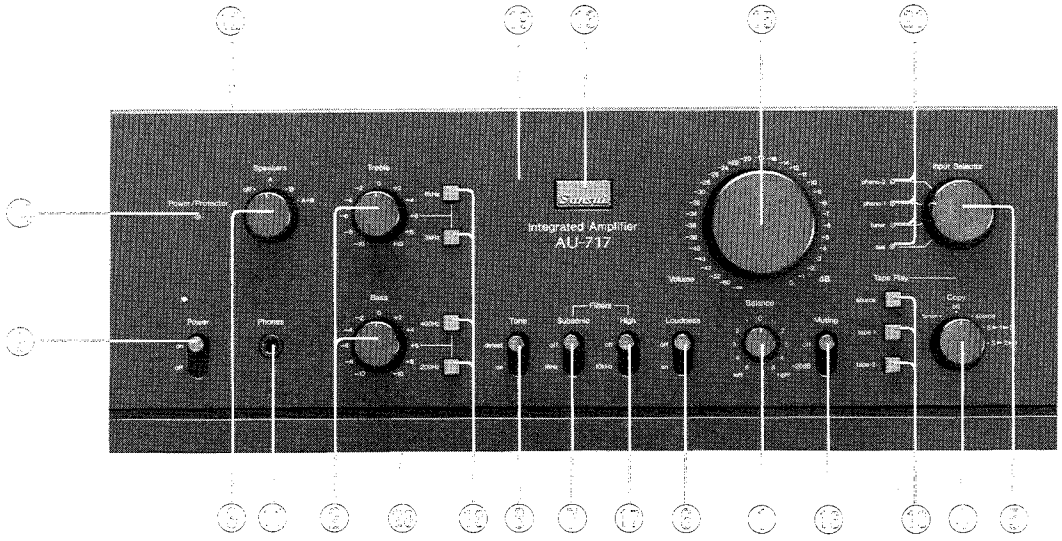

**Parts List <AU-517/717>**

| Parts No. | Stock No. | Description |
|---|---|---|
| C705 | 0659801 | 0.01μF 150V M.C. |
| C707~714 | 0602109 | 1.0μF 100V M.C. |
| R701, 702 | 0202221 | 220Ω 2W N.I.R. |
| CO701~703 | 2450060 | AC Outlet XX |
| | 5066280 | AC Outlet EU, BS |
| | 2290190 | Speaker Terminal |
| | 3800010 | Power Cord XX |
| | 3800190 | Power Cord EU |
| | 3800320 | Power Cord BS |
| | 2300060 | Power Fuse Holder XX |
| | 2300090 | Power Fuse Holder EU, BS |
| | 2410091 | Voltage Selector Plug XX |
| | 2410830 | Voltage Selector Socket XX |
| | 2411240 | Voltage Selector SW EU, BS |
| | 2230052 | Ground Terminal |
| **AU-517 Only** | | |
| TR701, 702 | 0306450-2 | 2SC1403A R, O, Y } Transistor |
| TR703, 704 | 0300830-2 | 2SA745A R, O, Y } Transistor |
| C701~704 | 0559518 | 12000μF 63V E.C. |
| T701, 702 | 4002590 | Power Transformer XX |
| | 4002594 | Power Transformer EU, BS |
| | 4002592 | Power Transformer UL, CSA |
| F701 | 0432270 | 3.5A 125V } Power Fuse XX |
| | 0432500 | 7A 125V } Power Fuse XX |
| | 0435140 | 2.5A Power Fuse EU, BS |
| **AU-717 Only** | | |
| TR701, 702 | 0305840-2 | 2SC1116 R, O, Y } Transistor |
| TR703, 704 | 0300520-2 | 2SA747 R, O, Y } Transistor |
| C701~704 | 0559520 | 15000μF 63V E.C. |
| T701, 702 | 4002580 | Power Transformer XX |
| | 4002584 | Power Transformer EU, BS |
| | 4002582 | Power Transformer UL, CSA |
| F701 | 0432290 | 5A 125V } Power Fuse XX |
| | 0434060 | 10A 250V } Power Fuse XX |
| | 0435150 | 3.15A Power Fuse EU, BS |



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## 5-2. Front View 〈AU-717〉




### Parts List <AU-517/717>

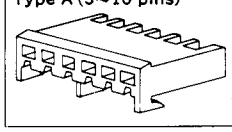
| Parts No. | Stock No. | Description |
|---|---|---|
| 1 | 5318850 | N-7 Type Knob |
| | 1015170, 1 | 250kΩ (MN)×2 Balance Volume L=25 P=5 |
| 2 | 5318840 | K-7 Type Knob |
| | 1015230, 1 | 100kΩ (C)×2 Treble, Bass Volume L=25 P=7 |
| 3 | 5318840 | K-7 Type Knob |
| | 1101780, 1 | Rotary Switch, Speakers |
| 4 | 5318840 | K-7 Type Knob |
| | 1190410 | Rotary Switch, Tape Copy |
| 5 | 5318830 | I-7 Type Knob |
| | 1190410 | Rotary Switch, Input Selector |
| 8 | 5326611 | Lever Switch Knob |
| | 1171150 | Lever Switch, Tone Defeat |
| 9 | 5326611 | Lever Switch Knob |
| | 1171630 | Lever Switch, Power |
| | 1171610 | Lever Switch, Power EU, BS |
| 10 | 5326620 | Push Switch Knob |
| | 5286721 | Knob Guide |
| | 1131400 | Push Switch, Tape Play |
| 11 | 2430290 | Head Phone Jack |
| 12 | 5006670 | Bonnet |
| 13 | 5336600 | Sansui Badge |
| 14 | 0319110 | Light Emitted Diode |
| | 5507070 | Leg |
| **AU-517 Only** | | |
| 6 | 5326611 | Lever Switch Knob |
| | 1171120 | Lever Switch, Loudnes |
| 7 | 5326611 | Lever Switch Knob |
| | 1171120 | Lever Switch, Subsonic Filter |
| 15 | 5318860 | H-7 Type Knob |
| | 1090250 | 150kΩ×2 Volume L=25 P=7 |
| 19 | 7007580 | Front Panel Ass'y |
| 20 | 5058740 | Bottom Plate |
| **AU-717 Only** | | |
| 6 | 5326611 | Lever Switch Knob |
| | 1171130 | Lever Switch, Loudnes |
| 7 | 5326611 | Lever Switch Knob |
| | 1171130 | Lever Switch, Subsonic Filter |
| 15 | 5318860 | H-7 Type Knob |
| | 1090280 | 150kΩ×2 5kΩ×2 Volume L=25 P=9 |
| 16 | 5326611 | Lever Switch Knob |
| | 1171120 | Lever Switch, Muting |
| 17 | 5326611 | Lever Switch Knob |
| | 1171130 | Lever Switch, High Filter |
| 18 | 5326620 | Push Switch Knob |
| | 5286721 | Knob Guide |
| | 1131400 | Push Switch, Turn Over |
| 19 | 7007570 | Front Panel Ass'y |
| 20 | 5058730 | Bottom Plate |
| 21 | 0319110 | Light Emitted Diode |

## ● Figures

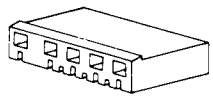
### Connectors & Pin Ass'y

**Connectors**

Type A (3~10 pins)



Type B (2~6 pins)

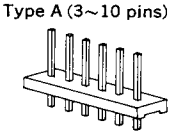


| Stock No. | |
|---|---|
| 2 Pins | 2420450 |
| 3 Pins | 2420460 |
| 3 Pins(RED) | 2420650 |
| 4 Pins | 2420470 |
| 5 Pins | 2420480 |
| 6 Pins | 2420490 |

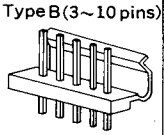
NOTE: Since stock number of famale connectors (type B) with wires are not shown in each parts list of Complete circuit board, please refer to the above parts list when ordering the connector.

**Pin Ass'y**

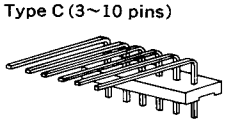
Type A (3~10 pins)



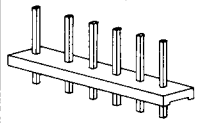
Type B (3~10 pins)



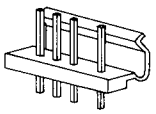
Type C (3~10 pins)



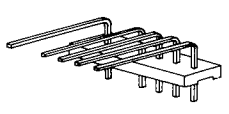
Type D (2~6 pins)



Type E (2~6 pins)



Type F (2~6 pins)



## Abbreviations

| | | | | | |
|---|---|---|---|---|---|
| **C.R.** | : | Carbon Resistor | **E.C.** | : | Electrolytic Capacitor |
| **S.R.** | : | Solid Resistor | **BP.E.C.** | : | Bi-Polar Electrolytic Capacitor |
| **Ce.R.** | : | Cement Resistor | **C.C.** | : | Ceramic Capacitor |
| **M.R.** | : | Metal Film Resistor | **Mi.C.** | : | Mica Capacitor |
| **F.R.** | : | Fusing Resistor | **O.C.** | : | Oil Capacitor |
| **N.I.R.** | : | Non-Inflammable Resistor | **P.C.** | : | Polystyrene Capacitor |
| **M.C.** | : | Mylar Capacitor | **T.C.** | : | Tantalum Capacitor |



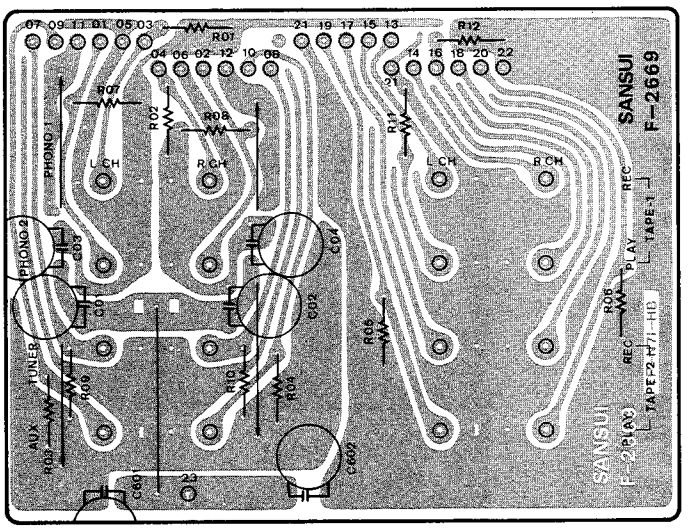
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# 6. PARTS LOCATION & PARTS LIST

Since some of capacitors and resistors are omitted from parts lists in this Service Manual, refer to the common parts list for capacitors & resistors which was appended previously to each Sansui Manual.

## 6-1. F-2669 Input Terminal Circuit Board (AU-517 Stock No. 7595201) (AU-717 Stock No. 7595171)

**Conductor Side**

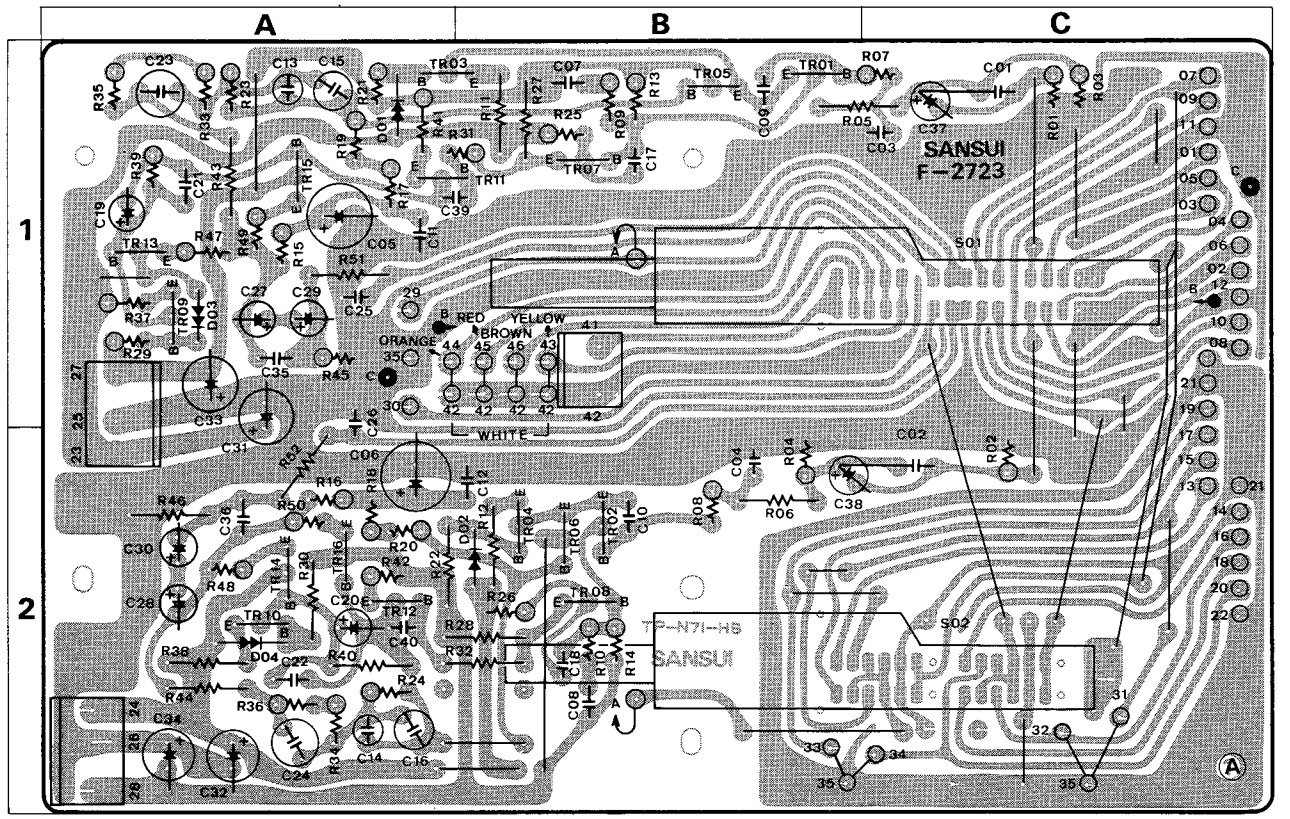



**Parts List**

| Parts No. | Stock No. | Description |
|---|---|---|
| | 2200480 | 8P Input Terminal |

## 6-2. F-2723 Equalizer Circuit Board (AU-517 Stock No. 7551171) (AU-717 Stock No. 7551161)

**Conductor Side**




**Parts List**

| Parts No. | Stock No. | Description | | Position |
|---|---|---|---|---|
| TR01, 02 | 0300900, 1 | 2SA906 (G, H) | Transistor | 1 B, 2 B |
| TR03, 04 | 0300470, 1 | 2SA726(W) (F, G) | Transistor | 1 A, 2 B |
| TR05, 06 | 0300900, 1 | 2SA906 (G, H) | Transistor | 1 B, 2 B |
| TR07, 08 | 0306290, 1 | 2SC1400(1) (E, U) | Transistor | 1 B, 2 B |
| TR09, 10 | 0300890, 1 | 2SA750(3) (E, U) | Transistor | 1 A, 2 A |
| TR11, 12 | 0306290, 1 | 2SC1400(1) (E, U) | Transistor | 1 A, 2 A |
| TR13, 14 | 0306290, 1 | 2SC1400(1) (E, U) | Transistor | 1 A, 2 A |
| TR15, 16 | 0300890, 1 | 2SA750(3) (E, U) | Transistor | 1 A, 2 A |
| D01, 02 | 0340120 | VD1212 | Varistor | 1 A, 2 B |
| D03, 04 | 0340120 | VD1212 | Varistor | 1 A, 2 A |

| Parts No. | Stock No. | Description | | Position |
|---|---|---|---|---|
| C01, 02 | 0602109 | 1.0μF | 100V M.C. | 1 C, 2 C |
| C07, 08 | 0620121 | 120pF | 50V P.C. | 1 B, 2 B |
| C13, 14 | 0620151 | 150pF | 50V P.C. | 1 A, 2 A |
| C15, 16 | 0625272 | 2700pF | 50V P.C. | 1 A, 2 A |
| C23, 24 | 0625103 | 10000pF | 50V P.C. | 1 A, 2 A |
| R17, 18 | 0231561 | 560Ω | | 1 A, 2 A |
| R19, 20 | 0231220 | 22Ω | | 1 A, 2 A |
| R23, 24 | 0231273 | 27kΩ | ½W M.R. | 1 A, 2 A |
| R33, 34 | 0231153 | 15kΩ | ½W M.R. | 1 A, 2 A |
| R35, 36 | 0231304 | 300kΩ | ½W M.R. | 1 A, 2 A |

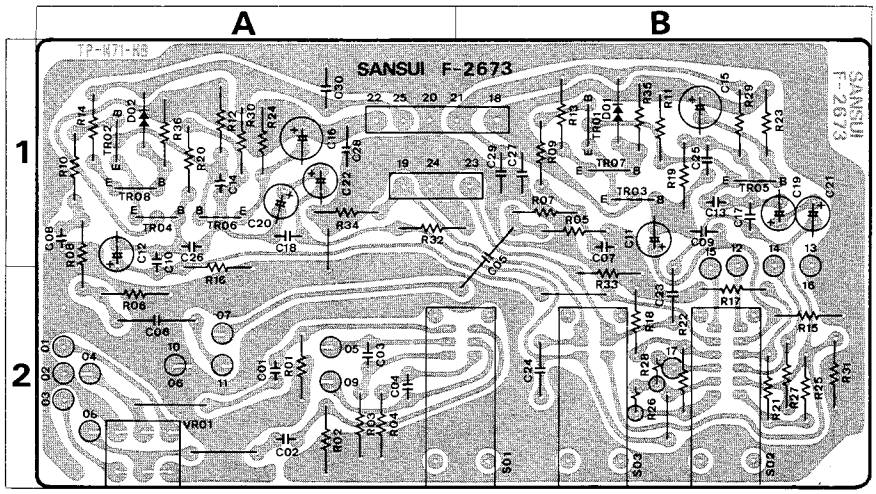
| Parts No. | Stock No. | Description | | Position |
|---|---|---|---|---|
| R47, 48 | 0193820 | 82Ω | ¼W F.R. | 1 A, 2 A |
| R49, 50 | 0193820 | 82Ω | ¼W F.R. | 1 A, 2 A |
| S01 | 1190420 | Input Rotary Switch | | 1 B, C |
| S02 | 1190410 | Tape Copy Rotary Switch | | 2 B, C |
| | 2410920 | 3P Pin Ass'y Type E | | |
| **AU-717 Only** | | | | |
| | 2410910 | 2P Pin Ass'y Type E | | |



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## 6-3. F-2673 Tone Control Circuit Board (AU-517 Stock No. 7561841)

Conductor Side

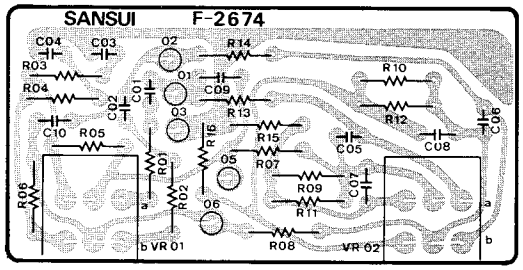



### Parts List

| Parts No. | Stock No. | Description | Position |
|---|---|---|---|
| TR01, 02 | 0306010, 1 | 2SC1222(2) (U, E) | 1B, 1A |
| TR03, 04 | 0306010, 1 | 2SC1222(2) (U, E) | 1B, 1A |
| TR05, 06 | 0300890, 1 | 2SA750(3) (E, U) | 1B, 1A |
| TR07, 08 | 0306010, 1 | 2SC1222(2) (U, E) | 1B, 1A |
| D01, 02 | 0340120 | VD1212 Varistor | 1B, 2B |
| C01, 02 | 0610361 | 360pF 50V P.C. | 2A |
| C05, 06 | 0602338 | 0.33μF 100V M.C. | |
| VR01 | 1015170, 1 | 250kΩ (MN)×2 Balance VR | 2A |
| S01 | 1171120 | Loudness Lever Switch | 2A, B |
| S02 | 1171150 | Tone Defeat Lever Switch | 2B |
| S03 | 1171120 | Subsonic Filter Lever Switch | 2B |
| | 2410570 | 5P Pin Ass'y Type D | |
| | 2410920 | 3P Pin Ass'y Type E | |

## 6-4. F-2674 Bass & Treble Volume Circuit Board (AU-517 Stock No. 7561861)

Conductor Side

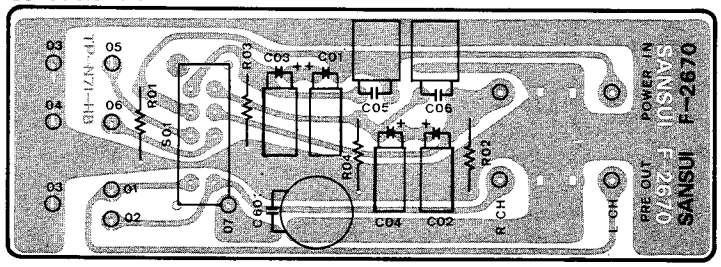



### Parts List

| Parts No. | Stock No. | Description |
|---|---|---|
| VR01, 02 | 1015230, 1 | 100kΩ (C)×2 Treble, Bass Volume |

## 6-5. F-2670 Pre-Main Switch Circuit Board (AU-517 Stock No. 7595211) (AU-717 Stock No. 7595191)

Conductor Side

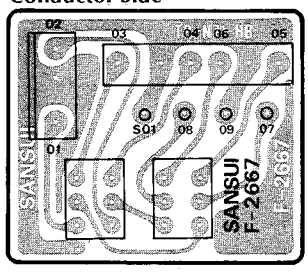



### Parts List

| Parts No. | Stock No. | Description |
|---|---|---|
| S01 | 1110290 | PRE-MAIN Slide Switch |
| | 2200500 | 4P Input terminal |

## 6-6. F-2667 Tape Play Circuit Board (AU-517 Stock No. 7595181) (AU-717 Stock No. 7595221)

Conductor Side




### Parts List

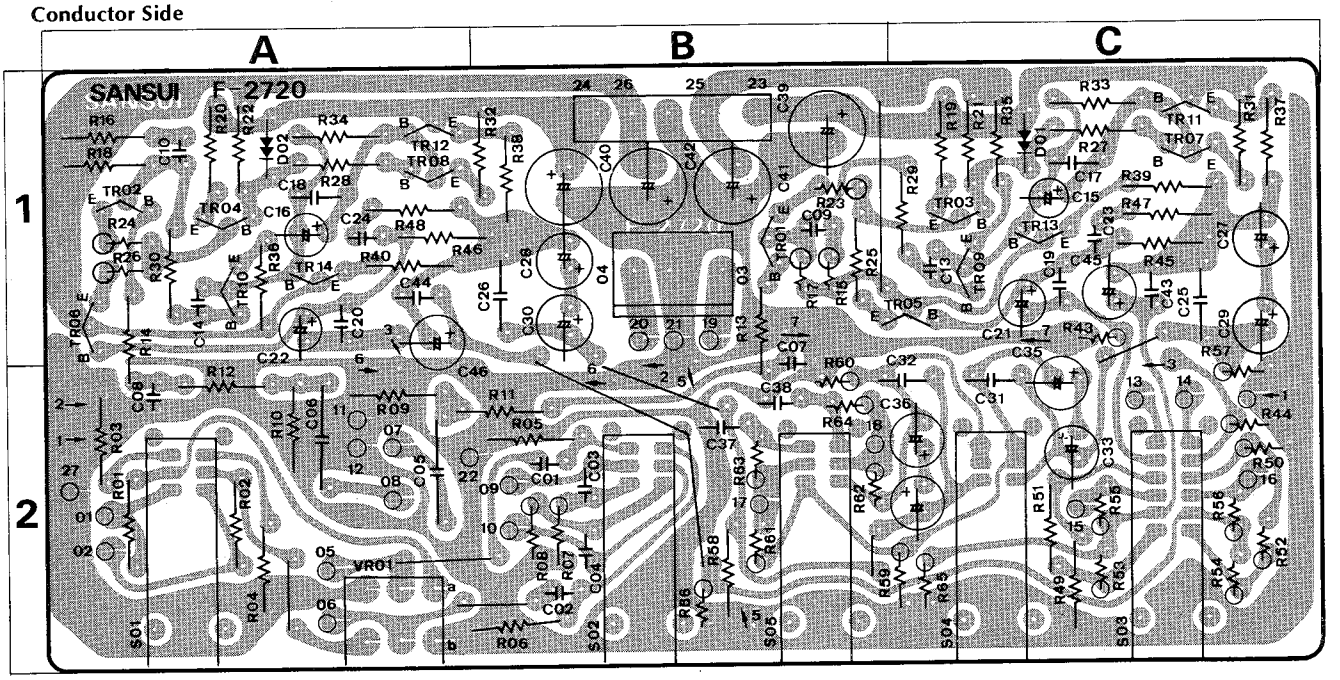
| Parts No. | Stock No. | Description |
|---|---|---|
| S01 | 1131400 | Tape Push Switch |
| | 2410700 | 6P Pin Ass'y Type F |
| | 2410920 | 3P Pin Ass'y Type E |



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## 6-7. F-2720 Tone Control Circuit Board (AU-717 Stock No. 7561941)

Conductor Side




### Parts List

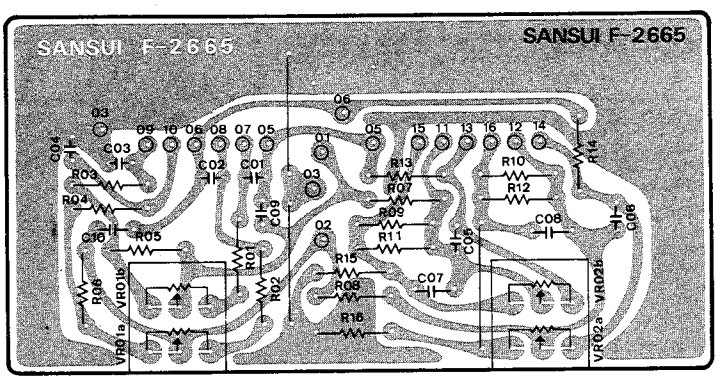
| Parts No. | Stock No. | Description | Position |
|---|---|---|---|
| TR01, 02 | 0360370~2 | 2SA798 (F, G, H) | 1B, 1A |
| TR03, 04 | 0300470, 1 | 2SA726(W) (F, G) | 1C, 1A |
| TR05, 06 | 0306290, 1 | 2SC1400(1) (E, U) | 1C, 1A |
| TR07, 08 | 0300890, 1 | 2SA750(S) (E, U) Transistor | 1C, 1A |
| TR09, 10 | 0306290, 1 | 2SC1400(1) (E, U) | 1C, 1A |
| TR11, 12 | 0306290, 1 | 2SC1400(1) (E, U) | 1C, 1A |
| TR13, 14 | 0300890, 1 | 2SA750(S) (E, U) | 1C, 1A |

| Parts No. | Stock No. | Description | Position |
|---|---|---|---|
| D01, 02 | 0340120 | VD1212 Varistor | 1C, 1A |
| C01, 02 | 0620361 | 360pF 50V P.C. | 2B |
| C05, 06 | 0602338 | 0.33μF 100WV M.C. | 2A |
| C09, 10 | 0620121 | 120pF 50V P.C. | 1B, 1A |
| R37, 38 | 0191820 | 82Ω ¼W F.R. | 1C, 1B |
| R39, 40 | 0191820 | 82Ω ¼W F.R. | 1C, 1A |
| VR01 | 1015170, 1 | 250kΩ(MN)×2 Balance VR | 2A |

| Parts No. | Stock No. | Description | Position |
|---|---|---|---|
| S01 | 1171130 | Muting SW | 2A |
| S02 | 1171130 | Loudness SW | 2B |
| S03 | 1171150 | Tone Defeat SW | 2C |
| S04 | 1171130 | Subsonik Filter SW | 2C |
| S05 | 1171130 | High Filter SW | 2B |
| | 2410570 | 5P Pin Ass'y Type D | |
| | 2410920 | 3P Pin Ass'y Type E | |

## 6-8. F-2665 Bass & Treble Volume Circuit Board (AU-717 Stock No. 7561851)

Conductor Side

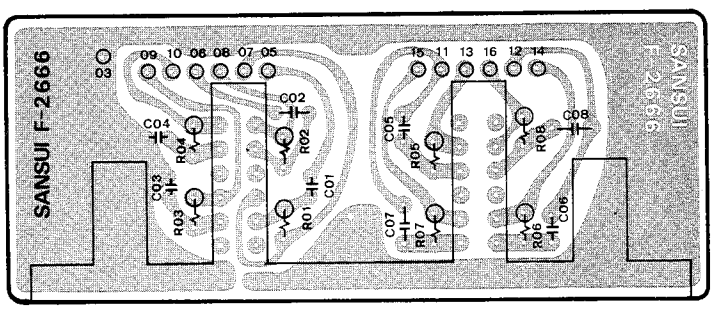



### Parts List

| Parts No. | Stock No. | Description |
|---|---|---|
| VR01, 02 | 1015230, 1 | 100kΩ (C)×2 Treble, Bass Volume |

## 6-9. F-2666 Turn Over Switch Circuit Board (AU-717 Stock No. 7561871)

Conductor Side




### Parts List

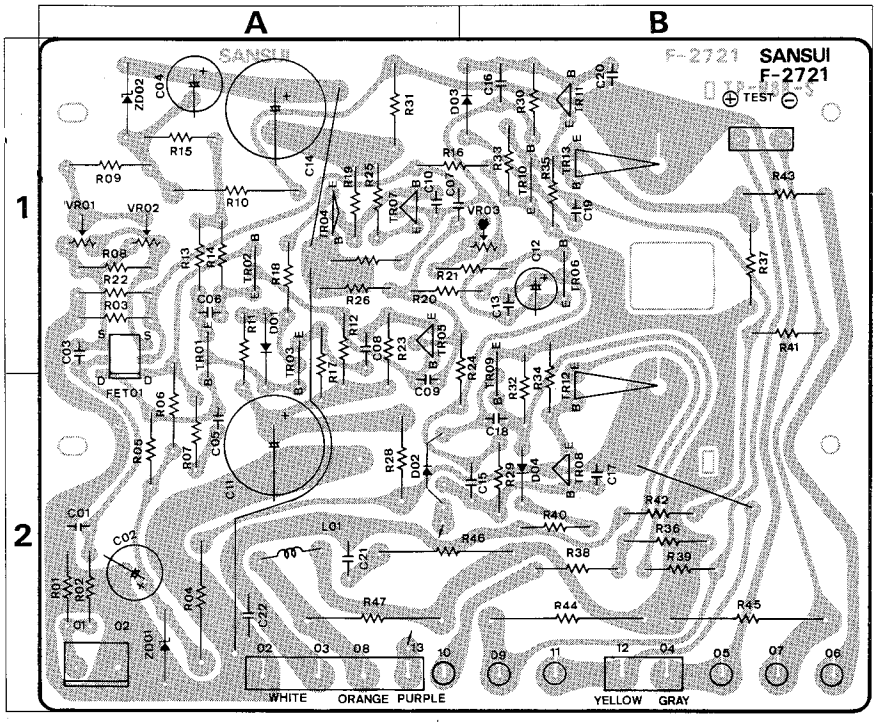
| Parts No. | Stock No. | Description |
|---|---|---|
| S01 | 1131410 | Turn Over Push SW |



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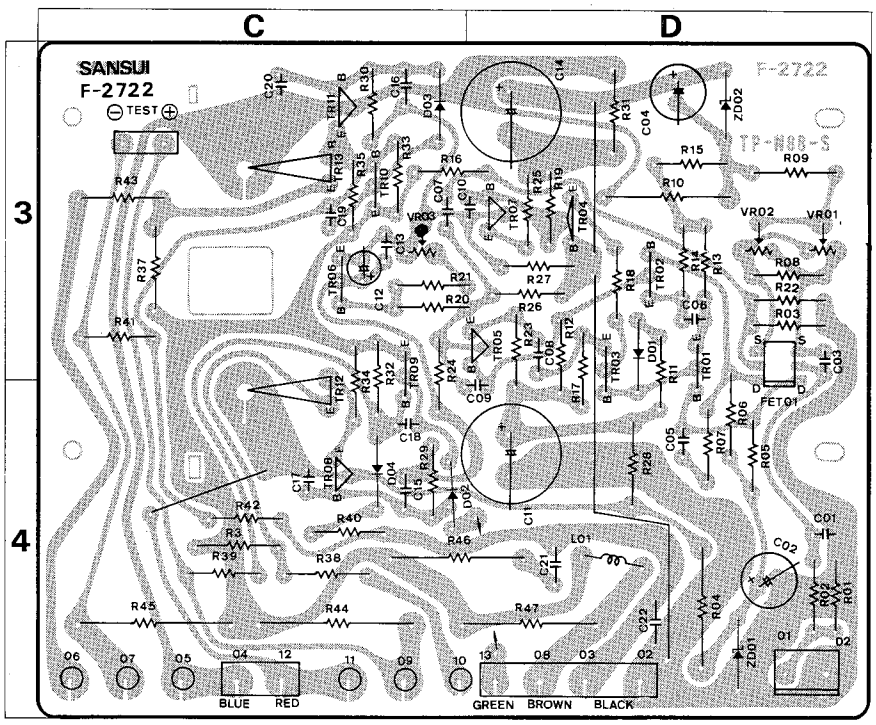
## 6-10. F-2721 Driver Circuit Board (L-CH) (AU-517 Stock No. 7571721) (AU-717 Stock No. 7571741)

**Conductor Side**




## 6-11. F-2722 Driver Circuit Board (R-ch) (AU-517 Stock No. 7571731) (AU-717 Stock No. 7571751)

**Conductor Side**




### Parts List

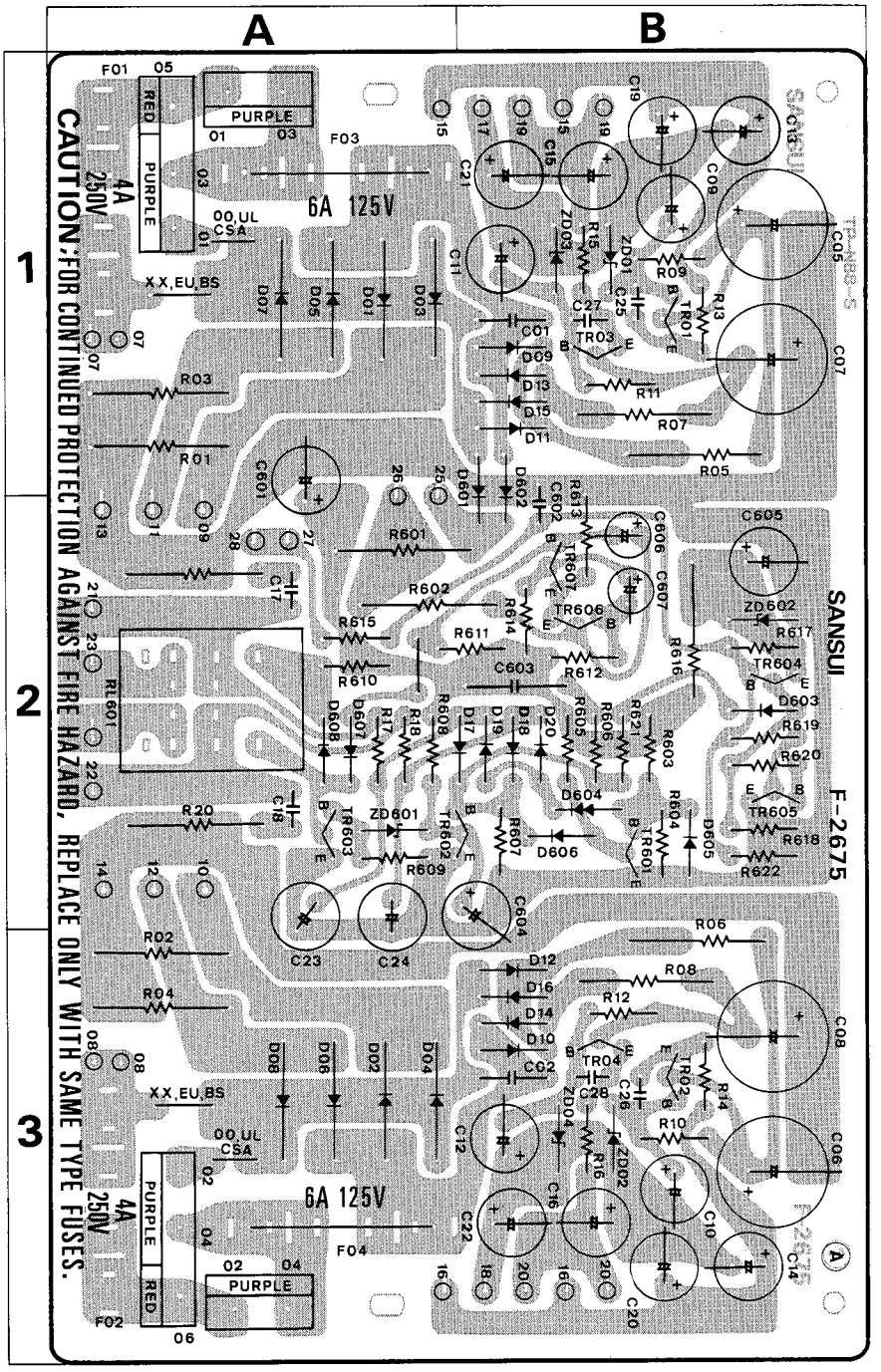
| Parts No. | Stock No. | Description | Position |
|---|---|---|---|
| TR01 | 0306290, 1 | 2SC1400(1)(E, U) | 1A.3D |
| TR02 | 0306290, 1 | 2SC1400(1)(E, U) | 1A.3D |
| TR03 | 0300890, 1 | 2SA750(3) (E, U) | 1A.3D |
| TR04 | 0300890, 1 | 2SA750(3) (E, U) | 1A.3D |
| TR05 | 0300791, 2 | 2SA899 (B, V) | 1A.3D |
| TR06 | 0305951, 2 | 2SC945 (Q, P) | 1B.3C |
| TR07 | 0306401, 2 | 2SC1904 (B, V) Transistor | 1A.3D |
| TR08 | 0306401, 2 | 2SC1904 (B, V) | 2B.4C |
| TR09 | 0305951, 2 | 2SC945 (Q, P) | 1,2B.3,4C |
| TR11 | 0300791, 2 | 2SA899 (B, V) | 1B.3C |
| TR12 | 0308441~3 | 2SD382 (M, L, K) | 2B.4C |
| TR13 | 0303271, 2 | 2SB537 (M, L, K) | 1B.3C |
| FT01 | 0370251, 2 | 2SK97 FET | |
| D01 | 0311160 | 1S2473D | 1A.3D |
| D02 | 0311160 | 1S2473D | 2A.4C |
| D03 | 0311160 | 1S2473D Diode | 1B.3C |
| D04 | 0311160 / 0311180 | 1S2473D / 1S1588 | 2B.4C |
| ZD01 | 0316170 | EQB01-22 Zener Diode | 2A.4D |
| ZD02 | 0316170 | EQB01-22 | 1A.3D |
| C01 | 0620101 | 100pF 50V P.C. | 2A.4D |
| C05 | 0620331 | 330pF | 2A.4D |
| C07 | 0669505 | 5pF 50V C.C. | 1B.3C |
| R04 | 0202222 | 2.2kΩ 2W N.I.R. | 2A.4D |
| R05 | 0231332 | 3.3kΩ ½W M.R. | 2A.4D |
| R06 | 0231332 | 3.3kΩ | 2A.4D |
| R09 | 0103392 | 3.9kΩ ½W C.R. | 1A.3D |
| R10 | 0202152 | 1.5kΩ 2W N.I.R. | 1A.3D |
| R28 | 0210470 | 47Ω ½W N.I.R. | 2A.4D |
| R31 | 0210470 | 47Ω | 1A.3D |
| R36 | 0103560 | 56Ω ½W C.R. | 2B.4C |
| R37 | 0103560 | 56Ω | 1B.3C |
| R38 | 0103479 | 4.7Ω | 2B.4D |
| R43 | 0103479 | 4.7Ω | 1B.3C |
| R44 | 0135338 | 0.33Ω 5W Ce.R. | 2B.4C |
| R45 | 0135338 | 0.33Ω | 2B.4C |
| R46 | 0202100 | 10Ω 2W N.I.R. | 2A,B.4C,D |
| R47 | 0132229 | 2.2Ω 2W Ce.R. | 2A.4C |
| L01 | 4210290 | 1.5μH Coil | 2A.4D |
| VR01 | 1033570 | 100Ω(B) Volume | 1A.3D |
| VR02 | 1035330 | 2.2kΩ(B) Volume | 1A.3D |
| VR03 | 1035310 | 1kΩ(B) Volume | 2A.4D |
| **AU-517 Only** | | | |
| R03 | 0107102 | 1kΩ ¼W C.R. | 1A.3D |
| R16 | 0107223 | 22kΩ | 1A,B.3C,D |
| R28 | 0210560 | 56Ω ½W N.I.R. | 2A.4D |
| R31 | 0210560 | 56Ω | 1A.3D |
| **AU-717 Only** | | | |
| R03 | 0107122 | 1.2kΩ ¼W C.R. | 1A.3D |
| R16 | 0107273 | 27kΩ | 1A,B.3C,D |
| R22 | 0107103 | 10kΩ | 1A.3D |
| R28 | 0210470 | 47Ω ½W N.I.R. | 2A.4D |
| R31 | 0210470 | 47Ω | 1A.3D |



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## 6-12. F-2675 Power Supply & Protector Circuit Board (AU-517 Stock No. 7502331)

Conductor Side




### Parts List

| Parts No. | Stock No. | Description | Position |
|---|---|---|---|
| TR01, 02 | 0308521, 2 | 2SD438 (E, F) | 1 B . 3 B |
| TR03, 04 | 0303361, 2 | 2SB560 (E, F) | 1 B . 3 B |
| TR601 | 0305951, 2 | 2SC945 (Q, P) | 2 B |
| TR602 | 0305951, 2 | 2SC945 (Q, P) | 2 B |
| TR603 | 0305951, 2 | 2SC945 (Q, P) Transistor | 2 A |
| TR604 | 0300510, 1 | 2SA733 (P, Q) | 2 B |
| TR605 | 0305951, 2 | 2SC945 (Q, P) | 2 B |
| TR606 | 0305951, 2 | 2SC945 (Q, P) | 2 B |
| TR607 | 0305951, 2 | 2SC945 (Q, P) | 2 B |
| D01, 02 | 0311530 | 30D2 | 1 A . 3 A |
| D03, 04 | 0311530 | 30D2 | 2 A |
| D05, 06 | 0311530 | 30D2 | 1 A . 3 A |
| D07, 08 | 0311530 | 30D2 | 1 A . 3 A |
| D09, 10 | 0310350 | 10D2 (1S2227) | 1 B . 3 B |
| D11, 12 | 0310350 | 10D2 (1S2227) | 1 B . 3 B |
| D13, 14 | 0310350 | 10D2 (1S2227) | 1 B . 3 B |
| D15, 16 | 0310350 | 10D2 (1S2227) Diode | 3 B . 3 B |

| Parts No. | Stock No. | Description | Position |
|---|---|---|---|
| D17~18 | 0311160 | 1S2473D | 2 B |
| | 0311180 | 1S1588 | |
| D19~20 | 0311160 | 1S2473D | 2 B |
| | 0311180 | 1S1588 | |
| D601 | 0310350 | 10D2 (1S2227) | 2 A |
| D602 | 0310350 | 10D2 (1S2227) | 2 A |
| D603 | 0311160 | 1S2473D | 2 B |
| D604 | 0340120 | VD1212 Varistor | 2 B |
| D605 | 0311160 | 1S2473D | 2 B |
| D606 | 0311160 | 1S2473D Diode | 2 B |
| D607 | 0311160 | 1S2473D | 2 B |
| D608 | 0310340 | 10D1 (1S2226) | 2 A |
| ZD01, 02 | 0316570 | RD33E (B) | 1 B . 3 B |
| ZD03, 04 | 0316570 | RD33E (B) Zener Diode | 1 B . 3 B |
| ZD601 | 0315760 | EQA01-06R | 2 B |
| ZD602 | 0316390 | RD6.2E (B) | 2 B |
| C01~02 | 0655103 | 10000pF 500V C.C. | 1 B . 3 B |

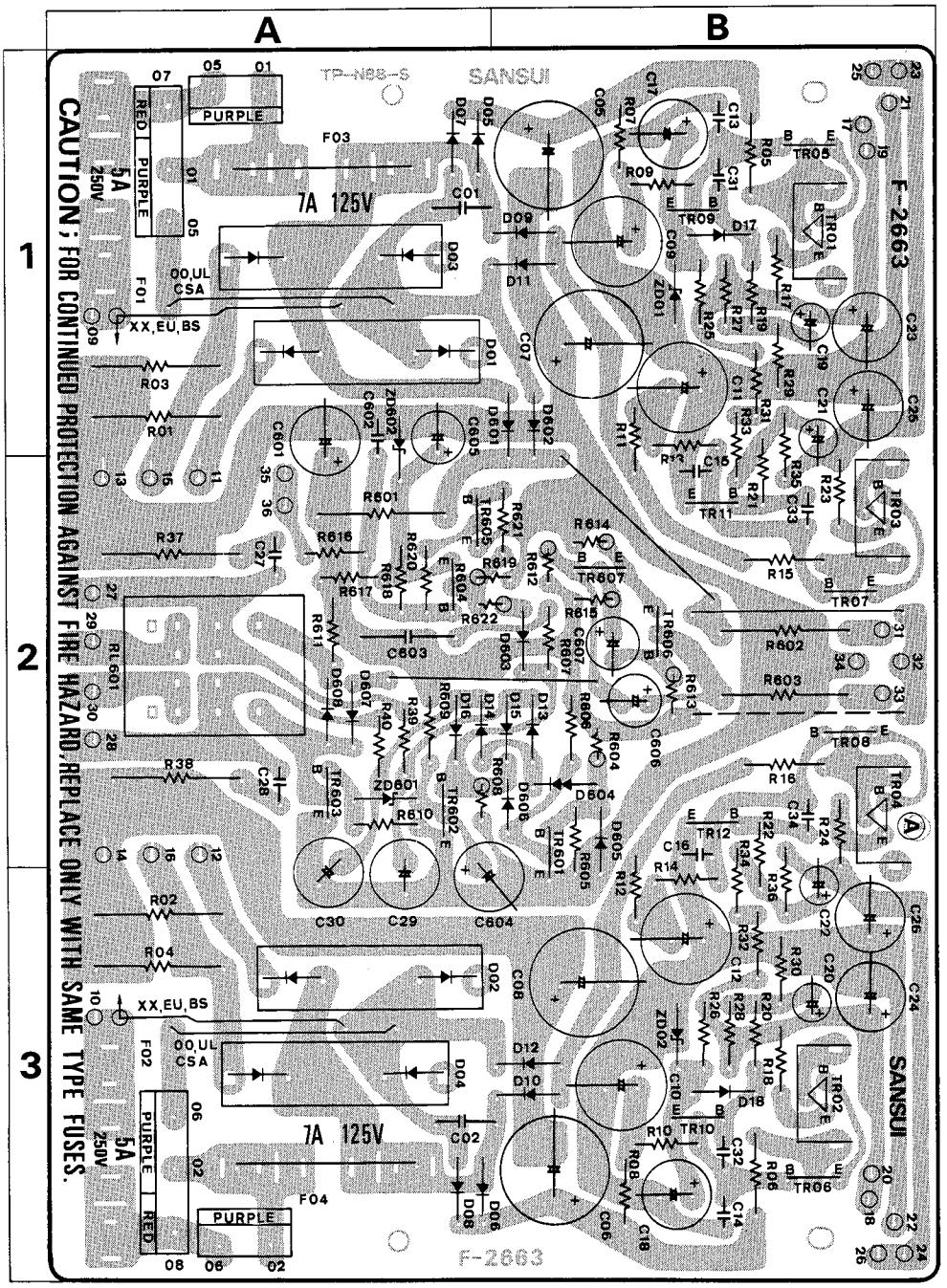
| Parts No. | Stock No. | Description | Position |
|---|---|---|---|
| C603 | 0602338 | 0.33μF 100WV M.C. | 2 B |
| R01, 02 | 0202272 | 2.7kΩ 2 W N.I.R. | 1 A . 3 A |
| R03, 04 | 0202272 | 2.7kΩ 2 W N.I.R. | 1 A . 3 A |
| R05, 06 | 0210101 | 100Ω ½W N.I.R. | 2 B . 3 B |
| R07, 08 | 0210101 | 100Ω ½W N.I.R. | 1 B . 3 B |
| R19, 20 | 0202100 | 10Ω | 2 A |
| R601 | 0202391 | 390Ω 2 W N.I.R. | 2 B |
| R602 | 0202222 | 2.2kΩ 2 W N.I.R. | 2 B |
| R616 | 0210472 | 4.7kΩ ½W N.I.R | 2 B |
| RL601 | 1150250 | Relay | 2 A |
| | 1150370 | Relay | |
| F01, 02 | 0435160 | 4A 125V Power fuse UL, CSA | 1 B . 3 B |
| | 0432300 | 6A 125V AC fuse XX | |
| | 0435160 | 4A-T AC fuse EU, BS | |
| | 2310220 | Fuse Holder XX | |
| | 2310230 | Fuse Holder EU, BS | |



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# 6-13. F-2663 Power Supply & Protector Circuit Board (AU-717 Stock No. 7502321)

**Conductor Side**




## Parts List

| Parts No. | Stock No. | Description | Position |
|---|---|---|---|
| TR01, 02 | 0308451, 2 | 2SD356 (D, E) | 1 B . 3 B |
| TR03, 04 | 0303281, 2 | 2SB526 (D, E) | 2 B |
| TR05, 06 | 0306270, 1 | 2SC1708 (E, U) | 1 B . 3 B |
| TR07, 08 | 0300710, 1 | 2SA847(1)(F, G) | 2 B |
| TR09, 10 | 0306270, 1 | 2SC1708 (F, G) | 1 B . 3 B |
| TR11, 12 | 0300710, 1 | 2SA847 (F, G) | 2 B |
| TR601 | 0305951, 2 | 2SC945 (Q, P) Transistor | 2 B |
| TR602 | 0305951, 2 | 2SC945 (Q, P) | 2 A |
| TR603 | 0305951, 2 | 2SC945 (Q, P) | 2 A |
| TR604 | 0300510, 1 | 2SA733 (P, Q) | 2 A |
| TR605 | 0305951, 2 | 2SC945 (Q, P) | 2 A |
| TR606 | 0305951, 2 | 2SC945 (Q, P) | 1 B |
| TR607 | 0305951, 2 | 2SC945 (Q, P) | 1 B |
| D01, 02 | 0311290 | SS-3 | 1 A . 3 A |
| D03, 04 | 0311300 | SS-3R | 1 A . 3 A |
| D05, 06 | 0310350 | 10D2 (1S2227) | 1 A . 3 A |
| D07, 08 | 0310350 | 10D2 (1S2227) | 1 A . 3 A |
| D09, 10 | 0310350 | 10D2 (1S2227) | 1 A . 3 A |
| D11, 12 | 0310350 | 10D2 (1S2227) | 1 A . 3 A |

| Parts No. | Stock No. | Description | Position |
|---|---|---|---|
| D13-14 | 0311160 | 1S2473D Diode | 1 B . 1 A |
| | 0311180 | 1S1588 Diode | |
| D15-16 | 0311160 | 1S2473D Diode | 1 B . 1 A |
| | 0311180 | 1S1588 Diode | |
| D17-18 | 0311160 | 1S2473D Diode | 1 B . 3 B |
| | 0311180 | 1S1588 Diode | |
| D601 | 0310350 | 10D2 (1S2227) Diode | 2 A |
| D602 | 0310350 | 10D2 (1S2227) Diode | 2 A |
| D603 | 0311160 | 1S2473D Diode | 2 B |
| D604 | 0340120 | VD1212 Varistor | 2 B |
| D605 | 0311160 | 1S2473D Diode | 2 B |
| D606 | 0311160 | 1S2473D Diode | 2 B |
| D607 | 0311160 | 1S2473D Diode | 2 B |
| D608 | 0310340 | 10D1 (1S2226) Diode | 2 A |
| D609 | 0340120 | VD1212 Varistor | |
| D610 | 0340120 | VD1212 Varistor | |
| ZD01, 02 | 0316310 | RD-13E (B) Zener Diode | 1 B . 3 B |
| ZD601 | 0315760 | EQA01-06R Zener Diode | 2 A |
| ZD602 | 0316390 | RD-6.2E (B) Zener Diode | 1 A |

| Parts No. | Stock No. | Description | Position |
|---|---|---|---|
| C01, 02 | 0655103 | 10000pF 500V C.C. | 1 A . 3 A |
| C03, 04 | 0655103 | 10000pF 500V C.C. | 1 A . 3 A |
| C603 | 0602338 | 0.33μF 100WV M.C. | 2 B |
| R01, 02 | 0202332 | 3.3kΩ 2 W N.I.R. | 1 A . 3 A |
| R03, 04 | 0202332 | 3.3kΩ 2 W N.I.R. | 1 A . 3 A |
| R05, 06 | 0210101 | 100Ω ½W N.I.R | 1 B . 3 B |
| R15, 16 | 0210101 | 100Ω ½W N.I.R | 2 B |
| R37, 38 | 0202100 | 10Ω 2 W N.I.R. | 2 A |
| R601 | 0202391 | 390Ω 2 W N.I.R. | 2 B |
| R602 | 0202272 | 2.7kΩ 2 W N.I.R. | 2 B |
| R603 | 0202272 | 2.7kΩ 2 W N.I.R. | 2 B |
| R617 | 0210472 | 4.7kΩ ½W N.I.R. | 2 A |
| RL601 | 1150250 | Relay | 2 A |
| | 1150370 | Relay | |
| F01, 02 | 0432290 | 5A 125V Power fuse UL, CSA | 1 A . 3 A |
| F01-04 | 0432500 | 7A 125V AC fuse XX | 1 A . 3 B |
| | 0435170 | 5A-T AC fuse EU, BS | |
| | 2310220 | Fuse Holder XX | |
| | 2310230 | Fuse Holder EU, BS | |



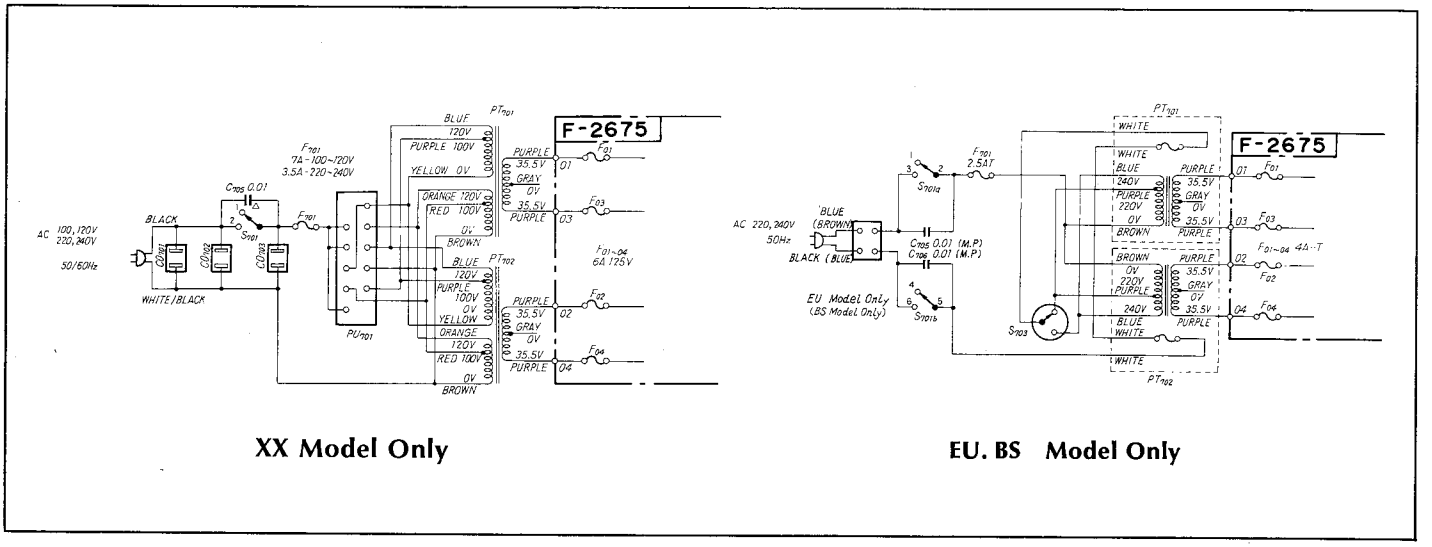
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# 7. SCHEMATIC DIAGRAM

## 7-1. AU-517 Power Supply Section

### XX EU. BS Model Only

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

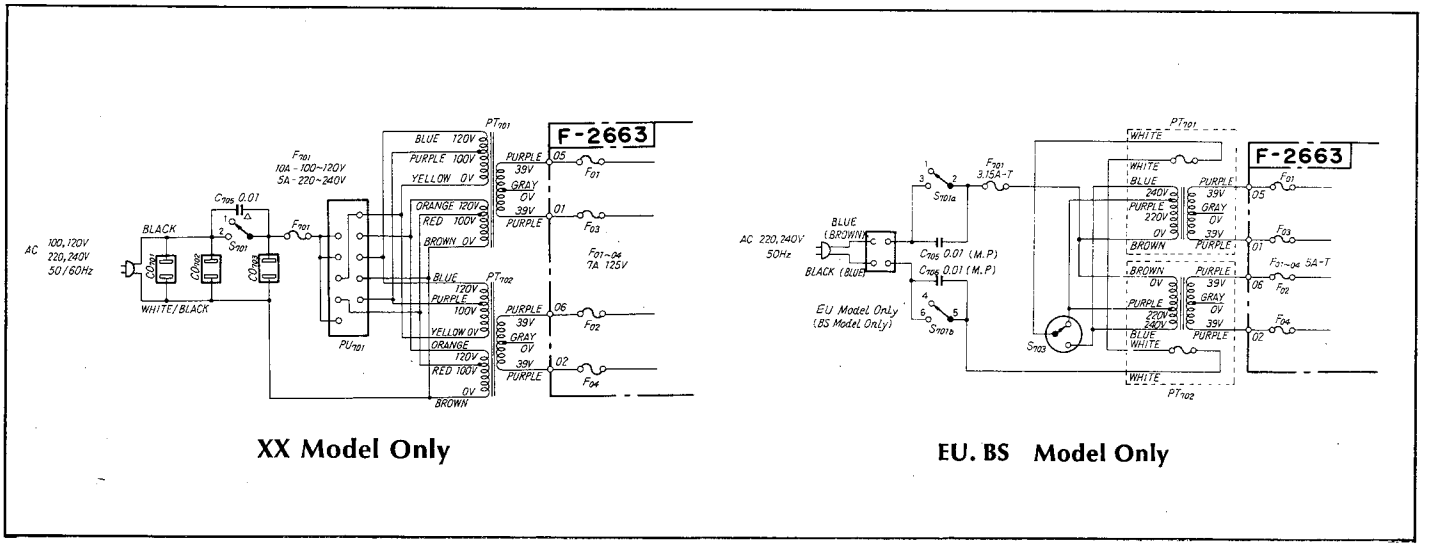



XX Model Only

EU. BS Model Only

## 7-2. AU-717 Power Supply Section

### XX EU. BS Model Only




XX Model Only

EU. BS Model Only

**NOTE:**

AS to U.L., C.S.A., B.S., ES and XX marked in the Parts Lists, note the followings:

U.L., C.S.A. ....Approved parts used in the unit which is applicable to the U.S. and Canada under safety standard.

B.S. .....Approved parts used in the unit which is applicable to British under safety reguirement.

E.U. .....Approved parts used in the unit which is applicable to Sweeden, Denmark, Norway, Finland, West Germany, and Switzerland under safety reguirement.

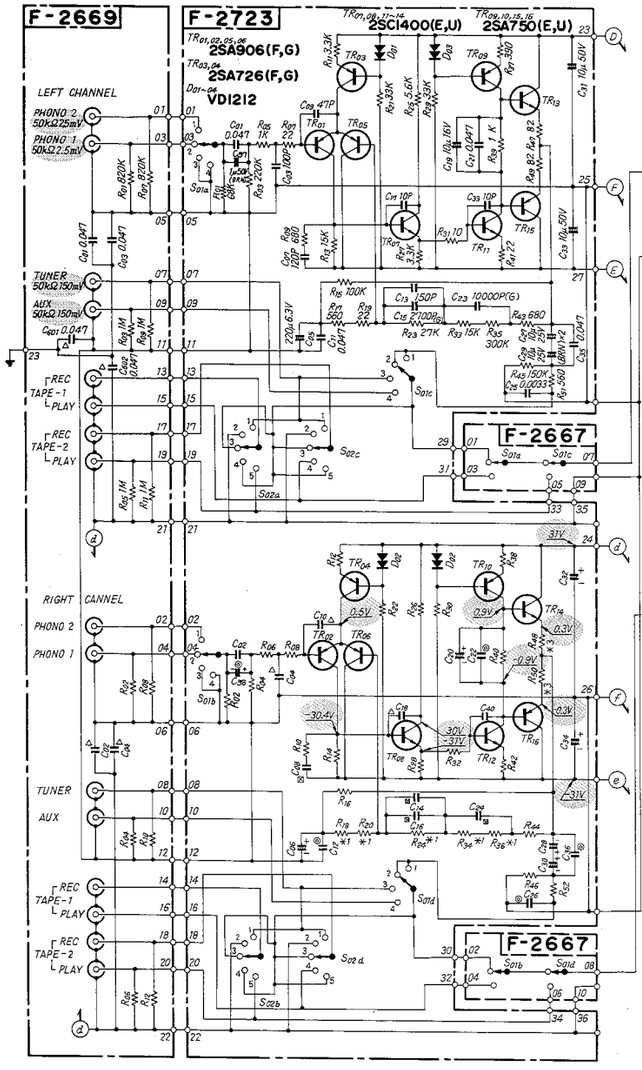
XX .....Parts used in the unit which is applicable to other countries excepting mentioned above.

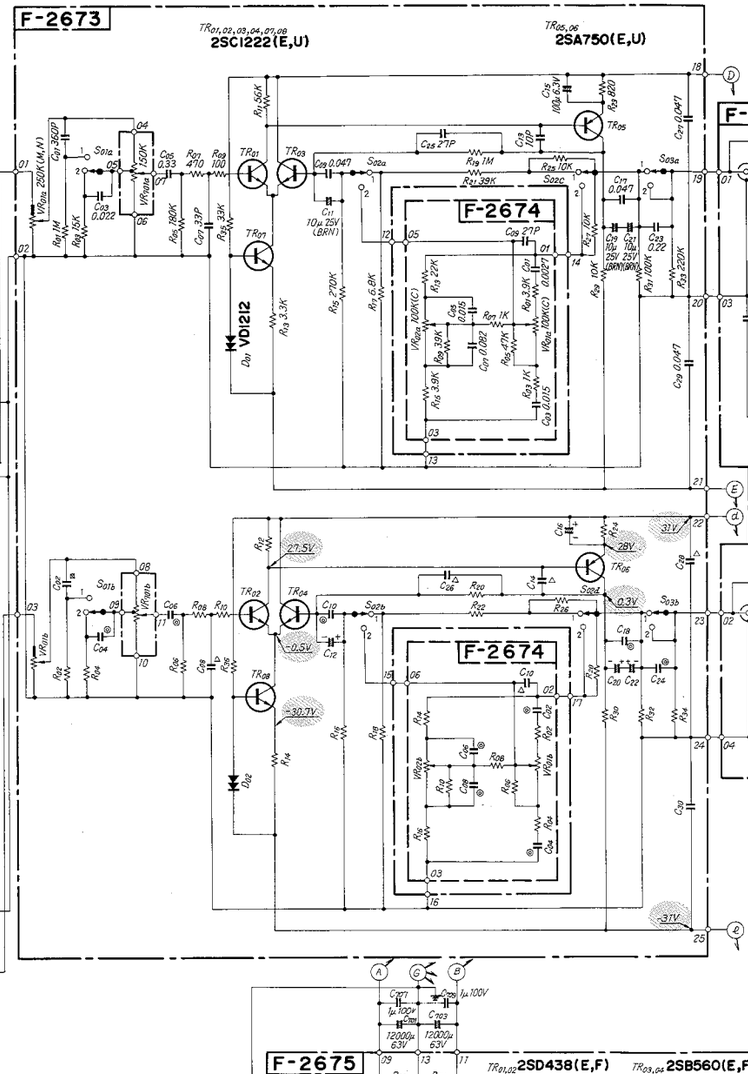
※ In parts lists, parts with no above mark in of "Description" are all the same as XX marked parts.



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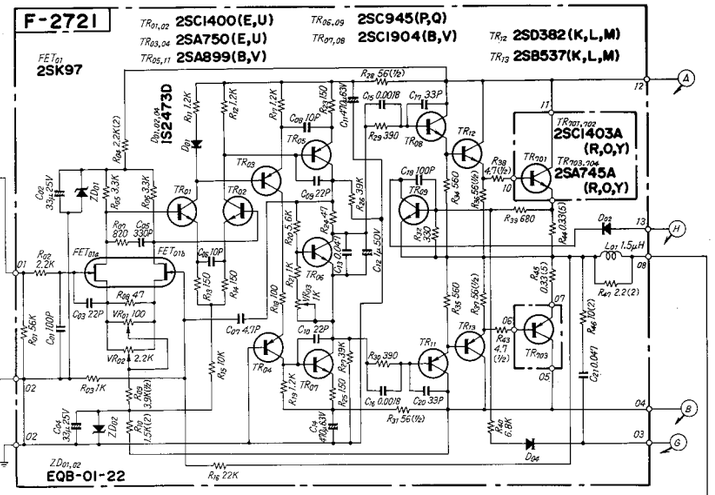
## 7-3. AU-517

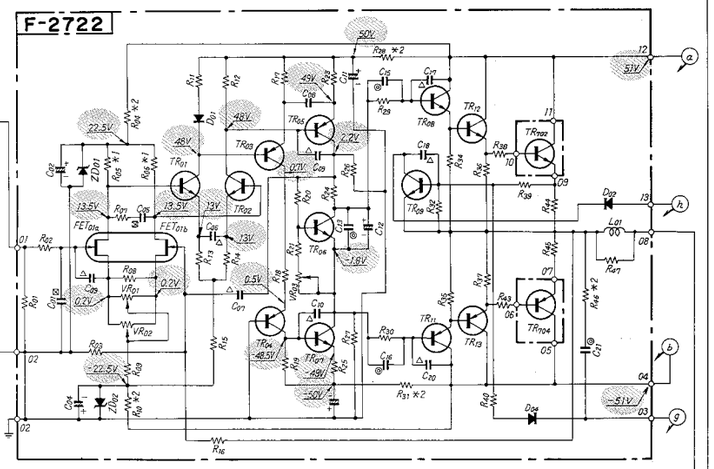


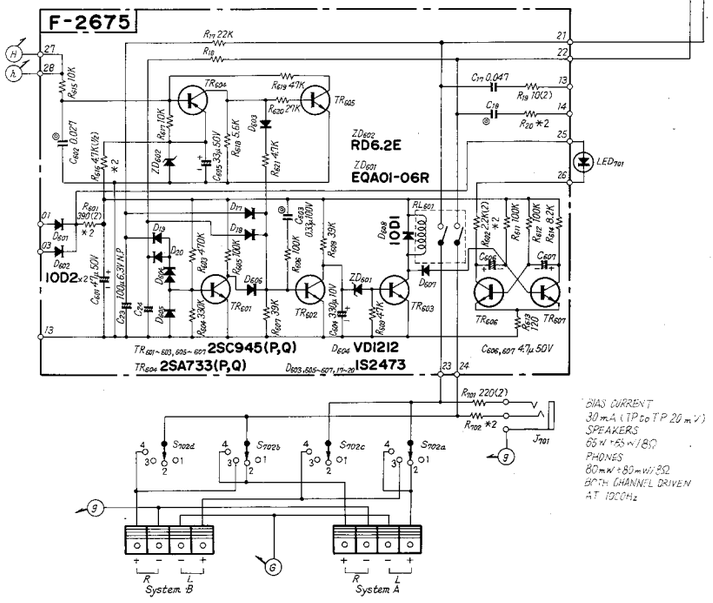



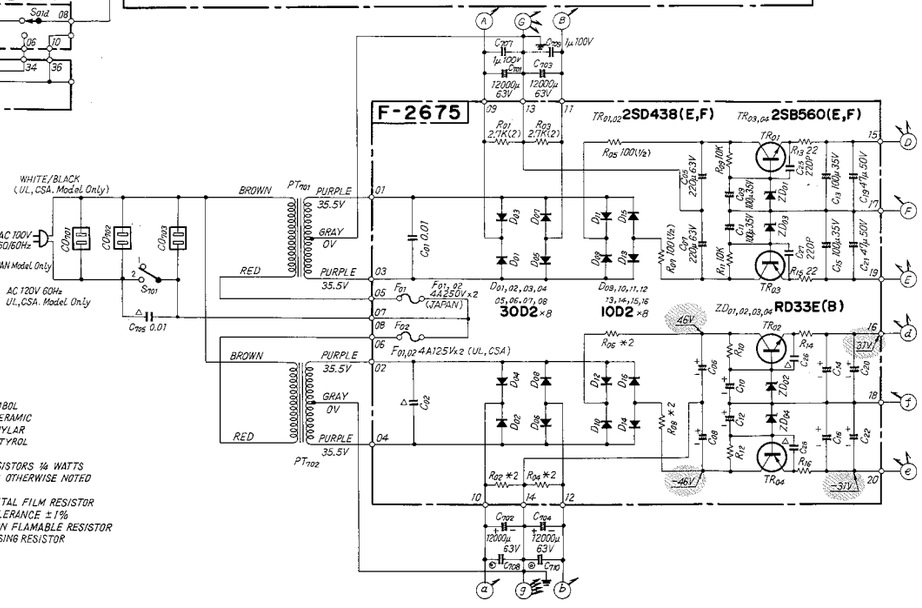







| | | | |
|---|---|---|---|
| Selector | F-2723 | S01a~d | 1. phono-2<br>2. phono-1<br>3. tuner<br>4. aux |
| Tape Copy | F-2723 | S02a~d | 1. tuner<br>2. off<br>3. source<br>4. S►1►2<br>5. S►2►1 |
| Tape Play | F-2667 | S01a,b | 1. source<br>2. tape-1 |
| | | S01c,d | 1. source<br>2. tape-2 |
| Loudness | F-2673 | S01a,b | 1. off<br>2. on |
| Tone | F-2673 | S02a~d | 1. defeat<br>2. on |
| Subsonic Filter | F-2673 | S03a,b | 1. off<br>2. 16Hz |
| PRE-POWER | F-2670 | S01a,b | 1. CONNECTED<br>2. DIRECT COUPLED<br>3. CAPACITOR COUPLED (SEPARATED) |
| Speakers | | S702a~d | 1. off<br>2. A<br>3. B<br>4. A+B |
| Power | | S701 | 1. off<br>2. on |

SYMBOL
△ CERAMIC
◎ MYLAR
▣ STYROL

ALL RESISTORS ¼ WATTS UNLESS OTHERWISE NOTED

*1. METAL FILM RESISTOR TOLERANCE ±1%
*2. NON FLAMABLE RESISTOR
*3. FUSING RESISTOR

BIAS CURRENT
30 mA (TP to TP 20 mV)
SPEAKERS
6Ω with (8Ω)
PHONES
80 mW+80 mW/8Ω
BOTH CHANNEL DRIVEN
AT 1000Hz

2SA733
2SA750
2SD560
2SC945
2SC1222
2SC1400
2SD438

2SA726
2SA847
2SA906
2SC1708

2SB537
2SD382

2SA899
2SC1904

2SA745A
2SC1403A

2SK97

1OD1
1OD2

VD1212

1S2473D

EQA01-06R
EQB01-22
RD6.2E
RD13E

30D2

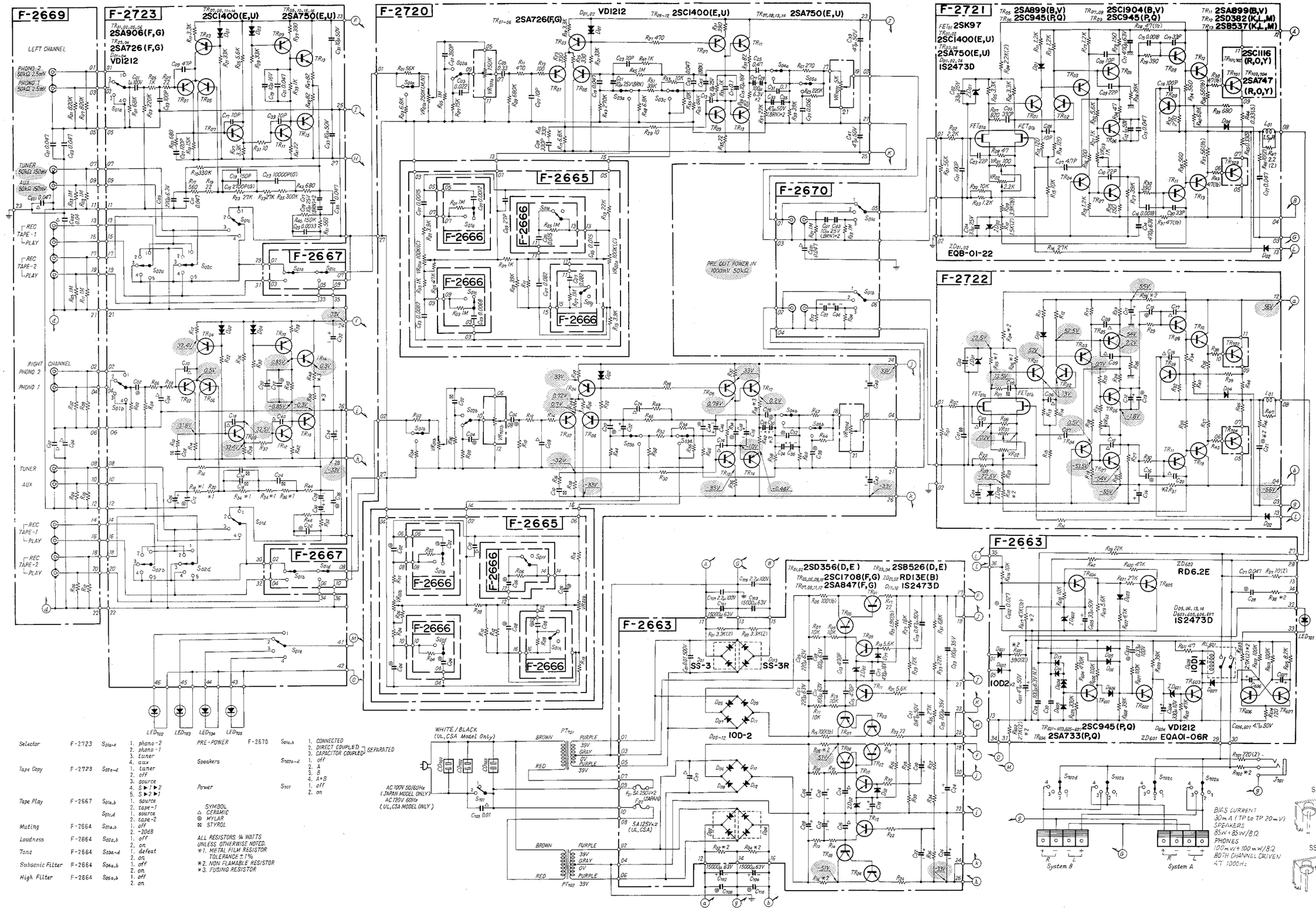
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A | B | C | D | E | F | G | H

## 7-4. AU-717




| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Selector | F-2723 | Sola-e | 1. phono-2<br>2. phono-1<br>3. tuner<br>4. aux | PRE-POWER | F-2670 | Sola,b | 1. CONNECTED<br>2. DIRECT COUPLED<br>3. CAPACITOR COUPLED (SEPARATED) |
| Tape Copy | F-2723 | Sola-d | 1. tuner<br>2. off<br>3. source<br>4. S ▶ 1 ▶ 2<br>5. S ▶ 2 ▶ 1 | Speakers | | Sw2a-d | 1. off<br>2. A<br>3. B<br>4. A+B |
| Tape Play | F-2667 | Sola,b<br>Solc,d | 1. source<br>2. tape-1<br>1. source<br>2. tape-2 | Power | | Sw1 | 1. off<br>2. on |
| Muting | F-2664 | Sola,b | 1. off<br>2. -20dB | | | | |
| Loudness | F-2664 | Sola,b | 1. off<br>2. on | | | | |
| Tone | F-2664 | Sola-d | 1. defeat<br>2. on | | | | |
| Subsonic Filter | F-2664 | Sola,b | 1. off<br>2. on | | | | |
| High Filter | F-2664 | Sola,b | 1. off<br>2. on | | | | |

SYMBOL
△ CERAMIC
◎ MYLAR
⊠ STYROL

ALL RESISTORS ¼ WATTS
UNLESS OTHERWISE NOTED.
*1. METAL FILM RESISTOR
TOLERANCE ±1%
*2. NON FLAMABLE RESISTOR
*3. FUSING RESISTOR

2SA733
2SA750
2SC945
2SC1222
2SC1400

2SA726
2SA847
2SA906
2SC1708

2SB526
2SD356

2SB537
2SD382

2SA747
2SC116

2SA899
2SC1904

2SK97

10D-1
10D-2

VD1212

1S2473D

EQA01-06R
EQB01-22
RD6.2E
RD13E

SS-3

SS-3R

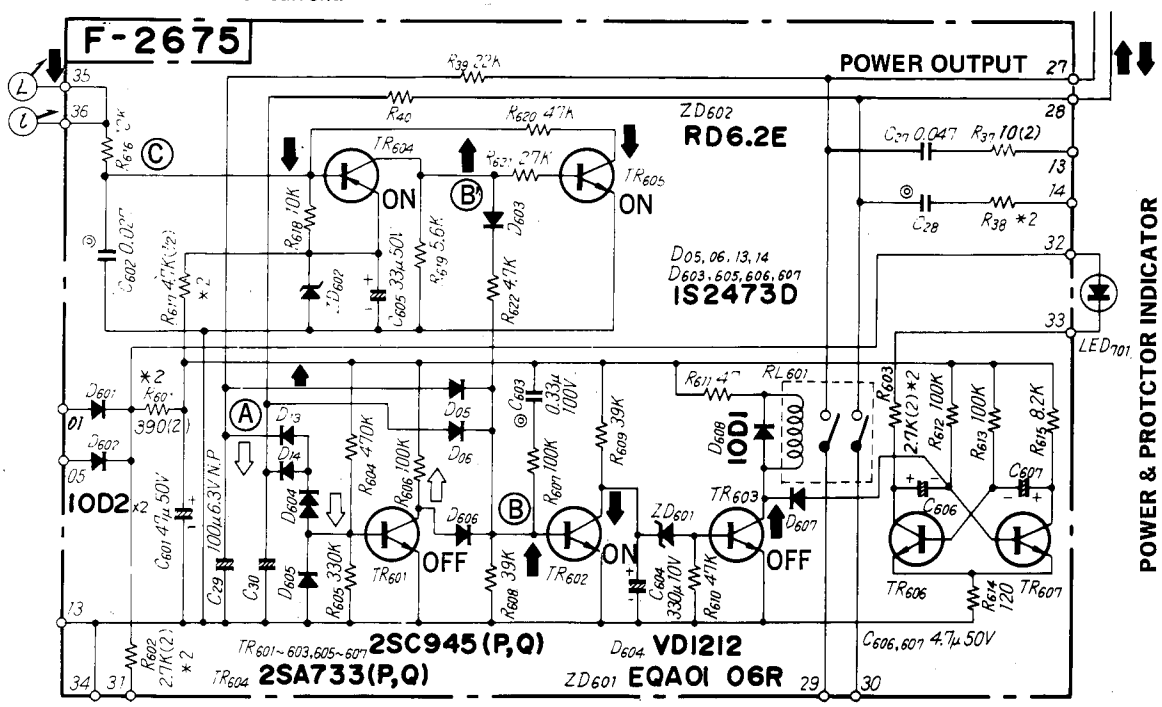
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# 8. OPERATION OF PROTECTOR CIRCUIT

This protector circuit contains two functions at abnormal condition; a speaker protector circuit against DC voltage appearing at output, and speaker protector circuit against over-current.




## A. Speaker Protection Circuit against DC voltage appearing at output Ⓐ

1. When an abnormal negative voltage appears at output Ⓐ, TR601 turns off, TR602 turns on and TR603 turns off so that the relay, RL601, keeps off in order to protect loudspeakers from break-down.
2. While the relay, RL601, keeps OFF, zero voltage (center voltage) controlling TR607 through D607 will increase, resultly the LED701 as protector indicator, starts flickering.
3. When abnormal positive voltage appears at output Ⓐ, the voltage is supplied to TR602 directly, and the operation of the protector circuit is same as above mentioned 1.

## B. Speaker Protection Circuit against abnormal over-current

1. At the moment when abnormal excessive current flows into power transistors, a transistor (TR09) detecting excessive over-current, on power stage becomes ON.
2. Then, DC voltage at Ⓒ decreases, resulfly TR604 turns on, and positive certain voltage appears at Ⓑ'.
3. As mentioned above, when TR602 turns on, the relay, RL601, keeps OFF; a certain positive voltage at Ⓑ' turns on TR605 too, resultly collector voltage of TR605 decreases and its collector voltage keeps a certain voltage at Ⓒ simultaneously.
4. By keeping a certain DC voltage at Ⓒ., the LED701 as protector indicator continues flikering, even though all circuits work completely.

## C. Operation of astable multivibrator

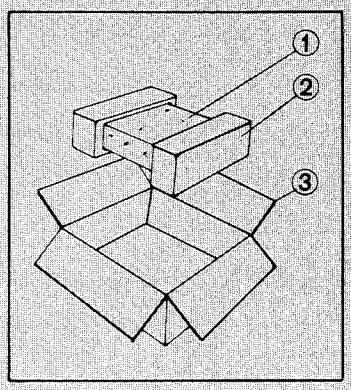
1. When control (bias) voltage is not supplied to the base of TR607 in abnormal condition, TR606 and TR607, on astable multivibrator repeat turning (switching) on and off alternately each other by charging and discharging of capacitors, C606 & C607, resultly, the LED701 as protector indicator continues flikering.
2. When the relay, RL601 is turned on, base voltage of TR607 becomes zero volt through D607 and TR606 becomes ON, resultly LED701 as power indicator lights up.



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# 9. PACKING LIST

| Parts No. | Stock No. | Description |
|---|---|---|
| 1 | 9116670 | Vinyl Cover |
| 2 | 9028020 | Stylofoam Packing (L) |
| | 9028030 | Stylofoam Packing (R) |
| 3 | 9009710 | Cartom Case (AU-717) |
| | 9009700 | Cartom Case (AU-517) |




# 10. ACCESSORY PARTS LIST

| Stock No. | Description |
|---|---|
| 9202520 | Operating Instructions (AU-517) |
| 9202500 | Operating Instructions (AU-717) |
| 5192082 | Hexagon Wrench (1.5mm) |
| 9116580 | Vinyl Bag For Wrench |
| 9237540 | Schematic Diagram (AU-517) |
| 9237550 | Schematic Diagram (AU-717) |
| 5396340 | Rack Mounting Adaptor (each) |
| 5216100 | Rear Stand (each) |

MEMO

Sansui

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