

SERVICE MANUAL

PREAMPLIFIER **SANSUI CA-3000**



Sansui

SANSUI ELECTRIC CO., LTD.

This service manual is designed for service engineers to repair, adjust, maintain and order the replacement parts of the CA-3000 correctly. When ordering the parts, use the stock number and parts name specifically referring to the Parts Locations & Parts Lists. For general usage and maintenance of the unit, please refer to the Operating Instructions attached with the unit.

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1. SPECIFICATIONS

OUTPUT VOLTAGE

OUTPUT1.3V (rated)
 (Maximum output level: 8V with no more than 0.1% total harmonic distortion)

TAPE REC-1, 2, 3 (Pin jacks).....130mV

TAPE-2 REC/PLAY (DIN socket) ..30mV

TOTAL HARMONIC DISTORTION

.....less than 0.03% at or below rated min. output

INTERMODULATION DISTORTION (70Hz: 7,000Hz=4:1 SMPTE method)

.....less than 0.03%

FREQUENCY RESPONSE (at rated output)

.....10Hz to 100kHz ± 0.5 dB -1.0 dB

RIAA CURVE DEVIATION (PHONO)

.....+0.2dB, -0.2dB (30Hz to 15kHz)

INPUT SENSITIVITY AND IMPEDANCE

(1 kHz for rated output)

PHONO-11.5mV, 3mV, 6mV/30k Ω , 50k Ω , 100k Ω

PHONO-21.5mV, 3mV, 6mV/50k Ω

(Maximum input capability: 1V at 1 kHz, less than 0.1% distortion and PHONO SENSITIVITY switch at 6mV)

AUX130mV/50k Ω

TUNER130mV/50k Ω

TAPE PLAY-1, 2, 3 (Pin jacks)130mV/50k Ω

TAPE-2 REC/PLAY (DIN socket) ..130mV

CHANNEL SEPARATION (at rated output, 1 kHz)

PHONO-1, 2better than 60dB

AUXbetter than 60dB

TUNERbetter than 60dB

TAPE PLAY-1, 2, 3better than 60dB

HUM AND NOISE (IHF)

PHONO-1, 2better than 70dB

AUXbetter than 90dB

TUNERbetter than 90dB

TAPE PLAY-1, 2, 3better than 90dB

CONTROLS

BASS ± 10 dB (50Hz with TONE SELECTOR at 400Hz)

TONE SELECTOR (turn-over frequencies)100Hz, 200Hz, 400Hz

MIDRANGE ± 5 dB (1 kHz)

TREBLE ± 10 dB (20kHz with TONE SELECTOR at 2kHz)

TONE SELECTOR (turn-over frequencies)2kHz, 4kHz, 8kHz

LOW FILTER-3dB (20Hz), 12dB/oct. -3dB (20Hz), 12dB/oct.

HIGH FILTER-3dB (7kHz), 60dB/oct. -3dB (12kHz), 12dB/oct.

POWER REQUIREMENTS

POWER VOLTAGE.....100, 120, 220, 240, 50/60Hz
 120V (Usable 110-130V),
 60Hz (for U.S.A. & Canada only)

POWER CONSUMPTION..50 Watts

DIMENSIONS

460mm (18 $\frac{1}{8}$ ") W

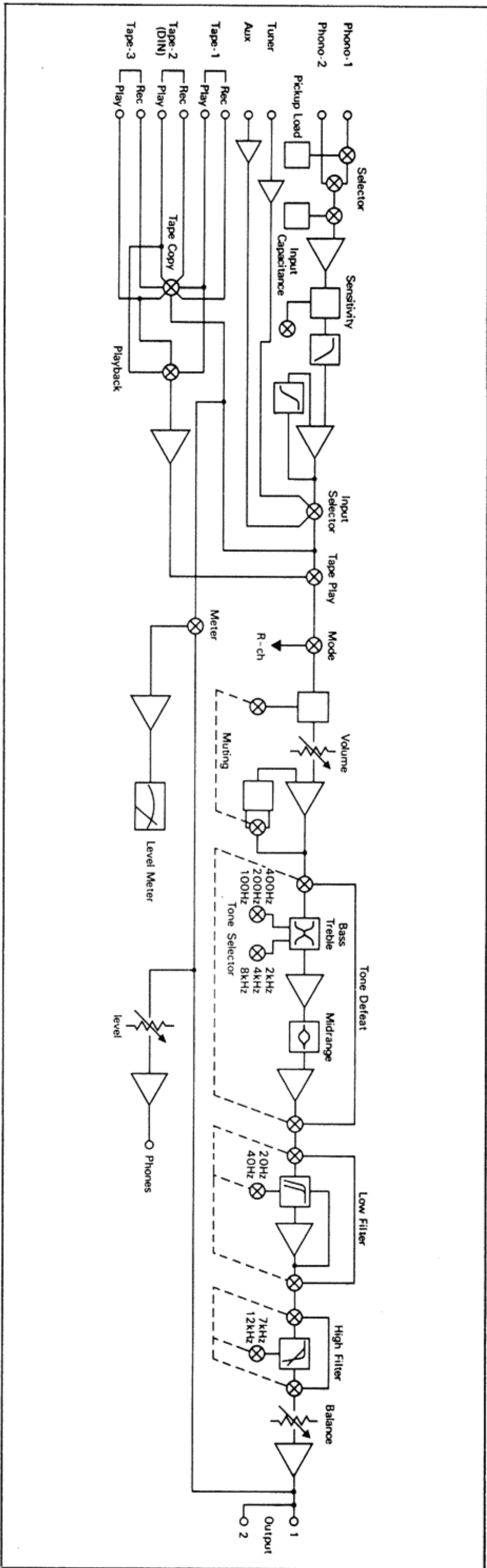
178mm (7 $\frac{1}{8}$ ") H

373mm (14 $\frac{11}{16}$ ") D

WEIGHT

13.3 kg (29.3 lbs) net
 15.3 kg (33.7 lbs) packed

2. BLOCK DIAGRAM



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

3. ADJUSTMENTS

3-1. Regulated Power Supply Adjustments (Fig. 3-3)

| STEP | SUBJECT | EQUIPMENT | MEASURE OUTPUT | ADJUST | ADJUST FOR |
|------|---------------------------------|---------------|--------------------------|----------------|------------|
| 1 | F-2494 for Low Voltage R-CH (A) | DC Volt Meter | Terminal of 03 on F-2494 | VR01 on F-2494 | -24.5V |
| 2 | F-2494 for Low Voltage L-CH (B) | Same as above | Same as above | Same as above | -24.5V |
| 3 | F-2494 (C) for High Voltage | Same as above | Same as above | Same as above | -49.5V |

3-2. Level Meter Adjustments (Fig. 3-1, 3-2, 3-3)

- Note:**
1. Room Temperature..... $25 \pm 10^{\circ}\text{C}$
 2. Input Selector AUX
 3. Meter Position 0dB
 4. Input AUX
 5. Input Signal Sine Curve (1kHz)
 6. For adjustment, run the unit for more than 5 minutes after the power is switched on.


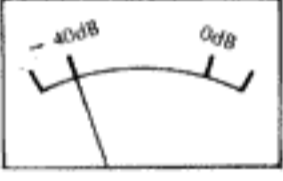
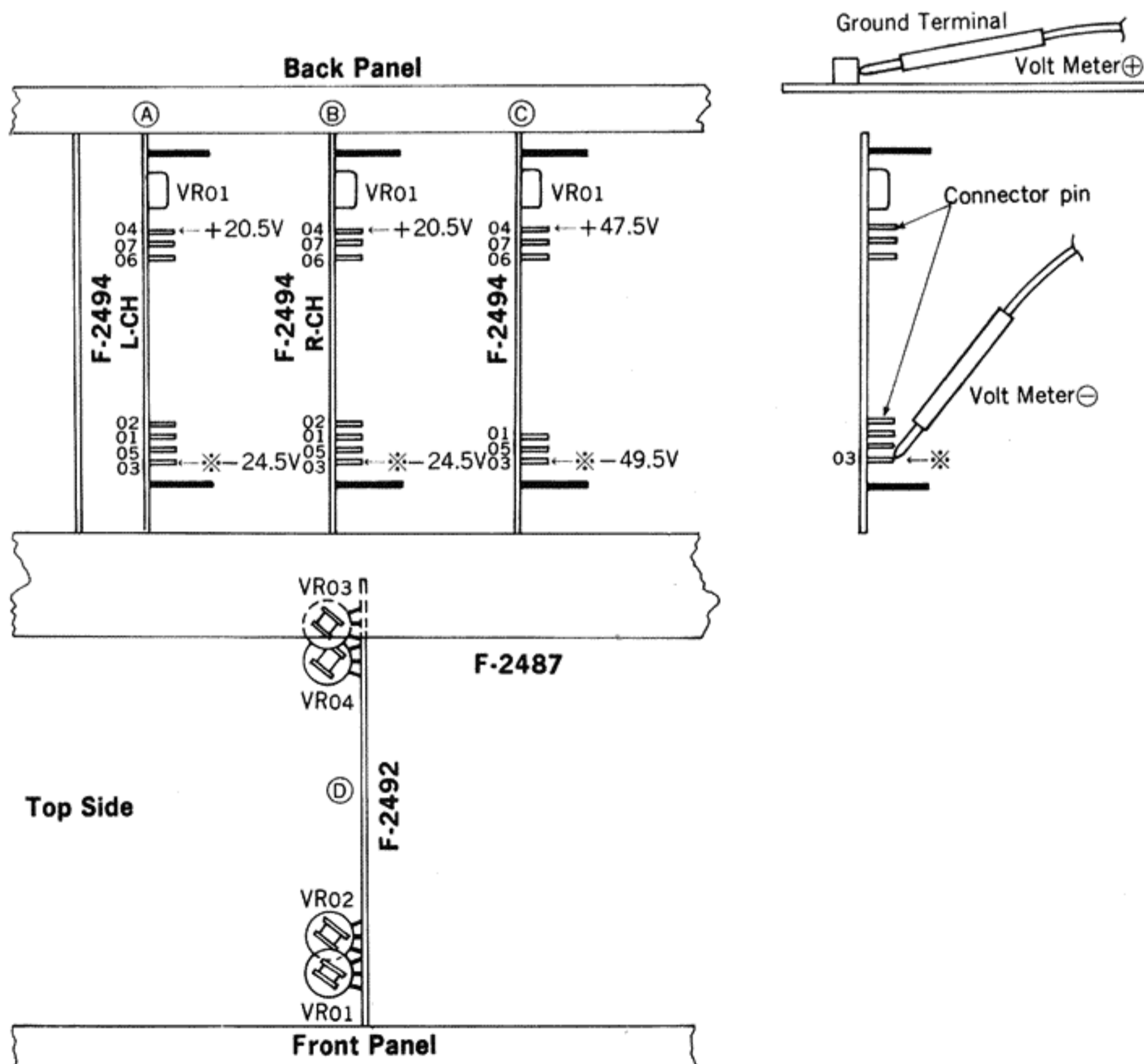
| STEP | SUBJECT | INPUT LEVEL | ADJUST | METER POSITION |
|------|-------------------------|---------------|--|--|
| 1 | Input level Adjustments | 130mV (0dB) | F-2492 (D) R-CH..... VR04 L-CH..... VR03 | 0dB  Fig. 3-1 |
| 2 | Same as above | 1.3mV (-40dB) | F-2492 (D) R-CH..... VR02 L-CH..... VR01 | -40dB  Fig. 3-2 |

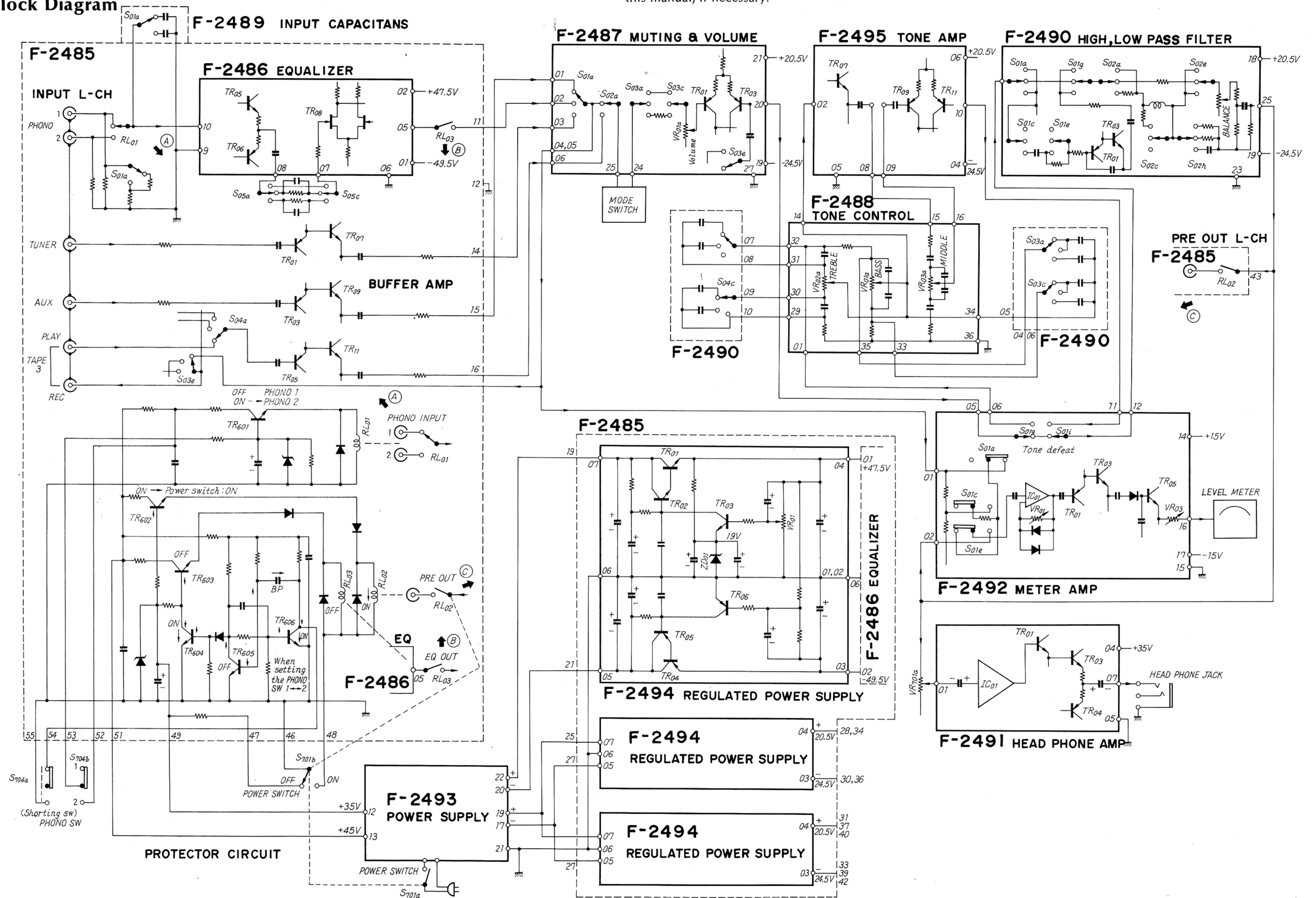
Fig. 3-3



4. TROUBLESHOOTING CHART

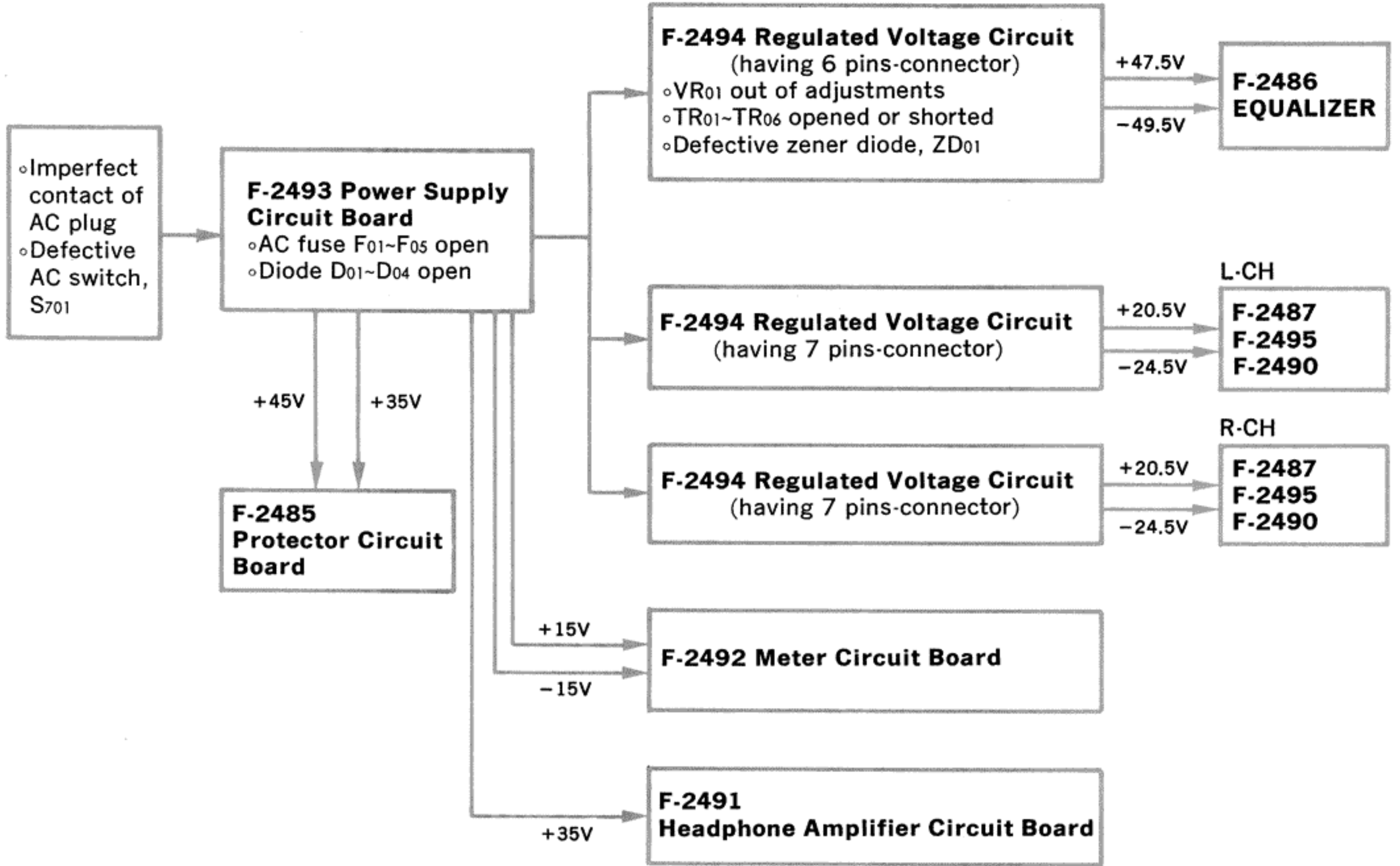
4-1. Operation Block Diagram

The operation of each section is outlined in the block diagram shown below. Please utilize the diagram together with "Troubleshooting on Each Section" in this manual, if necessary.

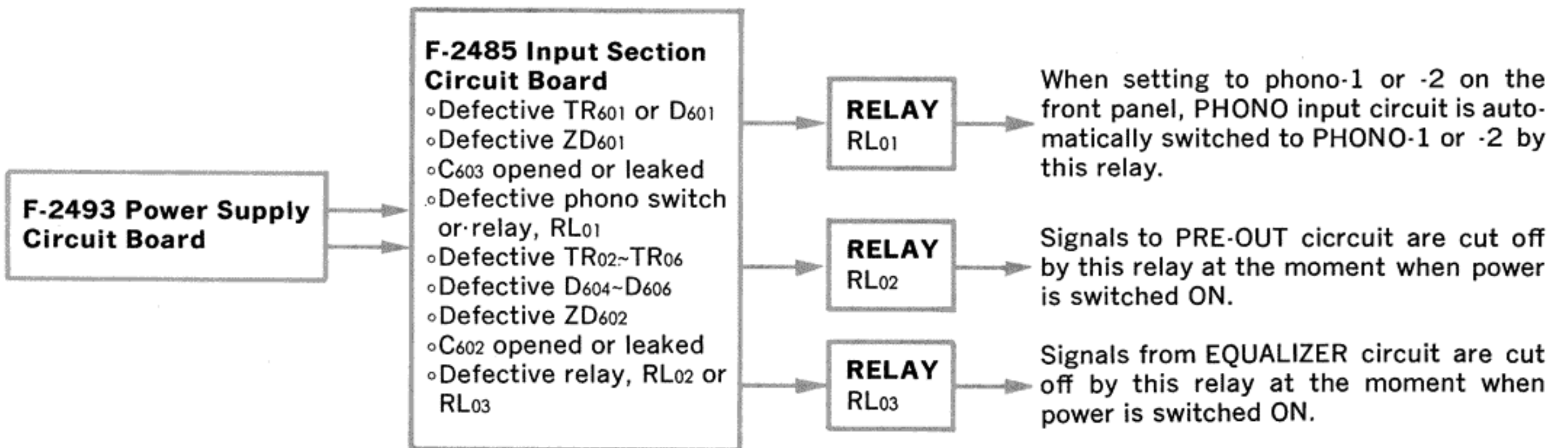


4-2. Troubleshooting on Each Section

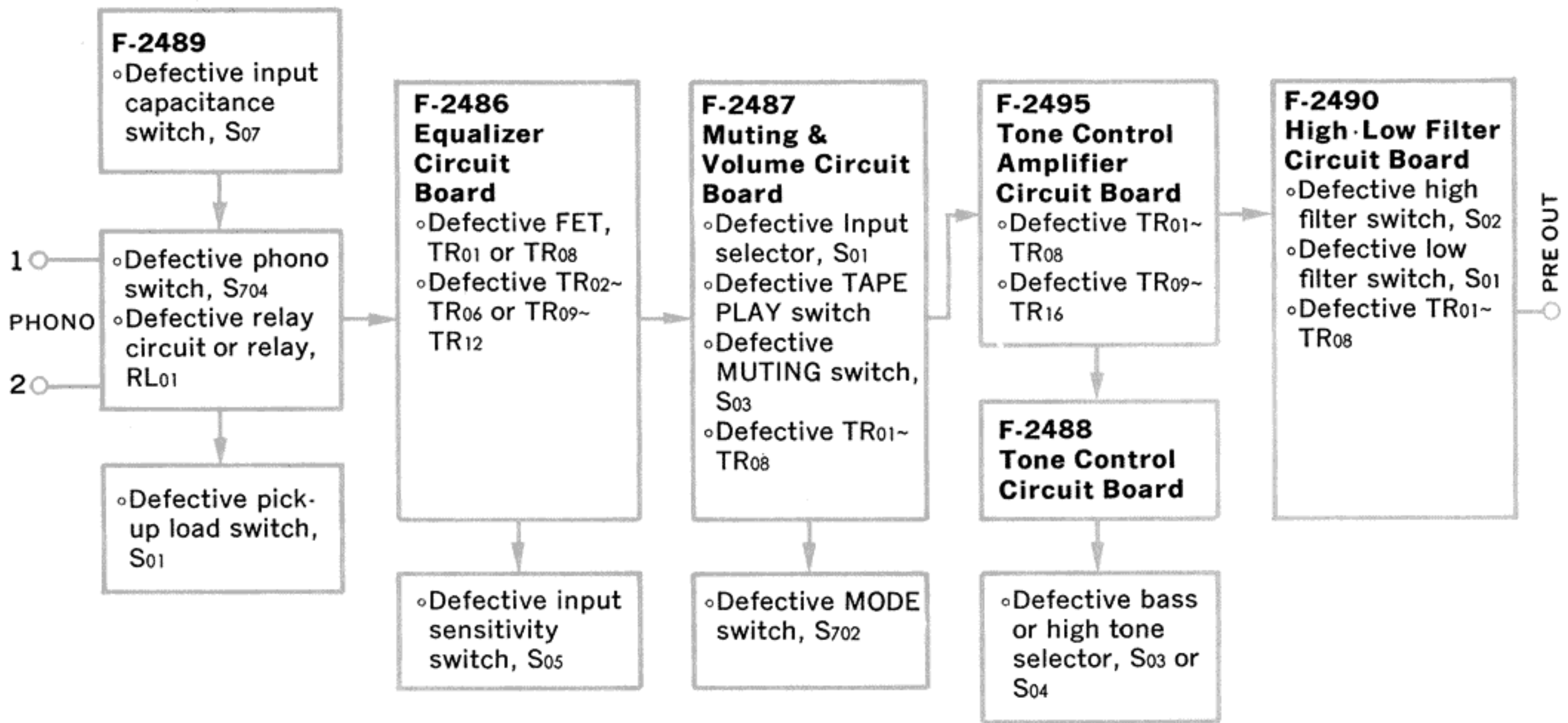
A) Troubles on Power Supply Circuit



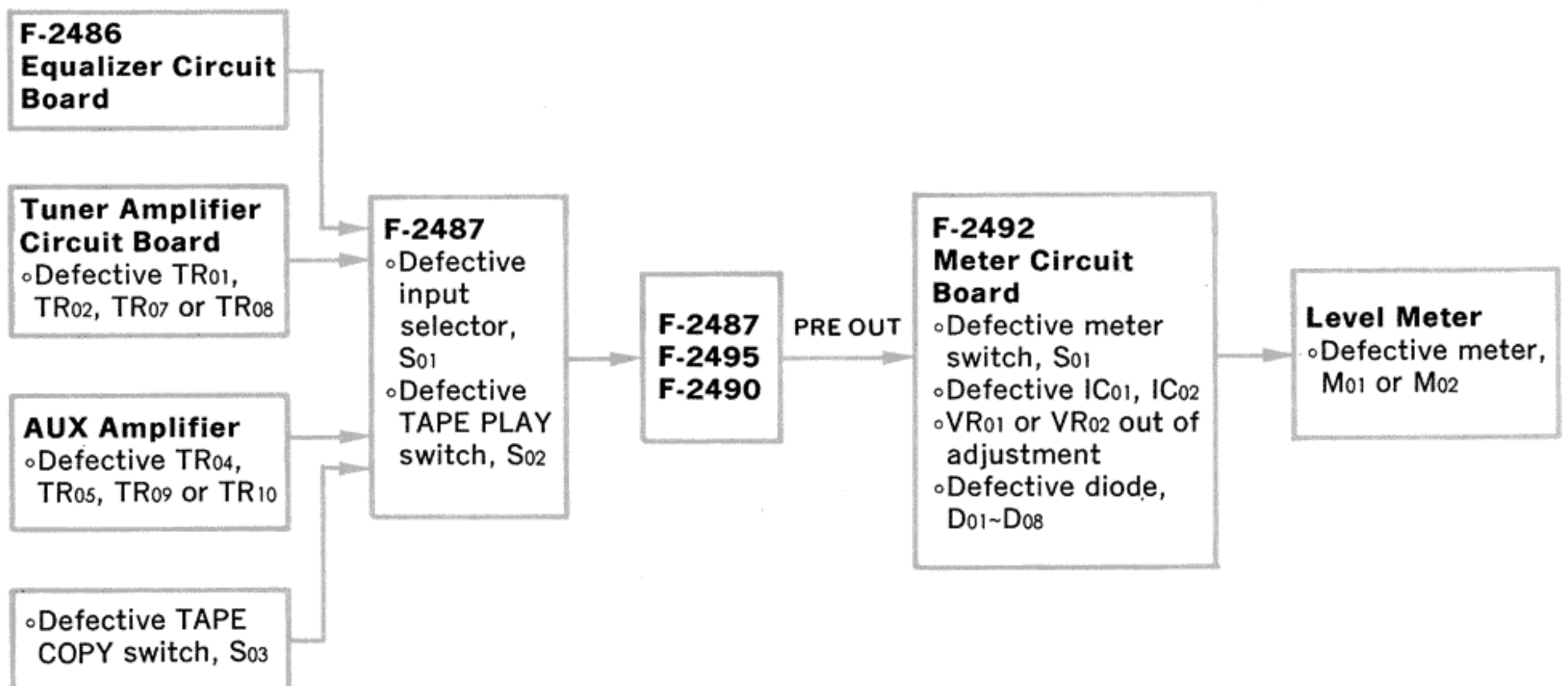
B) Troubles on Protector Circuit



C) Troubles on Phono Section



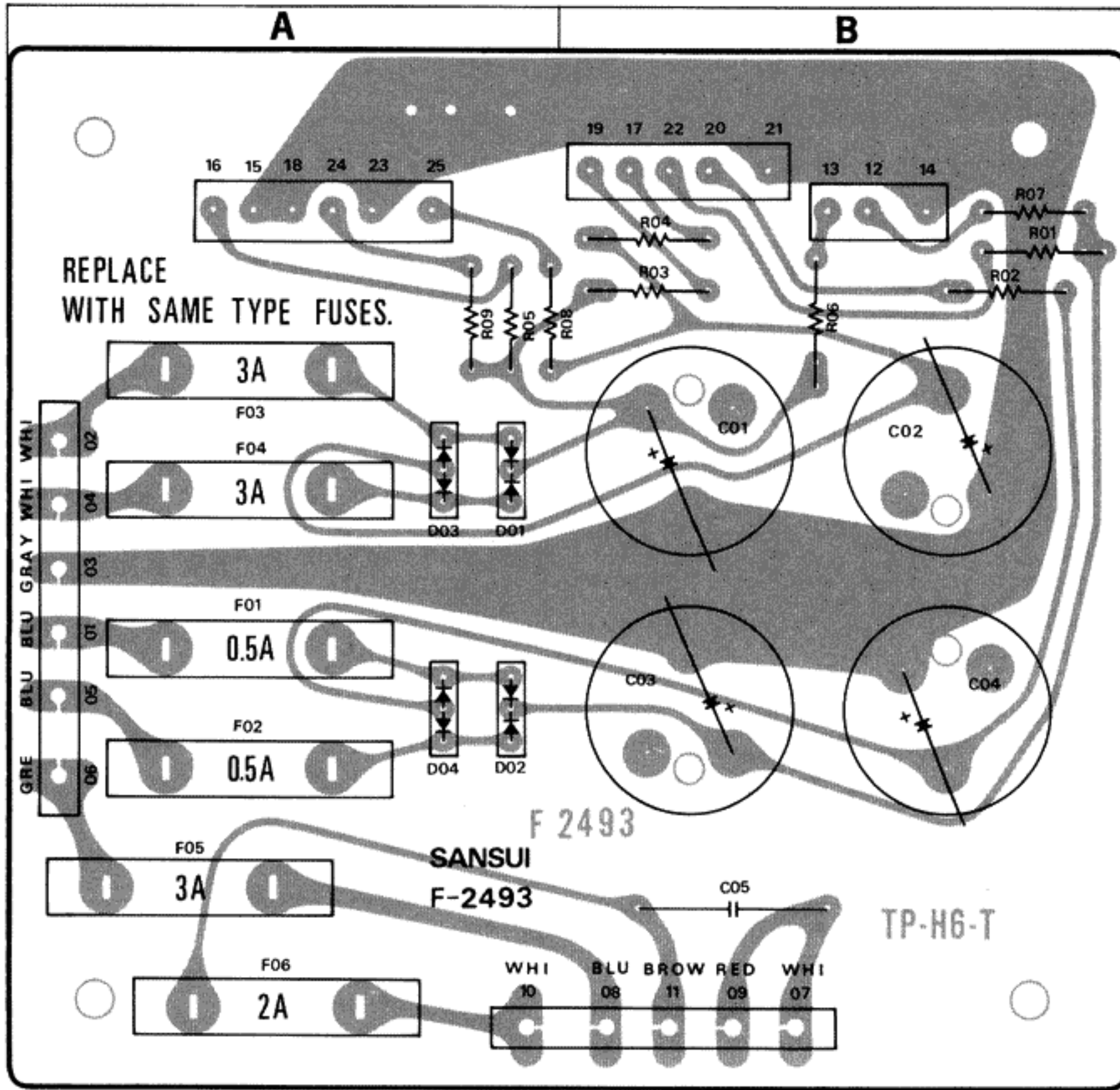
D) Troubles on Level Meter Section



5. PARTS LOCATIONS AND PARTS LISTS

5-1. F-2493 Power Supply Circuit Board (Stock No. 7501071 Complete Circuit Board F-2493)

Conductor Side

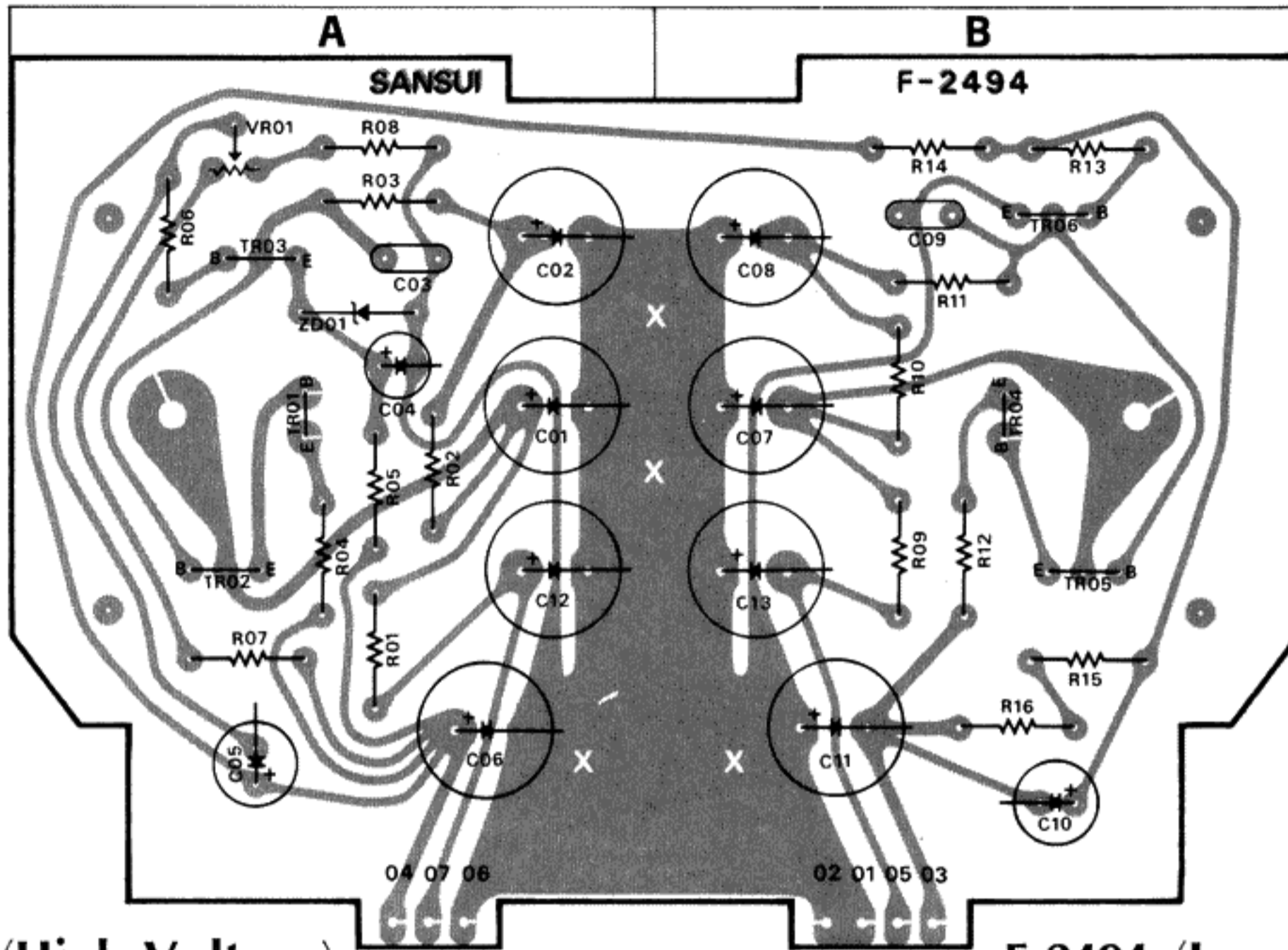


Parts List

| Parts No. | Stock No. | Description | Position | |
|-----------|-----------|-------------------------|------------|---|
| D01, 02 | { 0310530 | 1S1850 | Diode | A |
| | { 0311420 | | | |
| D03, 04 | { 0310540 | 1S1850R | | A |
| | { 0311430 | | | |
| C01, 02 | 0549206 | 1000 μ F 63V E.C. | B | |
| C03, 04 | 0549401 | 470 μ F 100V E.C. | B | |
| C05 | 0605477 | 0.047 μ F 250V M.C. | B | |
| R01 | 0103101 | 100 Ω | 1/2 W C.R. | B |
| R02 | 0103101 | 100 Ω | | B |
| R03 | 0103680 | 68 Ω | | B |
| R04 | 0103680 | 68 Ω | | B |
| R05 | 0201270 | 27 Ω 1 W M.R. | A | |
| R06 | 0103101 | 100 Ω 1/2 W C.R. | B | |
| R07 | 0107823 | 82k Ω 1/4 W C.R. | B | |
| R08 | 0201391 | 390 Ω | 1 W M.R. | A |
| R09 | 0201391 | 390 Ω | | A |
| F01, 02 | 0431210 | 250V 0.5A | AC Fuse | A |
| F03, 04 | 0431260 | 250V 3.0A | | A |
| F05 | 0431260 | 250V 3.0A | | A |
| F06 | 0430850 | 250V 2.0A | | A |
| | 2310151 | P Type Fuse Holder T-1 | | |
| | 2410570 | Pin Ass'y D type | | |
| | 2410580 | Pin Ass'y D type | | |
| | 2410600 | Pin Ass'y D type | | |

5-2. F-2494 Regulated Power Supply Circuit Board (High Voltage) (Stock No. 7501081)
F-2494 Regulated Power Supply Circuit Board (Low Voltage) (Stock No. 7501091)

Conductor Side



Parts List F-2494 (High Voltage)

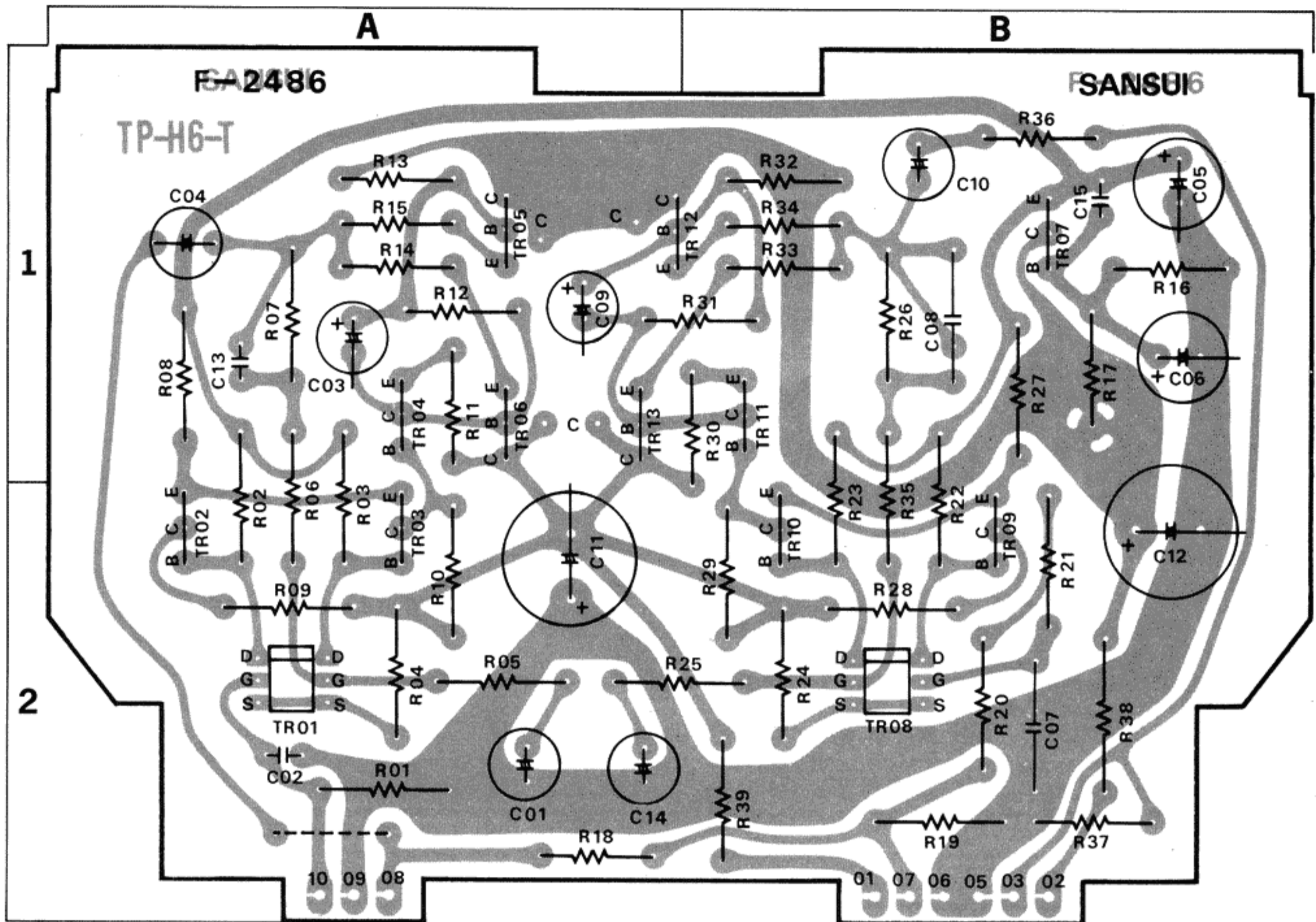
| Parts No. | Stock No. | Description | Position |
|-----------|----------------------|---------------------------------------|----------|
| TR01 | 0308500, 1 | 2SD357 (C, D) | A |
| TR02 | 0306270~2 | 2SC1708 (F, G, H) | A |
| TR03 | 0306070, 1 | 2SC1313 (F, G) | A |
| TR04 | 0303330, 1 | 2SB527 (C, D) | B |
| TR05 | 0300710~2 | 2SA847 (F, G, H) | B |
| TR06 | 0300470, 1 | 2SA726 (F, G) | B |
| ZD01 | {0315370 0315380} | {RD-19A (L) RD-19A (M)} Transistor | A |
| C01 | 0519402 | 100 μ F } 100V E.C. | A |
| C02 | 0519402 | 100 μ F } 100V E.C. | A |
| C03 | 0660471 | 470 pF 50V C.C. | A |
| C04 | 0519001 | 10 μ F 25V E.C. | A |
| C05 | 0519108 | 10 μ F } 50V E.C. | A |
| C06 | 0515221 | 220 μ F } 50V E.C. | A |
| C07 | 0519402 | 100 μ F } 100V E.C. | B |
| C08 | 0519402 | 100 μ F } 100V E.C. | B |
| C09 | 0660471 | 470 pF 50V C.C. | B |
| C10 | 0519108 | 10 μ F } 50V E.C. | B |
| C11 | 0515221 | 220 μ F } 50V E.C. | B |
| R01 | 0103121 | 120 Ω } 1/2W C.R. | A |
| R02 | 0107822 | 8.2k Ω } 1/4W C.R. | A |
| R03 | 0107123 | 12k Ω } 1/4W C.R. | A |
| R04 | 0107560 | 56 Ω } 1/4W C.R. | A |
| R05 | 0107682 | 6.8k Ω } 1/4W C.R. | A |
| R06 | 0107332 | 3.3k Ω } 1/4W C.R. | A |
| R07 | 0107123 | 8.2k Ω } 1/4W C.R. | A |
| R08 | 0107822 | 12k Ω } 1/4W C.R. | A |
| R10 | 0107822 | 8.2k Ω } 1/4W C.R. | B |
| R11 | 0107123 | 12k Ω } 1/4W C.R. | B |
| R12 | 0107560 | 56 Ω } 1/4W C.R. | B |
| R13 | 0107332 | 3.3k Ω } 1/4W C.R. | B |
| R14 | 0107273 | 27k Ω } 1/4W C.R. | B |
| R15 | 0107472 | 4.7k Ω } 1/4W C.R. | B |
| R16 | 0107562 | 5.6K Ω } 1/4W C.R. | B |
| VR01 | 1035350 | 4.7k Ω (B) Volume | A |
| | 0103121 | 120 Ω 1/2W C.R. | |
| | 2410760 | 3P Pin Ass'y C type | |

F-2494 (Low Voltage)

| Parts No. | Stock No. | Description | Position |
|-----------|----------------------|----------------------------------|----------|
| TR01 | 0308510, 1 | 2SD356 (C, D) | A |
| TR02 | 0306070, 1 | 2SC1313 (F, G) | A |
| TR03 | 0306070, 1 | 2SC1313 (F, G) | A |
| TR04 | 0303340, 1 | 2SB526 (C, D) | B |
| TR05 | 0300470, 1 | 2SA726 (F, G) | B |
| TR06 | 0300470, 1 | 2SA726 (F, G) | B |
| ZD01 | {0315290 0315300} | {RD-13A (L) RD-13A (M)} Diode | A |
| C01 | 0515221 | 220 μ F } 50V E.C. | A |
| C02 | 0515470 | 47 μ F } 50V E.C. | A |
| C03 | 0660471 | 470 pF 50V C.C. | A |
| C04 | 0519001 | 10 μ F } 25V E.C. | A |
| C05 | 0519001 | 10 μ F } 25V E.C. | A |
| C06 | 0513331 | 330 μ F } 25V E.C. | A |
| C07 | 0515221 | 220 μ F } 50V E.C. | B |
| C08 | 0515470 | 47 μ F } 50V E.C. | B |
| C09 | 0660471 | 470 pF 50V C.C. | B |
| C10 | 0519001 | 10 μ F } 25V E.C. | B |
| C11 | 0513331 | 330 μ F } 25V E.C. | B |
| R01 | 0103121 | 120 Ω } 1/4W C.R. | A |
| R02 | 0107822 | 8.2k Ω } 1/4W C.R. | A |
| R03 | 0107273 | 27k Ω } 1/4W C.R. | A |
| R04 | 0107220 | 22 Ω } 1/4W C.R. | A |
| R05 | 0107272 | 2.7k Ω } 1/4W C.R. | A |
| R06 | 0107222 | 2.2k Ω } 1/4W C.R. | A |
| R07 | 0107472 | 4.7k Ω } 1/4W C.R. | A |
| R08 | 0107822 | 8.2k Ω } 1/4W C.R. | A |
| R09 | 0103121 | 120 Ω } 1/4W C.R. | B |
| R10 | 0107822 | 8.2k Ω } 1/4W C.R. | B |
| R11 | 0107273 | 27k Ω } 1/4W C.R. | B |
| R12 | 0107220 | 22 Ω } 1/4W C.R. | B |
| R13 | 0107222 | 2.2k Ω } 1/4W C.R. | B |
| R14 | 0107153 | 15k Ω } 1/4W C.R. | B |
| R15 | 0107222 | 2.2k Ω } 1/4W C.R. | B |
| R16 | 0107123 | 12k Ω } 1/4W C.R. | B |
| VR01 | 1035350 | 4.7k Ω (B) Volume | A |
| | 2410760 | 3P Pin Ass'y C type | |
| | 2410770 | 4P Pin Ass'y C type | |

5-3. F-2486 Equalizer Circuit Board (Stock No. 9550701 Complete Circuit Board F-2486)

Conductor Side



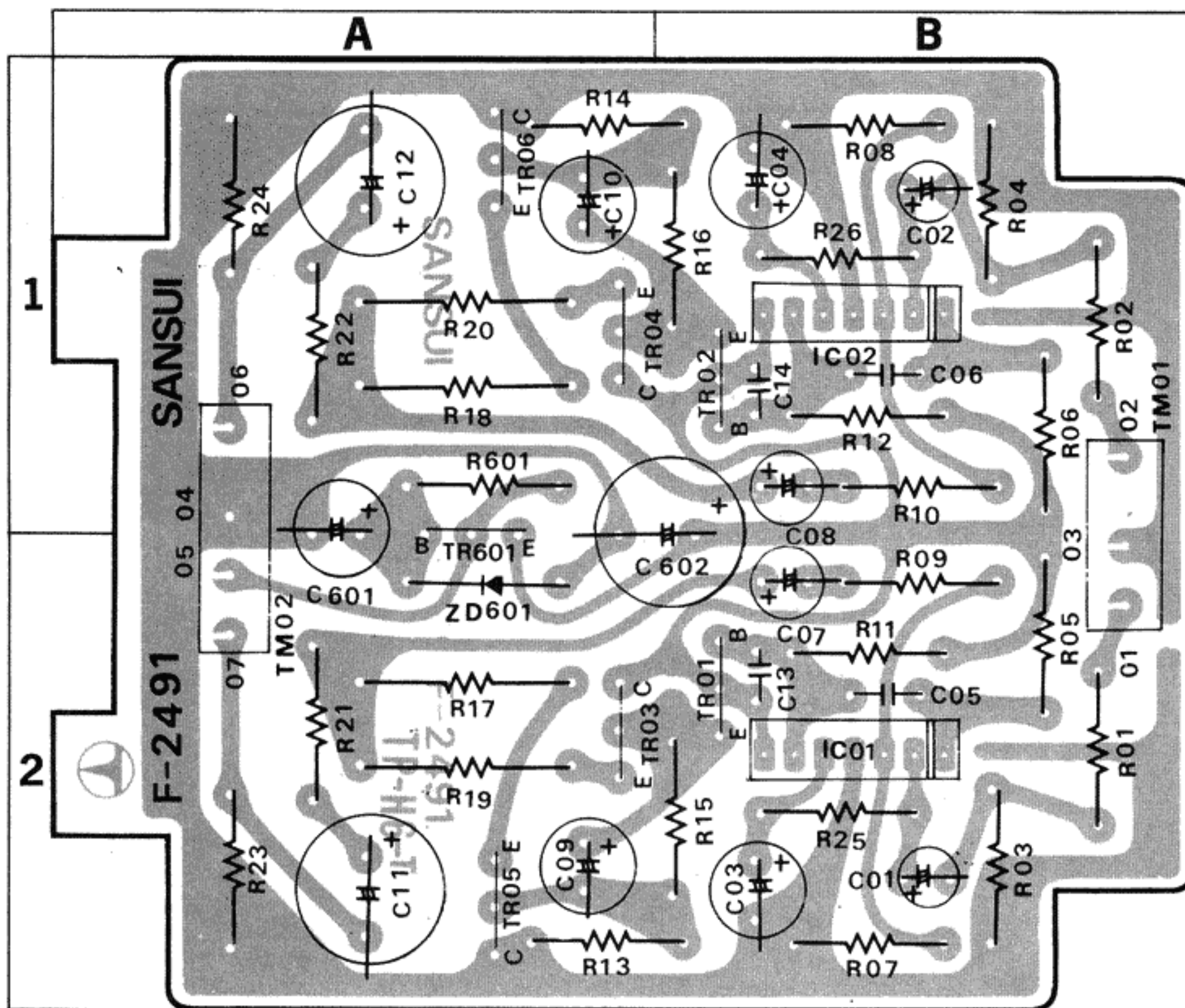
Parts List

| Parts No. | Stock No. | Description | Position |
|-----------|------------|--------------------|----------|
| TR01 | 0370220 | 2SK58 IC | 2A |
| TR02 | 0300710~2 | 2SA847 (F, G, H) | 2A |
| TR03 | 0300710~2 | 2SA847 (F, G, H) | 2A |
| TR04 | 0306270~2 | 2SC1708 (F, G, H) | 1A |
| TR05 | 0305901, 2 | 2SC1124 (2, 3) | 1A |
| TR06 | 0300401, 2 | 2SA706 (2, 3) | 1A |
| TR07 | 0306070~2 | 2SC1313 (F, G, H) | 1B |
| TR08 | 0360260 | 2SK58 IC | 2B |
| TR09 | 0300710~2 | 2SA847 (F, G, H) | 2B |
| TR10 | 0300710~2 | 2SA847 (F, G, H) | 2B |
| TR11 | 0306270~2 | 2SC1708 (F, G, H) | 1B |
| TR12 | 0305901 | 2SC1124 (2, 3) | 1A |
| TR13 | 0300401, 2 | 2SA706 (2, 3) | 1A |
| C02 | 0660100 | 10 pF 50V C.C. | 2A |
| C03 | 0510470 | 47 μF 6.3V E.C. | 1A |
| C04 | 0535109 | 1 μF 50V E.C. | 1A |
| C05 | 0514101 | 100 μF 35V E.C. | 1B |
| C06 | 0515330 | 33 μF 50V E.C. | 1B |
| C07 | 0630106 | 1000 pF } 50V P.C. | 2B |
| C08 | 0630476 | 4700 pF } | 1B |
| C09 | 0510470 | 47 μF 6.3V E.C. | 1A |
| C10 | 0535479 | 4.7 μF } 50V E.C. | 1B |
| C11 | 0515221 | 220 μF } | 2A |
| C12 | 0515221 | 220 μF } | 1, 2B |

| Parts No. | Stock No. | Description | Position |
|-----------|-----------|-------------|----------|
| R01 | 0231104 | 100kΩ | 2A |
| R02 | 0231393 | 39kΩ | 1, 2A |
| R03 | 0231393 | 39kΩ | 1, 2A |
| R04 | 0231563 | 56kΩ | 2A |
| R05 | 0231123 | 12kΩ | 2A |
| R06 | 0231682 | 6.8kΩ | 1, 2A |
| R07 | 0231823 | 82kΩ | 1A |
| R08 | 0231393 | 39kΩ | 1A |
| R09 | 0231473 | 47kΩ | 2A |
| R10 | 0231123 | 12kΩ | 2A |
| R11 | 0107102 | 1kΩ | 1A |
| R12 | 0107122 | 1.2kΩ | 1A |
| R13 | 0107273 | 27kΩ | 1A |
| R14 | 0107121 | 120Ω | 1A |
| R15 | 0107121 | 120Ω | 1A |
| R16 | 0107333 | 33kΩ | 1B |
| R17 | 0107223 | 22kΩ | 1B |
| R18 | 0107124 | 120kΩ | 2A |
| R19 | 0231104 | 100kΩ | 2B |
| R20 | 0231683 | 68kΩ | 2B |
| R21 | 0231562 | 5.6kΩ | 2B |
| R22 | 0231393 | 39kΩ | 1, 2B |
| R23 | 0231393 | 39kΩ | 1, 2B |
| R24 | 0231563 | 56kΩ | 2B |
| R25 | 0231682 | 6.8kΩ | 2A, B |
| R26 | 0231684 | 680kΩ | 1B |

5-4. F-2491 Headphone Amplifier Circuit Board (Stock No. 7592441 Complete Circuit Board F-2491)

Conductor Side

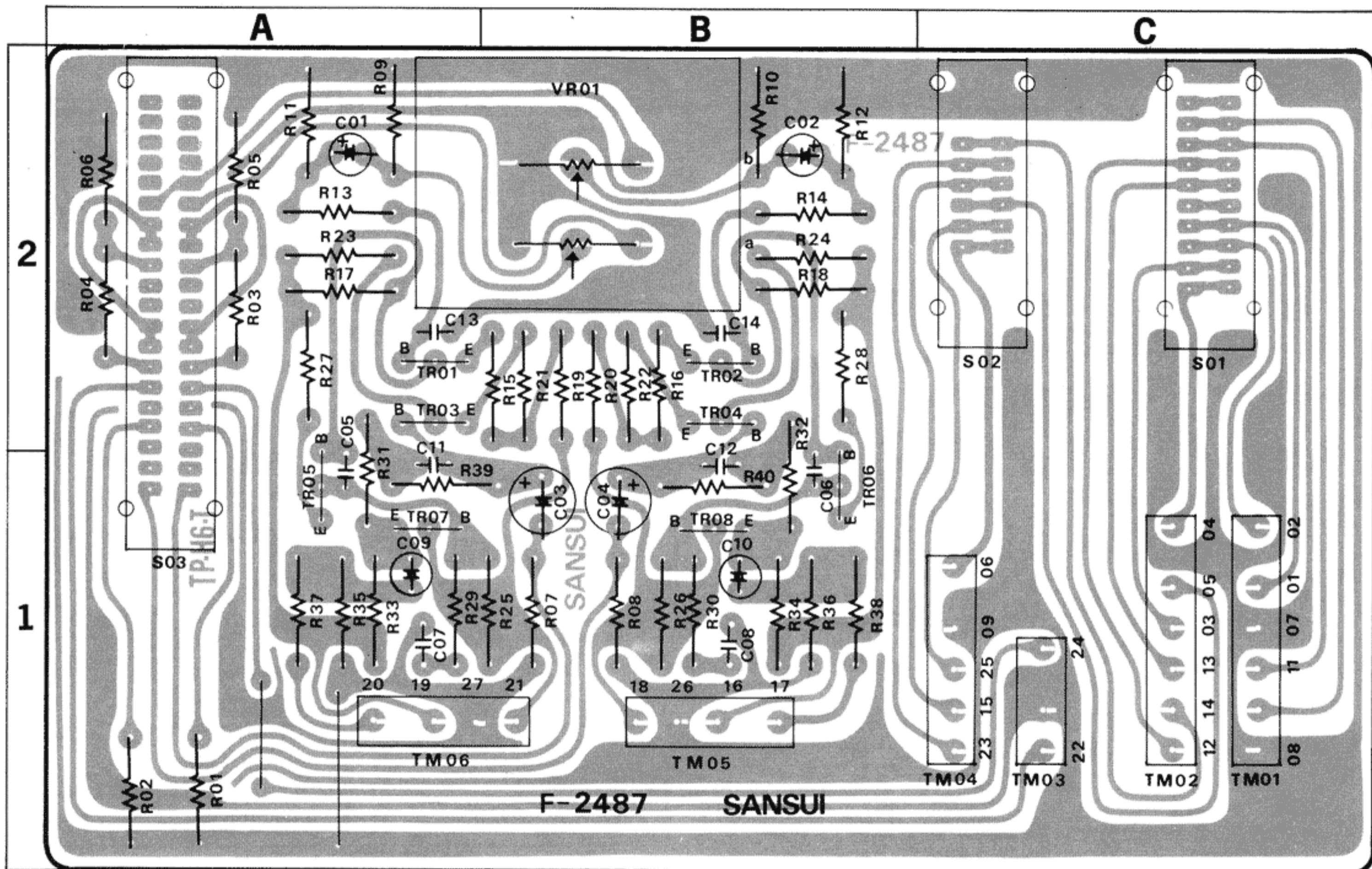


Parts List

| Parts No. | Stock No. | Description | Position |
|-----------|-----------|---------------------|------------|
| R27 | 0231393 | 39kΩ | 1 B |
| R28 | 0231473 | 47kΩ | 2 B |
| R29 | 0231123 | 12kΩ | 2 B |
| R30 | 0107102 | 1kΩ | 1 B |
| R31 | 0107122 | 1.2kΩ | 1 A, B |
| R32 | 0107273 | 27kΩ | 1 B |
| R33 | 0107121 | 120Ω | 1 B |
| R34 | 0107121 | 120Ω | 1 B |
| R35 | 0231683 | 68kΩ | 1/2 W M.R. |
| R36 | 0107561 | 560Ω | 1 B |
| R37 | 0107124 | 120kΩ | 1/4 W C.R. |
| R38 | 0107479 | 4.7Ω | 2 B |
| R39 | 0107479 | 4.7Ω | 2 B |
| | 2410760 | 3P Pin Ass'y C type | |
| | 2410780 | 6P Pin Ass'y C type | |

| Parts No. | Stock No. | Description | Position |
|-----------|------------|---------------------|------------|
| TR01, 02 | 0306070, 1 | 2SC1313 (F, G) | Transistor |
| TR03, 04 | 0300381, 2 | 2SA706-2 (2, 3) | |
| TR05, 06 | 0305901, 2 | 2SC1124 (2, 3) | |
| TR601 | 0308450, 1 | 2SD356 (C, D) | |
| IC01, 02 | 0360190 | IC | 2 B.1 B |
| ZD601 | 0316600 | RD36E (C) Diode | 2 A |
| C01, 02 | 0515109 | 1μF 50V E.C. | 2 A.1 B |
| C03, 04 | 0510101 | 100μF 6.3V E.C. | 2 A.1 B |
| C05, 06 | 0660100 | 10pF 50V C.C. | 2 A.1 B |
| C07, 08 | 0513100 | 10μF 25V E.C. | 2 B.1 B |
| C09, 10 | 0510101 | 100μF 6.3V E.C. | 2 A.1 A |
| C11, 12 | 0513221 | 220μF 25V E.C. | 2 A.1 A |
| C13, 14 | 0660100 | 10pF 50V C.C. | 2 B.1 B |
| C601 | 0515330 | 33μF | 50V E.C. |
| C602 | 0515101 | 100μF | |
| R01, 02 | 0107104 | 100kΩ | 2 B.1 B |
| R03, 04 | 0107103 | 10kΩ | 2 B.1 B |
| R05, 06 | 0107394 | 390kΩ | 2 B.1 B |
| R07, 08 | 0107122 | 1.2kΩ | 2 B.1 B |
| R09, 10 | 0107273 | 27kΩ | 1/4 W C.R. |
| R11, 12 | 0107273 | 27kΩ | |
| R13, 14 | 0107152 | 1.5kΩ | 2 A.1 A |
| R15, 16 | 0107101 | 100Ω | 2 B.1 B |
| R17, 18 | 0104330 | 33Ω | 1 W C.R. |
| R19, 20 | 0104330 | 33Ω | |
| R21, 22 | 0103100 | 10Ω | 2 A.1 A |
| R23, 24 | 0103331 | 330Ω | 1/2 W C.R. |
| R25, 26 | 0107154 | 150kΩ | 2 B.1 B |
| R601 | 0107332 | 3.3kΩ | 1/4 W C.R. |
| VR01 | 1015150 | 50kΩ Volume | |
| | 2410580 | 3P Pin Ass'y D type | |
| | 2410590 | 4P Pin Ass'y D type | |

5-5. F-2487 Volume & Muting Circuit Board (Stock No. 7592421 Complete Circuit Board F-2487)
Conductor Side



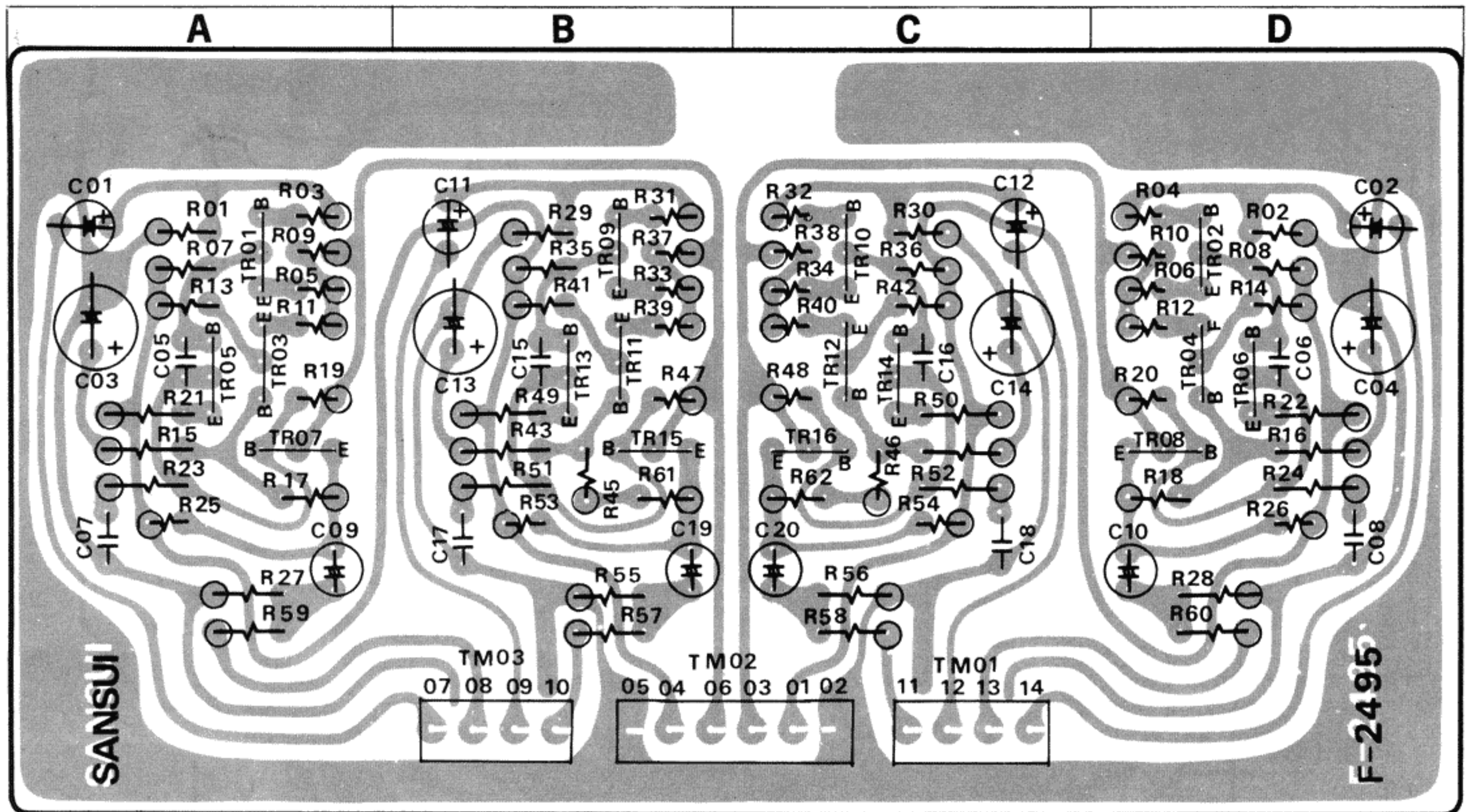
Parts List

| Parts No. | Stock No. | Description | Position |
|-----------|------------|----------------------------|-----------|
| TR01, 02 | 0300470, 1 | 2SA726 (F, G) | 1 A. 3 B |
| TR03, 04 | 0300470, 1 | 3SA726 (F, G) | 1 A. 1 B |
| TR05, 06 | 0306070, 1 | 2SC1313 (F, G) | 1,2A. 2 B |
| TR07, 08 | 0306070, 1 | 2SC1313 (F, G) | 2 A. 2 B |
| C01, 02 | 0519101 | 1 μ F 50V E.C. | 1 A. 1 B |
| C03, 04 | 0510470 | 47 μ F 6.3V E.C. | 2 B |
| C05, 06 | 0660100 | 10pF } 50V C.C. | 2 A. 2 B |
| C07, 08 | 0660221 | 220pF } 50V C.C. | 2 A. 2 B |
| C09, 10 | 0533479 | 4.7 μ F 25V E.C. | 2 A. 2 B |
| C11, 12 | 0660101 | 100pF } 50V C.C. | 2 A. 2 B |
| C13, 14 | 0660470 | 47pF } 50V C.C. | 1 A. 1 B |
| R01, 02 | 0107472 | 4.7k Ω | 2 A |
| R03, 04 | 0107103 | 10k Ω | 1 A |
| R05, 06 | 0107102 | 1k Ω | 1 A |
| R07, 08 | 0107123 | 12k Ω | 2 B |
| R09, 10 | 0107224 | 220k Ω } 1/4 W C.R. | 1 A. 1 B |
| R11, 12 | 0107222 | 2.2k Ω | 1 A. 1 B |
| R15, 16 | 0107101 | 100 Ω | 1 B |
| R17, 18 | 0107103 | 10k Ω | 1 A. 1 B |
| R19, 20 | 0107104 | 100k Ω | 1 B |

| Parts No. | Stock No. | Description | Position |
|-----------|-----------|---------------------------|-----------|
| R21, 22 | 0107101 | 100 Ω | 1 B |
| R23, 24 | 0107103 | 10k Ω | 1 A. 1 B |
| R25, 26 | 0107333 | 33k Ω | 2 B |
| R27, 28 | 0107102 | 1k Ω | 1 A. 1 B |
| R29, 30 | 0107183 | 18k Ω | 2 A. 2 B |
| R31, 32 | 0107393 | 39k Ω } 1/4 W G.R. | 1,2A.1,2B |
| R33, 34 | 0107392 | 3.9k Ω | 2 A. 2 B |
| R35, 36 | 0107104 | 100k Ω | 2 A. 2 B |
| R37, 38 | 0107561 | 560 Ω | 2 A. 2 B |
| R39, 40 | 0107123 | 12k Ω | 2A,B.1A,B |
| R41, 42 | 0107479 | 4.7 Ω | |
| VR01 | 1090081 | 50k Ω x 2 Volume | 1 A, B |
| S01 | 1170950 | Lever Switch | 1 C |
| S02 | 1170880 | | 1 C |
| S03 | 1170990 | | 1, 2 A |
| | 2410570 | 5P Pin Ass'y D type | |
| | 2410580 | 3P Pin Ass'y D type | |
| | 2410590 | 4P Pin Ass'y D type | |
| | 2410600 | 6P Pin Ass'y D type | |

5-6. F-2495 Tone Amplifier Circuit Board (Stock No. 7592461 Complete Circuit Board F-2495)

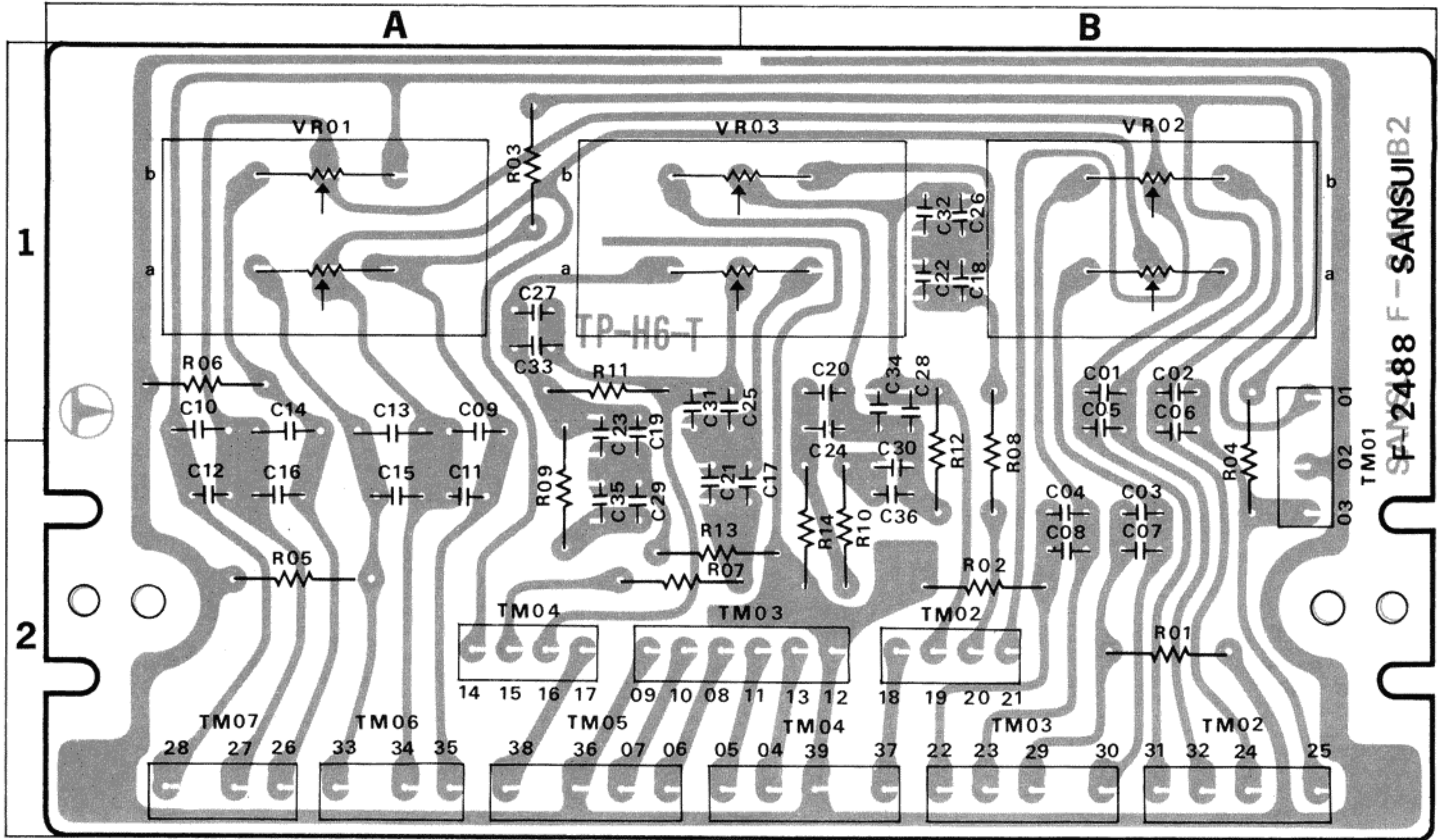
Conductor Side



Parts List

| Parts No. | Stock No. | Description | Position | Parts No. | Stock No. | Description | Position | |
|-----------|------------|----------------|--------------|-----------|-----------|---------------------|-------------|------|
| TR01, 02 | 0300470, 1 | 2SA726 (F, G) | } Transistor | R15, 16 | 0106472 | 4.7kΩ | A. D | |
| TR03, 04 | 0300470, 1 | 2SA726 (F, G) | | A. D | R17, 18 | 0106153 | 15kΩ | A. D |
| TR05, 06 | 0306070, 1 | 2SC1313 (F, G) | | A. D | R19, 20 | 0107393 | 39kΩ | A. D |
| TR07, 08 | 0306070, 1 | 2SC1313 (F, G) | | A. D | R21, 22 | 0106102 | 1kΩ | A. D |
| TR09, 10 | 0300470, 1 | 2SA726 (F, G) | | B. C | R25, 26 | 0107392 | 3.9kΩ | A. D |
| TR11, 12 | 0300470, 1 | 2SA726 (F, G) | | B. C | R27, 28 | 0106104 | 100kΩ | A. D |
| TR13, 14 | 0306070, 1 | 2SC1313 (F, G) | | B. C | R29, 30 | 0106105 | 1MΩ | B. C |
| TR15, 16 | 0306070, 1 | 2SC1313 (F, G) | | B. C | R31, 32 | 0106102 | 1kΩ | B. C |
| C01, 02 | 0519101 | 1μF 50V E.C. | A. D | R33, 34 | 0106101 | 100Ω | B. C | |
| C03, 04 | 0510470 | 47μF 6.3V E.C. | A. D | R35, 36 | 0106103 | 10kΩ | B. D | |
| C05, 06 | 0660100 | 10pF 50V C.C. | A. D | R37, 38 | 0106104 | 100kΩ | } 1/4W C.R. | |
| C09, 10 | 0533339 | 3.3μF 25V E.C. | A. D | R39, 40 | 0106101 | 100Ω | | B. C |
| C11, 12 | 0519101 | 1μF 50V E.C. | B. C | R41, 42 | 0106103 | 10kΩ | B. C | |
| C13, 14 | 0510470 | 47μF 6.3V E.C. | B. C | R43, 44 | 0106472 | 4.7kΩ | B. C | |
| C15, 16 | 0660100 | 10pF 50V C.C. | B. C | R45, 46 | 0107222 | 2.2kΩ | B. C | |
| C19, 20 | 0533339 | 3.3μF 25V E.C. | B. C | R47, 48 | 0107393 | 39kΩ | B. C | |
| R01, 02 | 0106224 | 220kΩ | A. D | R49, 50 | 0106102 | 1kΩ | B. C | |
| R03, 04 | 0106102 | 1kΩ | A. D | R53, 54 | 0107392 | 3.9kΩ | B. C | |
| R05, 06 | 0106101 | 100Ω | A. D | R55, 56 | 0106104 | 100kΩ | B. C | |
| R07, 08 | 0106103 | 10kΩ | } 1/4W C.R. | R57, 58 | 0106561 | 560Ω | B. C | |
| R09, 10 | 0106104 | 100kΩ | | A. D | R59, 60 | 0106561 | 560Ω | A. D |
| R11, 12 | 0106101 | 100Ω | | A. D | R61, 62 | 0107103 | 10kΩ | B. C |
| R13, 14 | 0106103 | 10kΩ | | A. D | | | | |
| | | | | | 2420280 | 4P Connector A type | | |
| | | | | | 2420290 | 6P Connector A type | | |

5-7. F-2488 Tone Control Circuit Board (Stock No. 7561031 Complete Circuit Board F-2488)
Conductor Side

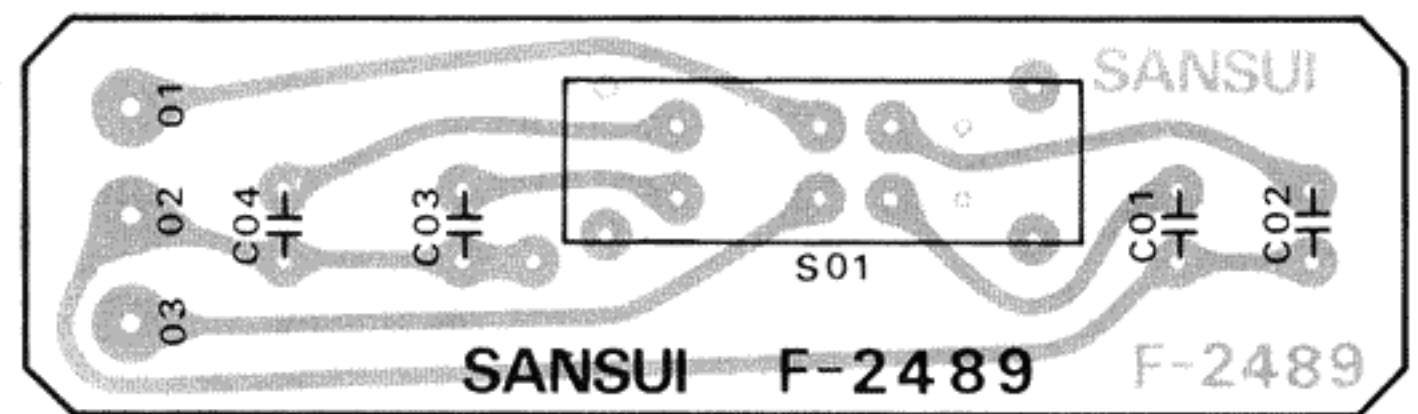


Parts List

| Parts No. | Stock No. | Description | Position |
|-----------|-----------|----------------------------------|-------------------|
| C01, 02 | 0600226 | 0.0022 μ F } 50V M.C. | 1 B |
| C03, 04 | 0600826 | 0.0082 μ F } | 2 B |
| C05, 05 | 0620221 | 220pF } 50V P.C. | 1 B |
| C07, 08 | 0620391 | 390pF } | 2 B |
| C09, 10 | 0600477 | 0.047 μ F } | 1 A |
| C11, 12 | 0600156 | 0.0015 μ F } | 2 A |
| C13, 14 | 0600157 | 0.015 μ F } | 1 A |
| C15, 16 | 0600227 | 0.022 μ F } | 2 A |
| C17, 18 | 0600157 | 0.015 μ F } | 50W M.C. 2 B, 1 B |
| C19, 20 | 0600277 | 0.027 μ F } | 1, 2A. 1B |
| C25, 26 | 0600566 | 0.0056 μ F } | 1 A. 1 B |
| C27, 28 | 0600157 | 0.015 μ F } | 1 A. 1 B |
| C29, 30 | 0600566 | 0.0056 μ F } | 2 B |
| R01, 02 | 0107561 | 560 Ω } | 2 B |
| R03, 04 | 0107822 | 8.2k Ω } | 1A. 1, 2A |
| R05, 06 | 0107272 | 2.7k Ω } | 2 A. 1 A |
| R07, 08 | 0107822 | 8.2k Ω } | 2A,B. 1,2B |
| R09, 10 | 0107563 | 56k Ω } | 1, 2 A. 2B |
| R11, 12 | 0107223 | 22k Ω } | 1 A. 1,2B |
| R13, 14 | 0107392 | 3.9k Ω } | 2A,B. 2 B |
| VR01 | 1090090 | 50k Ω \times 2 } Volume | 1 A |
| VR02 | 1090110 | 50k Ω \times 2 } | 1 B |
| VR03 | 1090100 | 50k Ω \times 2 } | 1 A, B |
| | 2410580 | 3P Pin Ass'y D type | |
| | 2410590 | 4P Pin Ass'y D type | |
| | 2410720 | 4P Pin Ass'y A type | |
| | 4210860 | 6P Pin Ass'y B type | |

5-8. F-2489 Input Capacitance Circuit Board (Stock No. 7593261 Complete Circuit Board F-2489)

Conductor Side

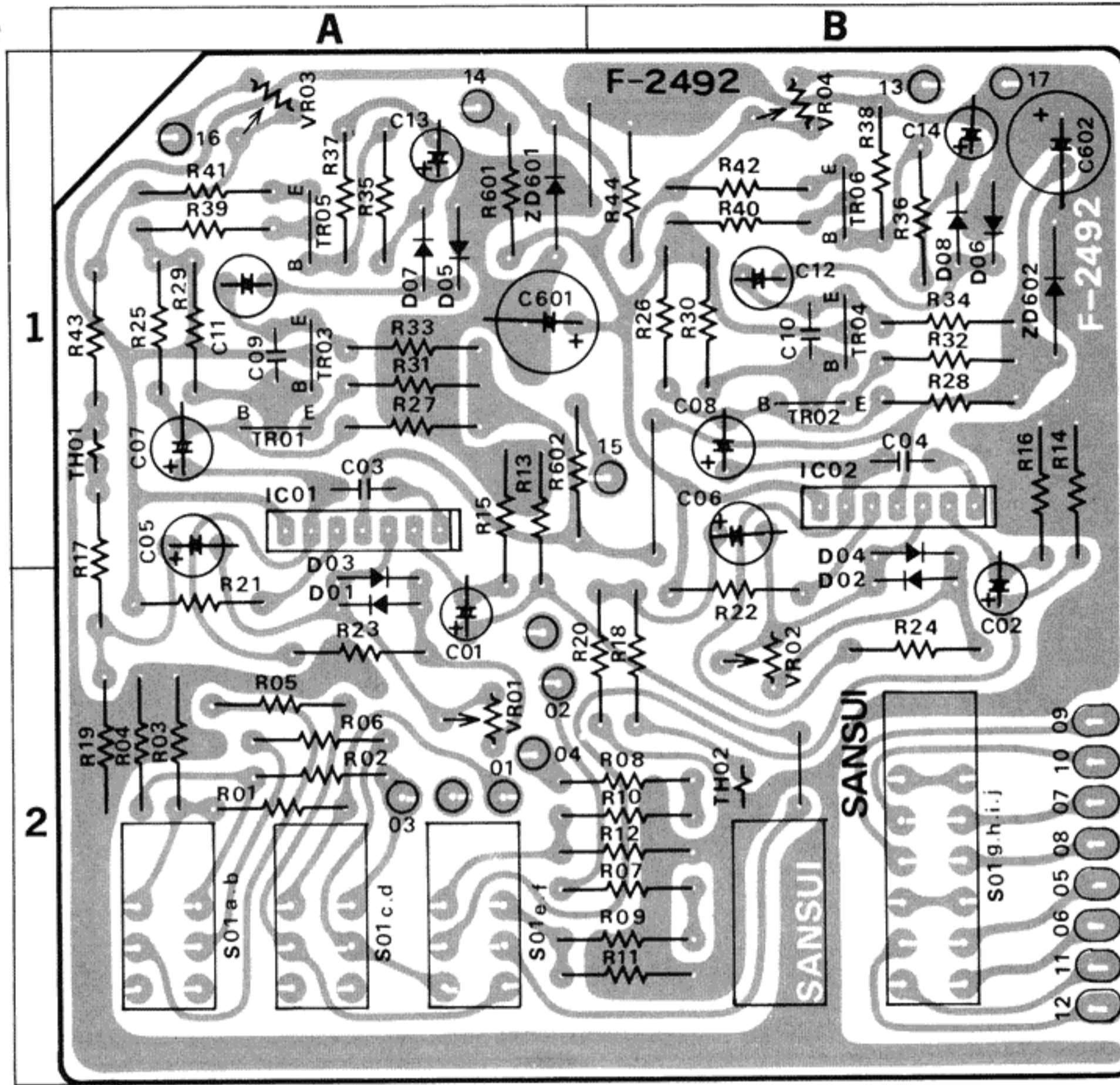


Parts List

| Parts No. | Stock No. | Description |
|-----------|-----------|----------------|
| C01, 02 | 0620101 | 50V P.C. |
| C03, 04 | 0620201 | 200pF 50V P.C. |
| S01 | 1110290 | Slide Switch |

5-9. F-2492 Meter Circuit Board (Stock No. 7592451 Complete Circuit Board F-2492)

Conductor Side

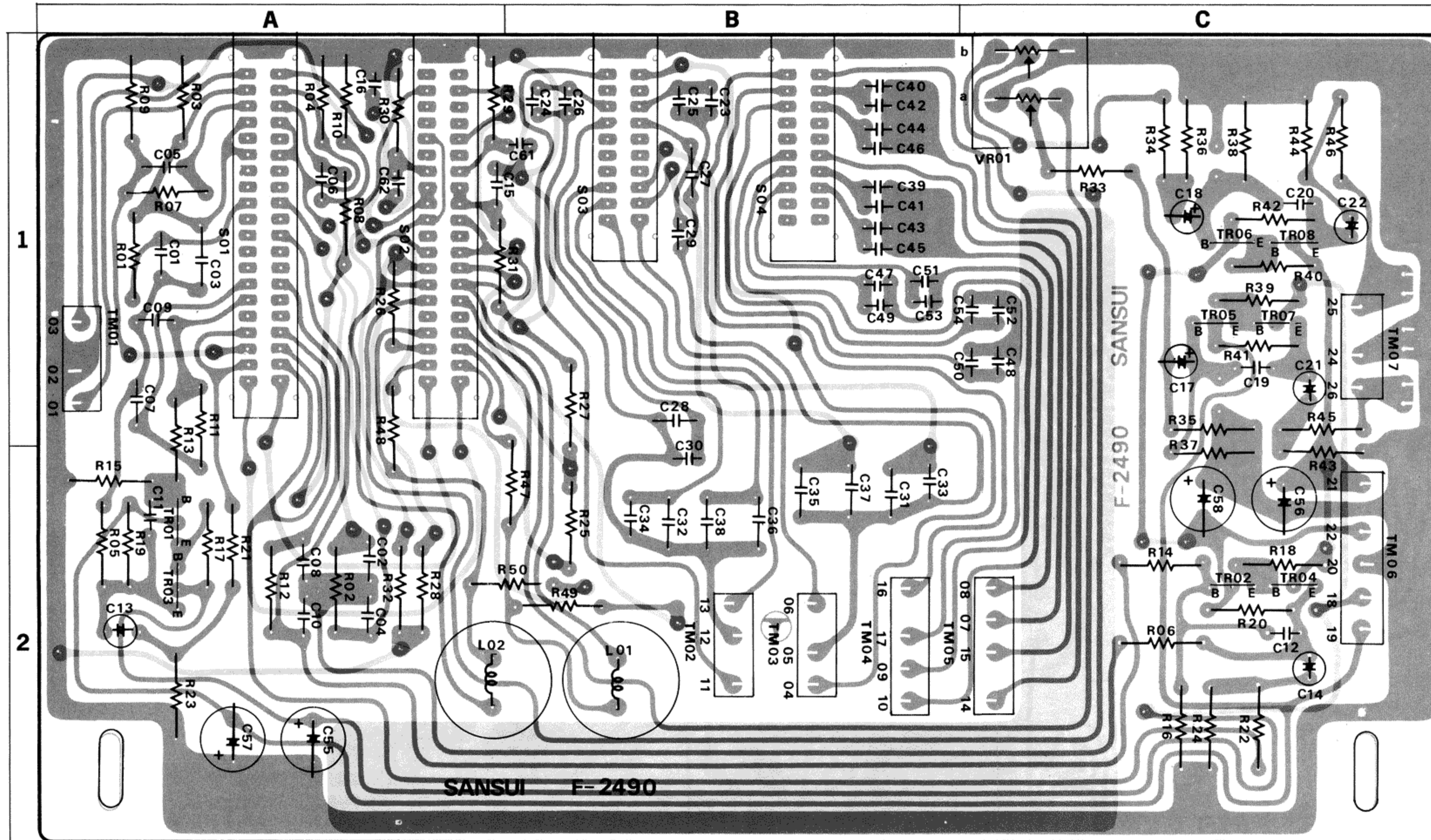


Parts List

| Parts No. | Stock No. | Description | Position | Parts No. | Stock No. | Description | Position | | |
|------------|------------|------------------|--------------------------|------------|-----------|-------------|------------------------------|---------|-----------------|
| TR01, 02 | 0305951, 2 | 2SC945 (Q, P) | } Transistor 1 A. 1 B | R09, 10 | 0107822 | 8.2kΩ | } 1/4 W C.R. 2A, B. 2A, B | | |
| TR03, 04 | 0305951, 2 | 2SC945 (Q, P) | | 1 A. 1 B | R11, 12 | 0107153 | | 15kΩ | |
| TR05, 06 | 0306071 | 2SC1313 (G) | | } 1 A. 1 B | R13, 14 | 0107334 | | 330kΩ | |
| | 0306161 | 2SC1312 (F) | | | 1 A. 1 B | R15, 16 | | 0107184 | 180kΩ |
| IC01, 02 | 0360280 | TA-7136P IC | 1 A. 1 B | R17, 18 | 0107102 | 1kΩ | } 2A, B. 2 B | | |
| D01, 02 | 0340120 | VD1212 | } Diode 2 A. 2 B | R19, 20 | 0107272 | 2.7kΩ | | | |
| D03, 04 | 0340120 | VD1212 | | 2 A. 1 B | R21, 22 | 0107104 | 100kΩ | | |
| D05, 06 | 0311160 | 1S2473D | | 1 A. 1 B | R23, 24 | 0107821 | 820Ω | | |
| D07, 08 | 0311160 | 1S2473D | | 1 A. 1 B | R25, 26 | 0107474 | 470kΩ | | |
| ZD601, 602 | 0316330 | RD-15E (B) | } Diode 1 A. 1 B | R27, 28 | 0107563 | 56kΩ | | | |
| | 0316340 | RD-15E (C) | | 1 A. 1 B | R29, 30 | 0107183 | 18kΩ | | |
| C01, 02 | 0515109 | 1μF 50V E.C. | 2 A. 1, 2 B | R31, 32 | 0107332 | 3.3kΩ | } 1 W M.C. 1 A | | |
| C03, 04 | 0660330 | 33pF 50V C.C. | 1, 2 A. 1 B | R33, 34 | 0107392 | 3.9kΩ | | | |
| C05, 06 | 0513100 | 10μF } 25V E.C. | 1, 3 A. 1 B | R35, 36 | 0107684 | 680kΩ | | | |
| C07, 08 | 0513100 | 10μF } | 1 A. 1 B | R37, 38 | 0107474 | 470kΩ | | | |
| C09, 10 | 0660151 | 150pF 50V C.C. | 1 A. 1 B | R39, 40 | 0107182 | 1.8kΩ | } 1 A. 1 B | | |
| C11, 12 | 0535109 | 1μF 50V E.C. | 1 A. 1 B | R41, 42 | 0107271 | 270Ω | | | |
| C13, 14 | 0573688 | 0.68μF 35WV T.C. | 1 A. 1 B | R43, 44 | 0107821 | 820Ω | | | |
| C601, 602 | 0513470 | 47μF 25V E.C. | 1 A. 1 B | R601 | 0201331 | 330Ω | | | |
| R01, 02 | 0107274 | 270kΩ | } 1/4 W C.R. 2 A | R602 | 0201331 | 330Ω | } 1 W M.C. 1 A | | |
| R03, 04 | 0107472 | 4.7kΩ | | 2 A | M701, 702 | 4300840 | | Meter | |
| R05, 06 | 0107104 | 100kΩ | | 2 A | VR01, 02 | 1035490 | | 1MΩ (B) | } Volume 2 B |
| R07, 08 | 0107124 | 120kΩ | | 2 A. 2A, B | VR03, 04 | 1035310 | | 1kΩ (B) | |
| S01 | 1131080 | Push Switch | 2 A | | | | | | |

5-10. F-2490 High-Low Filter Circuit Board (Stock No. 7592431 Complete Circuit Board F-2490)

Conductor Side

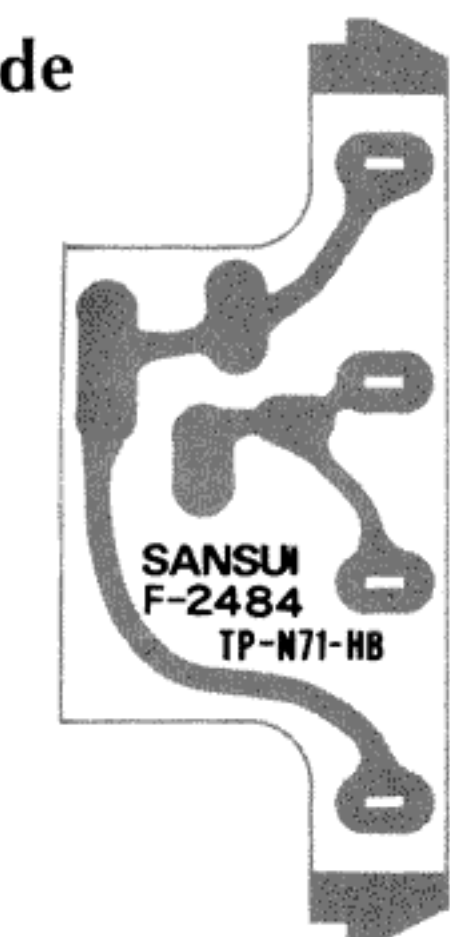


| Parts No. | Stock No. | Description | Position |
|-----------|-----------|---------------------|--------------|
| R11, 12 | 0107824 | 820kΩ | 1, 2A, 2A |
| R13, 14 | 0107102 | 1kΩ | 1, 2A, 2A |
| R15, 16 | 0107154 | 150kΩ | 2A, 2C |
| R17, 18 | 0107183 | 18kΩ | 2A, 2C |
| R19, 20 | 0107472 | 4.7kΩ | 2A, 2C |
| R21, 22 | 0107561 | 560Ω | 2A, 2C |
| R23, 24 | 0107104 | 100kΩ | 2A, 2C |
| R25, 26 | 0107479 | 4.7Ω | 2B, 1A |
| R27, 28 | 0107104 | 100kΩ | 1B, 2A |
| R29, 30 | 0107473 | 47kΩ | 1A |
| R31, 32 | 0107154 | 150kΩ | 1A, 2A |
| R33, 34 | 0107102 | 1kΩ | 1C |
| R35, 36 | 0107564 | 560kΩ | 1C |
| R37, 38 | 0107124 | 120kΩ | 2C, 1C |
| R39, 40 | 0107183 | 18kΩ | 1C |
| R41, 42 | 0107472 | 4.7kΩ | 1C |
| R43, 44 | 0107104 | 100kΩ | 2C, 1C |
| R45, 46 | 0107561 | 560Ω | 1C |
| R47, 48 | 0107479 | 4.7Ω | 1, 2B, 1, 2A |
| R49, 50 | 0107473 | 47kΩ | 2B, 1A, B |
| L01, 02 | 4900230 | 500μF Inductor | 2B, 1A, B |
| VR01 | 1015160 | 50kΩ Volume | 1C |
| S01 | 1170990 | Lever Switch | 1A |
| S02 | 1170990 | | 1A |
| S03 | 1170950 | | 1B |
| S04 | 1170950 | | 1B |
| | 2410570 | 5P Pin Ass'y D type | |
| | 2410580 | 3P Pin Ass'y D type | |
| | 2410590 | 4P Pin Ass'y D type | |

5-11. F-2484 Meter Lamp Circuit Board

(Stock No. 7592401 Complete Circuit Board F-2484)

Conductor Side



Parts List

| Parts No. | Stock No. | Description | Position |
|-----------|-----------|---------------------|----------|
| PL01, 02 | 0420040 | 7V 320MA Pilot lamp | |
| | 2310051 | P Type Fuse Holder | |

Parts List

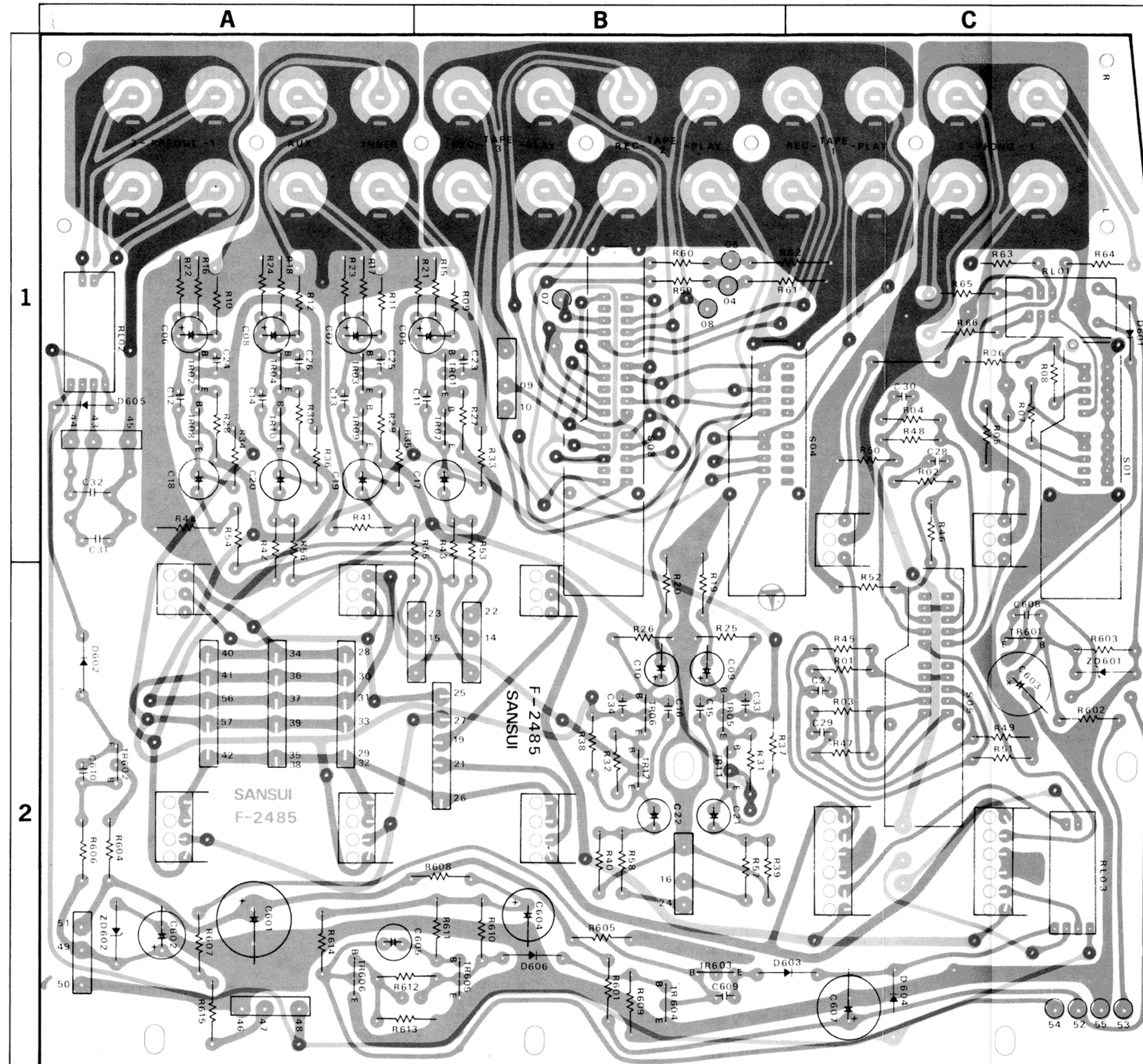
| Parts No. | Stock No. | Description | Position |
|-----------|------------|-----------------|----------|
| TR01, 02 | 0300470, 1 | 2SA726 (F, G) | 2A, 2C |
| TR03, 04 | 0306070, 1 | 2SC1313(F, G) | |
| TR05, 06 | 0300470, 1 | 2SA726 (F, G) | |
| TR09, 10 | 0306070, 1 | 2SC1313(F, G) | |
| C01, 02 | 0600397 | 0.039μF | 1A, 2A |
| C03, 04 | 0600477 | 0.047μF | 1A, 2A |
| C07, 08 | 0600397 | 0.039μF | 1A, 2A |
| C09, 10 | 0600477 | 0.047μF | 1A, 2A |
| C11, 12 | 0660221 | 220 pF 50V C.C. | 2A, 2C |
| C13, 14 | 0533479 | 4.7μF 25V E.C. | 2A, 2C |
| C15, 16 | 0620221 | 220 pF 50V P.C. | 1A |
| C17, 18 | 0519101 | 1μF 50V E.C. | 1C |
| C19, 20 | 0660221 | 220 pF 50V C.C. | 1C |

| Parts No. | Stock No. | Description | Position |
|-----------|-----------|-------------------|----------|
| C21, 22 | 0533100 | 10μF 25V E.C. | 1C |
| C23, 24 | 0600156 | 0.0015μF | 1B |
| C25, 26 | 0600477 | 0.047μF | 1B |
| C27, 28 | 0600128 | 0.12μF | 1B |
| C29, 30 | 0600227 | 0.022μF | 1B, 2B |
| C31, 32 | 0600158 | 0.15μF | 50V M.C. |
| C33, 34 | 0600277 | 0.027μF | 2B |
| C35, 36 | 0600338 | 0.33μF | 2B |
| C37, 38 | 0600188 | 0.18μF | 2B |
| C39, 40 | 0600686 | 0.0068μF | 1B |
| C41, 42 | 0620471 | 470 pF 50V P.C. | 1B |
| C43, 44 | 0600226 | 0.0022μF 50V M.C. | 1B |
| C45, 46 | 0620221 | 220 pF 50V P.C. | 1B |
| C47, 48 | 0600227 | 0.022μF 50V M.C. | 1B, 1C |

| Parts No. | Stock No. | Description | Position |
|-----------|-----------|------------------|-----------|
| C49, 50 | 0600396 | 0.0039μF | 1B, 1C |
| C51, 52 | 0600826 | 0.0082μF | 50V M.C. |
| C53, 54 | 0620431 | 430 pF 50V P.C. | 1B, 1C |
| C55 | 0513470 | 47μF | 2A |
| C56 | 0513470 | 47μF | 2C |
| C57 | 0513470 | 47μF | 25V E.C. |
| C58 | 0513470 | 47μF | 2C |
| C61, 62 | 0600106 | 0.001μF 50V M.C. | 1B, 1A |
| R01, 02 | 0107824 | 820kΩ | 1A, 2A |
| R03, 04 | 0107824 | 820kΩ | 1A, 2A |
| R05, 06 | 0107683 | 68kΩ | 1/4W C.R. |
| R07, 08 | 0107479 | 4.7Ω | 1A |
| R09, 10 | 0107683 | 68kΩ | 1A |

5-12. F-2485 Input Circuit Board (Stock No. 7592411 Complete Circuit Board F-2485)

Conductor Side


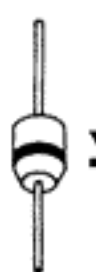












Parts List

| Parts No. | Stock No. | Description | Position |
|-----------|---------------------|------------------------|-----------------|
| TR01, 02 | 0300470, 1 | 2SA726 (F, G) | 1B.1A |
| TR03, 04 | 0300470, 1 | 2SA726 (F, G) | 1A.1A |
| TR05, 06 | 0300470, 1 | 2SA726 (F, G) | 2B.2B |
| TR07, 08 | 0306070, 1 | 2SC1313 (F, G) | 1B.1A |
| TR09, 10 | 0306070, 1 | 2SC1313 (F, G) | 1A.1A |
| TR11, 12 | 0306070, 1 | 2SC1313 (F, G) | 2B.2B |
| TR601 | 0305930, 1 | 2SC1211 (C) | 2C |
| TR602 | 0305930, 1 | 2SC1211 (C) | 2A |
| TR603 | 0305930, 1 | 2SC1211 (C, D) | 2B |
| TR604 | 0305951, 2 | 2SC945 (Q, P) | 2B |
| TR605 | 0305951, 2 | 2SC945 (Q, P) | 2B |
| TR606 | 0305951, 2 | 2SC945 (Q, P) | 2A |
| D601 | 0310340 | 10D1 | 1C |
| D602 | 0310340 | 10D1 | 2A |
| D603 | 0310340 | 10D1 | 2B, C |
| D604 | 0310340 | 10D1 | 2C |
| D605 | 0310340 | 10D1 | 1A |
| D606 | 0311160 | 1S2473D | 2B |
| ZD601 | {0316490 0316500 | RD22E (B) RD22E (C) | 2C |
| ZD602 | {0316560 0316570 | RD30E (C) RD30E (B) | 2A |
| C05, 06 | 0519101 | 1 μ F | 1A, B.1A |
| C07, 08 | 0519101 | 1 μ F 50V E.C. | 1A |
| C09, 10 | 0519101 | 1 μ F | 2B |
| C11, 12 | 0660221 | 220pF | 1B.1A |
| C13, 14 | 0660221 | 220pF 50V C.C. | 1A |
| C15, 16 | 0660221 | 220pF | 2B |
| C17, 18 | 0533479 | 4.7 μ F | 1B.1B |
| C19, 20 | 0533479 | 4.7 μ F 25V E.C. | 1A |
| C21, 22 | 0533479 | 4.7 μ F | 2B |
| C23, 24 | 0660680 | 68pF | 1B.1A |
| C25, 26 | 0660680 | 68pF | 1A |
| C27, 28 | 0620102 | 1000pF | 2C.1C |
| C29, 30 | 0620331 | 330pF | 2C.1C |
| C31, 32 | 0660471 | 470pF | 1A |
| C33, 34 | 0660680 | 68pF | 2B |
| C601 | 0515221 | 220 μ F 50V E.C. | 2A |
| C602 | 0514101 | 100 μ F 35V E.C. | 2A |
| C603 | 0513101 | 100 μ F 25V E.C. | 2C |
| C604 | 0511331 | 330 μ F 10V E.C. | 2B |
| C605 | 0530330 | 33 μ F 6.3V E.C. | 2A |
| C606 | 0657102 | 1000pF 50V C.C. | |
| C607 | 0515101 | 100 μ F 50V E.C. | 2C |
| R01, 02 | 0107124 | 120k Ω | 2C.1C |
| R03, 04 | 0107184 | 180k Ω | 2C.1C |
| R05, 06 | 0107473 | 47k Ω | 1C |
| R07, 08 | 0107563 | 56k Ω | 1C |
| R09, 10 | 0107222 | 2.2k Ω | 1B.1A |
| R11, 12 | 0107222 | 2.2k Ω | 1A |
| R13, 14 | 0107222 | 2.2k Ω | |
| R15, 16 | 0107564 | 560k Ω | 1/4W C.R. 1B.1A |
| R17, 18 | 0107564 | 560k Ω | 1A |
| R19, 20 | 0107564 | 560k Ω | 1, 2B |
| R21, 22 | 0107563 | 56k Ω | 1B.1A |
| R23, 24 | 0107563 | 56k Ω | 1A |
| R25, 26 | 0107563 | 56k Ω | 2B |
| R27, 28 | 0107183 | 18k Ω | 1B.1A |

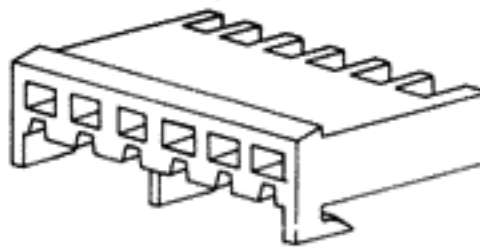
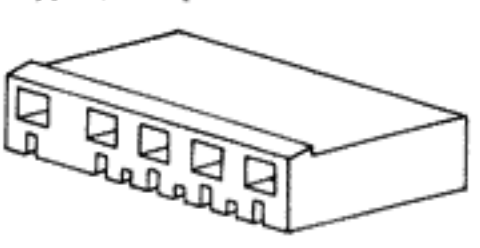
5-13. Figures Semiconductor

| Parts No. | Stock No. | Description | Position |
|-----------|-----------|----------------------------|-------------|
| R29, 30 | 0107183 | 18kΩ | 1 A |
| R31, 32 | 0107183 | 18kΩ | 2 B |
| R33, 34 | 0107472 | 4.7kΩ | 1 B, 1 A |
| R35, 36 | 0107472 | 4.7kΩ | 1 A |
| R37, 38 | 0107472 | 4.7kΩ | 2 B |
| R39, 40 | 0107104 | 100kΩ | 2 B |
| R41, 42 | 0107104 | 100kΩ | 1A, 1, 2A |
| R43, 44 | 0107104 | 100kΩ | 1,2B, 1A |
| R45, 46 | 0107153 | 15kΩ | 2C, 1C |
| R47, 48 | 0107223 | 22kΩ | 2C, 1C |
| R49, 50 | 0107822 | 8.2kΩ | 2C, 1C |
| R53, 54 | 0107681 | 680Ω | 1,2B, 1A |
| R55, 56 | 0107681 | 680Ω | 1,2AB, 1,2A |
| R57, 58 | 0107681 | 680Ω | 2 B |
| R59, 60 | 0107334 | 330kΩ | 1 B |
| R61, 62 | 0107104 | 100kΩ | 1 B, C |
| R63, 64 | 0107222 | 2.2kΩ | 1 A, 1 C |
| R65, 66 | 0107222 | 2.2kΩ | 1 C |
| R601 | 0103471 | 470Ω | 2 B |
| R602 | 0107222 | 2.2kΩ | 2 C |
| R603 | 0107563 | 56kΩ | 2 C |
| R604 | 0107471 | 470Ω | 2 A |
| R605 | 0107471 | 470Ω | 2 B |
| R606 | 0107332 | 3.3kΩ | 2 A |
| R607 | 0107332 | 3.3kΩ | 2 A |
| R608 | 0107183 | 18kΩ | 2 B |
| R609 | 0107563 | 56kΩ | 2 B |
| R610 | 0107222 | 2.2kΩ | 2 B |
| R611 | 0107183 | 18kΩ | 2 B |
| R612 | 0107682 | 6.8kΩ | 2 A, B |
| R613 | 0107273 | 27kΩ | 2 A, B |
| R614 | 0107222 | 2.2kΩ | 2 A |
| R615 | 0201151 | 150Ω 1 W C.R. | 2 A |
| RL01 | 1150330 | Relay Switch | 1 C |
| RL02 | 1150320 | Relay Switch | 1 A |
| S01 | 1190220 | Switch | 1, 2 C |
| S03 | 1190230 | | 1, 2 B |
| S04 | 1190240 | | 1, 2 B C |
| S05 | 1190220 | | 2 C |
| | 1150320 | | 10mA 1600Ω |
| | 2410570 | 5P Pin Ass'y D type | |
| | 2410580 | 4P Pin Ass'y D type | |
| | 2420320 | 3P Connector A type | |
| | 2420330 | 4P Connector A type | |
| | 2430260 | S-Q3068-01 1P Jack (white) | |
| | 2430270 | S-Q3068-02 1P Jack (Red) | |

| SEMICONDUCTORS | COMPLETE CIRCUIT BOARD | SEMICONDUCTORS | COMPLETE CIRCUIT BOARD |
|---|---|--|---|
| 2SC945 |  ECB | F-2485 F-2492 | 10D-1  F-2485 |
| 2SA726 2SA847 2SC1211 2SC1313 2SC1708 |  BCE | F-2495 F-2485 F-2487 F-2486 F-2494 F-2491 F-2490 F-2492 | VD1212  F-2492 |
| 2SB526 |  ECB | F-2494 | 1S2473D  F-2485 |
| 2SB527 2SD356 2SD357 |  C B E | F-2494 F-2491 | RD-13A RD-24E RD-30E RD-36E RD-15E  F-2494 F-2485 F-2491 F-2492 |
| 2SA706 2SC1124 |  EBC | F-2486 F-2491 | 1S1850(+) 1S1850R(-)  F-2493 |
| BA312 TA7136P |  1 2 3 4 5 6 7 | F-2491 F-2492 | |
| 2SK58 |  D1 G1 S1 D2 G2 S2 | F-2486 | |

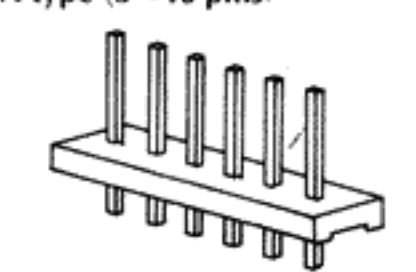
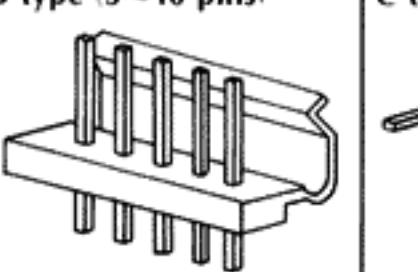
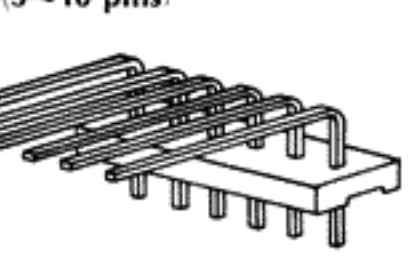
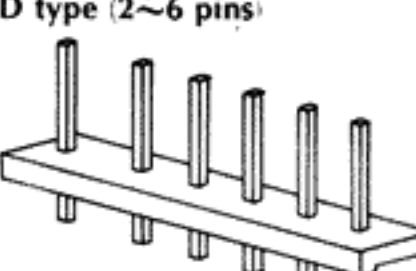
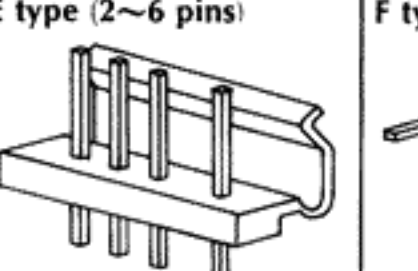
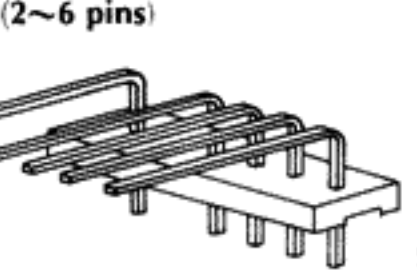
Connector & Pin Ass'y

Connector

| A type (3~10 pins) | B type (2~6 pins) | Stock No. |
|---|---|----------------|
|  |  | 2 Pins 2420250 |
| | | 3 Pins 2420220 |
| | | 4 Pins 2420230 |
| | | 5 Pins 2420210 |
| | | 6 Pins 2420240 |

NOTE: Since stock number of female 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

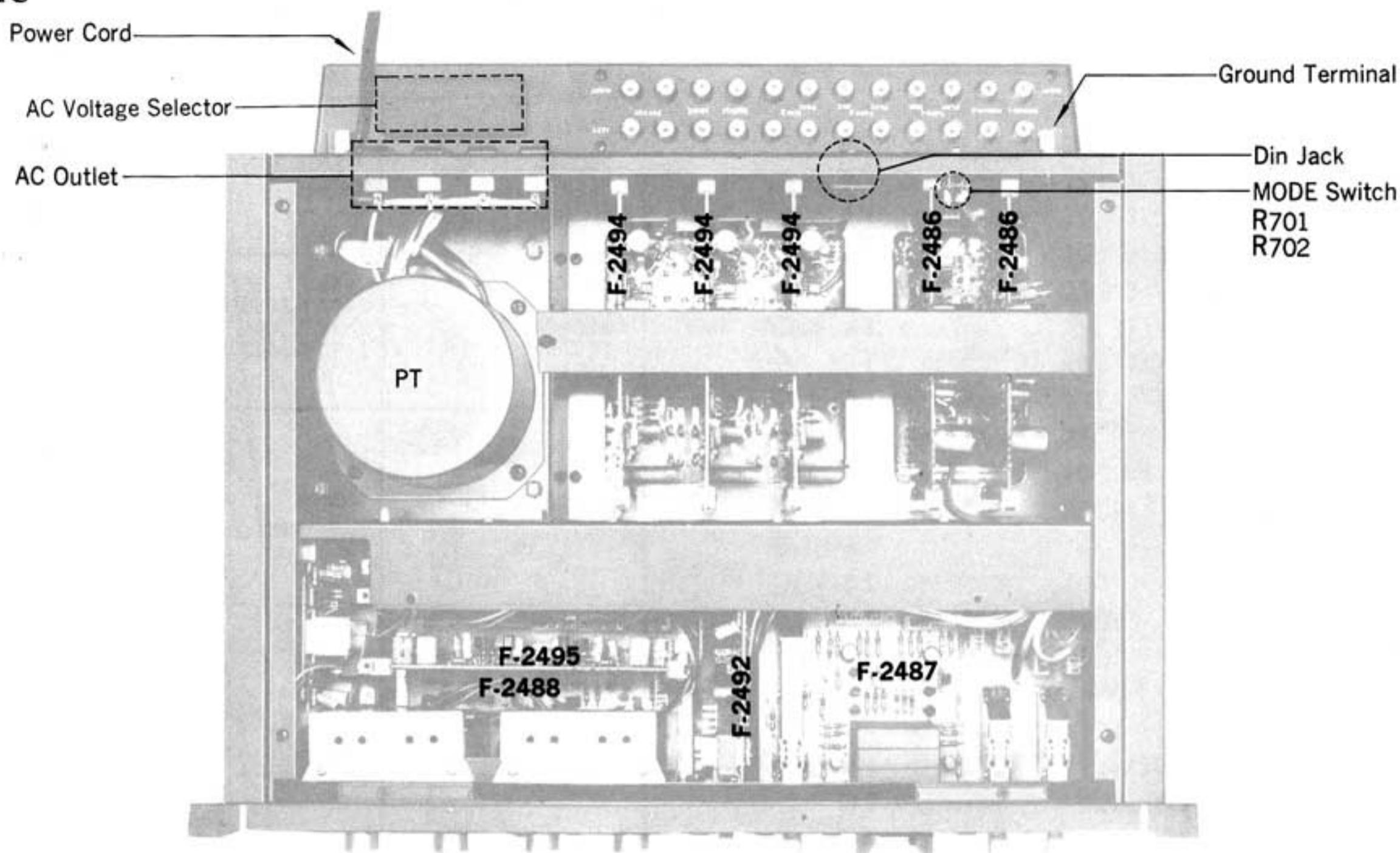
| A type (3~10 pins) | B type (3~10 pins) | C type (3~10 pins) |
|---|---|---|
|  |  |  |
| D type (2~6 pins) | E type (2~6 pins) | F type (2~6 pins) |
|  |  |  |

Abbreviations

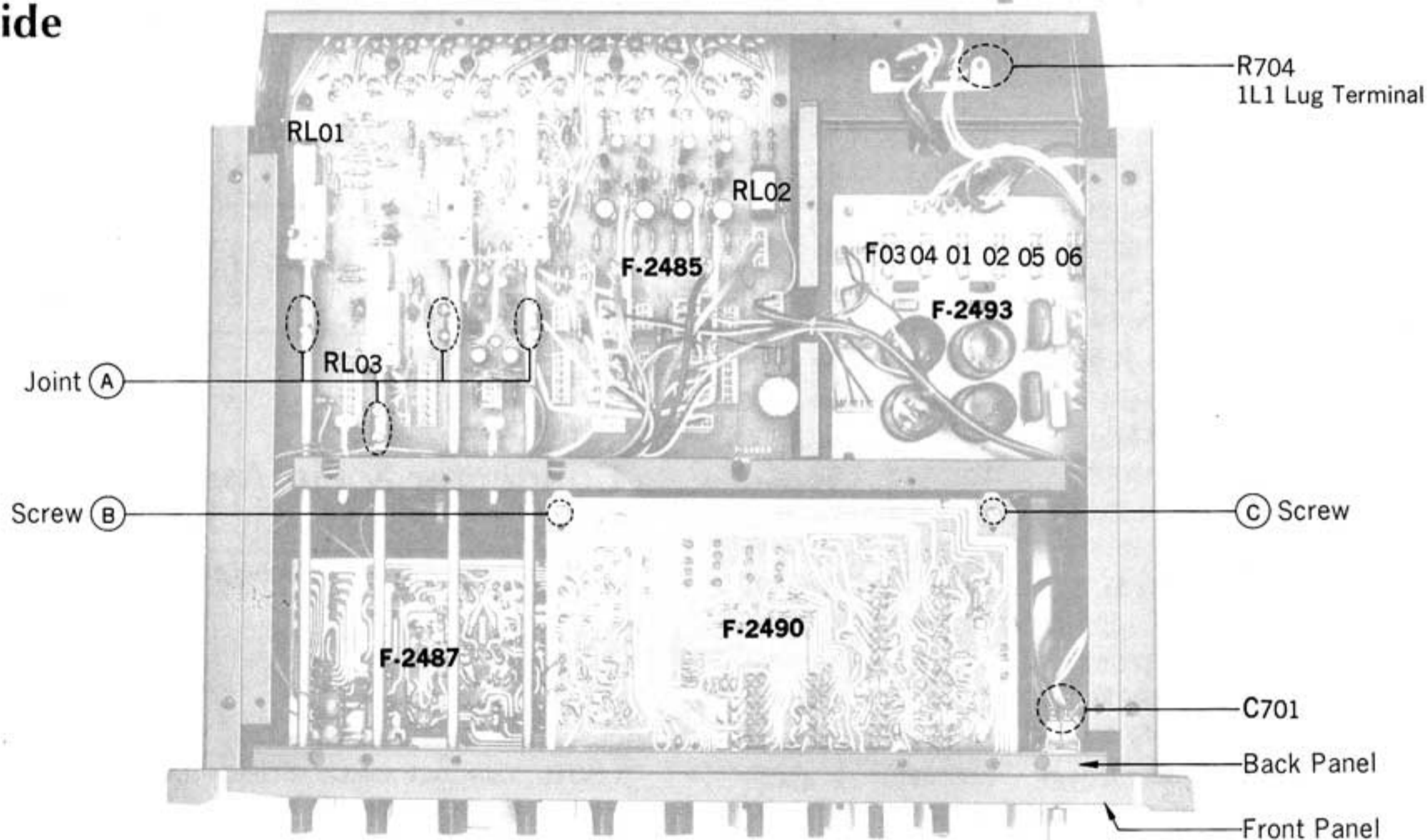
| | |
|--|---|
| C.R. : Carbon Resistor | BP.E.C.: Bi-Polar Electrolytic Capacitor |
| S.R. : Solid Resistor | C.C. : Ceramic capacitor |
| Ce.R. : Cement Resistor | Mi.C. : Mica Capacitor |
| M.R. : Metallized Film Resistor | O.C. : Oil Capacitor |
| M.C. : Mylar Capacitor | P.C. : Polystyrene Capacitor |
| E.C. : Electrolytic Capacitor | T.C. : Tantalum Capacitor |

5-14. Other Parts

Top Side



Bottom Side



Other Parts List

| Parts No. | Stock No. | Description |
|-----------|-----------|-------------------------|
| PT01 | 4002250 | Power Transformer |
| CO701-702 | 2450060 | AC Outlet |
| | 2230051 | Ground Terminal |
| | 3800250 | Power Cord |
| | 2090040 | Din Jack |
| C701 | 0659801 | 0.01 μ F 1.4kV C.C. |
| R701, 702 | 0107153 | 15k Ω 1/4W C.R. |
| R704 | 0152339 | 3.3 Ω 2W Ce.R. |
| | 2110011 | 1L1 Lug Terminal |
| | 2410091 | Voltage Selector Plug |
| | 2410130 | Voltage Selector Socket |
| | 5268600 | Voltage Selector Cover |

* Removal of Back plate

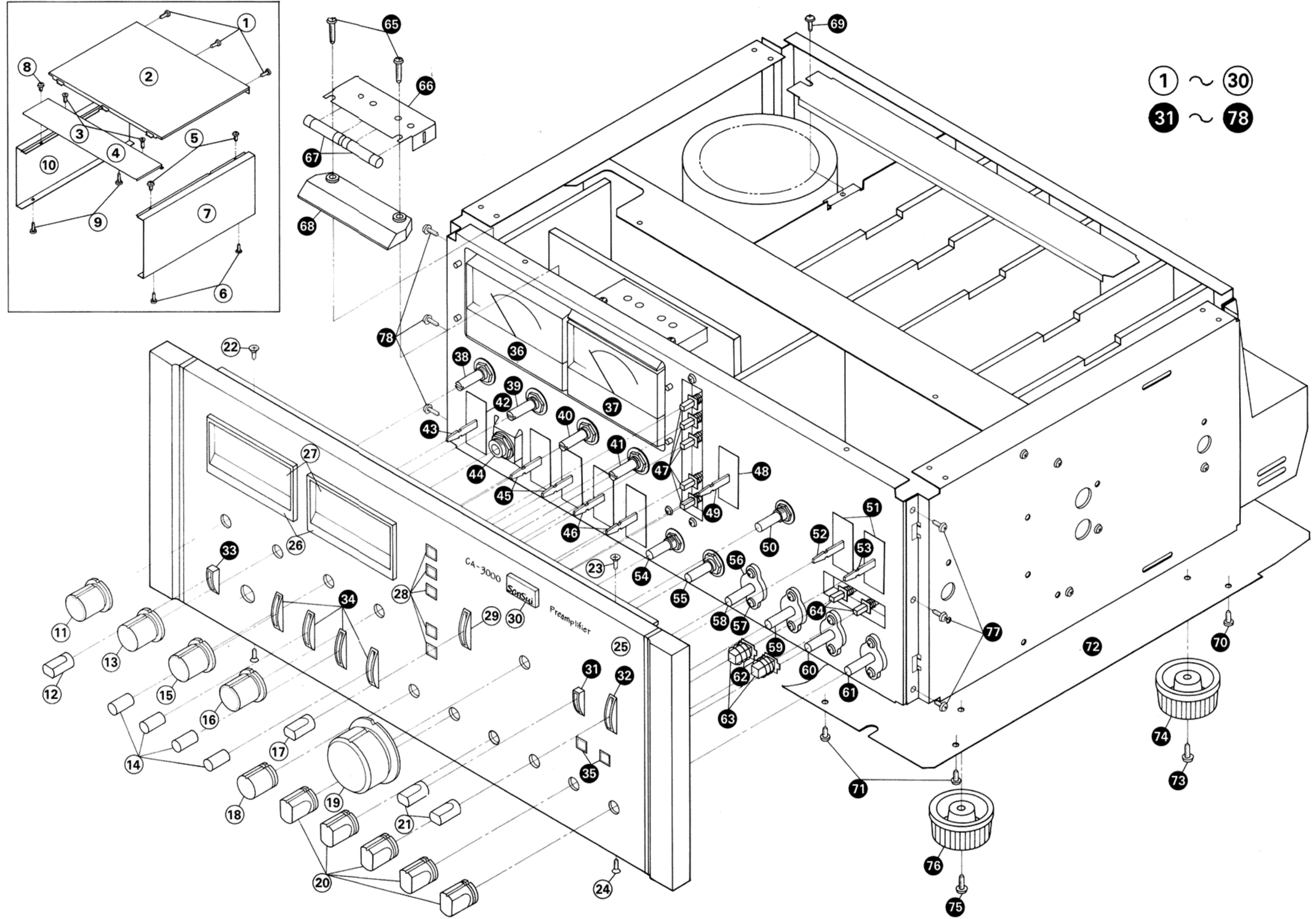
○ Back plate will be easily pulled out without removing Front Panel Ass'y as stated below.

- 1) Remove two bonnets (1), (2) (refer to Exploded View, parts No ②, ④).
- 2) Remove both panels ⑦ and ⑩ (See Exploded View).
- 3) Remove screws, ⑦⑦, ⑦⑧ for installing Back Panel and both side chassis.
- 4) Loosen tow screws on joint (A) each (see above picture from bottom view)
- 5) Loosen screws (B) (C) for installing the printed circuit board on chassis, then pull it toward the front panel. (See the picture)
- 6) Pull out the Back Panel toward the Front Panel.

5-15. Other Parts (Front Side)

Parts List

| Parts No. | Stock No. | Description |
|-----------|-----------|---------------------------------------|
| 1 | 5109222 | Binding Head Tapping Screw, M3×8 |
| 2 | 5006420 | Bonnet (2) |
| 3 | 5109222 | Binding Head Tapping Screw, M3×8 |
| 4 | 5006400 | Bonnet (1) |
| 5 | 5109222 | Binding Head Tapping Screw, M3×8 |
| 6 | 5109222 | Binding Head Tapping Screw, M3×8 |
| 7 | 5309800 | Dress Panel, Right |
| 8 | 5109222 | Binding Head Tapping Screw, M3×8 |
| 9 | 5109222 | Binding Head Tapping Screw, M3×8 |
| 10 | 5309790 | Dress Panel, Left |
| 11 | 5318250 | B-6 Type Knob, Headphone Level VR |
| 12 | 5326510 | E-2 Type Knob, Power SW |
| 13 | 5318250 | B-6 Type Knob, Bass VR |
| 14 | 5326520 | E-3 Type Knob, Filter & Tone Selector |
| 15 | 5318250 | B-6 Type Knob, Midrange VR |
| 16 | 5318250 | B-6 Type Knob, Treble VR |
| 17 | 5326510 | E-2 Type Knob, Muting SW |
| 18 | 5318270 | D-6 Type Knob, Balance VR |
| 19 | 5318230 | Z-5 Type Knob, Volume |
| 20 | 5318280 | F-6 Type Knob |
| 21 | 5326510 | E-2 Type Knob |
| 22 | 5166610 | Flat Countersunk Head Screw, M3×6 |
| 23 | 5166610 | Flat Countersunk Head Screw, M3×6 |
| 24 | 5166610 | Flat Countersunk Head Screw, M3×6 |
| 25 | 7007080 | Front Panel Ass'y |
| 26 | 5309760 | Meter Hood |
| 27 | 5446250 | Meter Glass |
| 28 | 5286720 | Knob Guide |
| 29 | 5286740 | Lever Guide (2) |
| 30 | 5336580 | Sansui Mark |
| 31 | 5286730 | Lever Guide (1) |
| 32 | 5286740 | Lever Guide (2) |
| 33 | 5286730 | Lever Guide (1) |
| 34 | 5286740 | Lever Guide (2) |
| 35 | 5286720 | Knob Guide |
| 36 | 4300480 | Level Meter |
| 37 | 4300480 | Level Meter |
| 38 | 1015150 | Headphone Level Volume |
| 39 | 1090090 | Bass Volume 50kΩ×2 |
| 40 | 1090100 | Midrange Volume 50kΩ×2 |
| 41 | 1090110 | Treble Volume 50kΩ×2 |
| 42 | 5047470 | Masking, Lever Switch |
| 43 | 1170330 | Power Switch |
| 44 | 2430190 | Headphone Jack |
| 45 | 1170990 | Lever Switch, Low & High Filter |
| 46 | 1170950 | Tone Selector SW |
| 47 | 1131080 | Push Switch, Meter & Tone Selector |
| 48 | 5047470 | Masking, Lever Switch |
| 49 | 1170990 | Muting Switch |
| 50 | 1090080 | Volume |
| 51 | 5047470 | Masking, Lever Switch |
| 52 | 1170940 | Tape Play Switch |
| 53 | 1170950 | Input Selector Switch |
| 54 | 1015160 | Balance Volume 50kΩ |
| 55 | 1101680 | Mode Switch, F-1-3-5 |
| 56 | 5269321 | Shaft Retainer |
| 57 | 5109222 | Binding Head Tapping Screw, M3×8 |
| 58 | 1190230 | Tape Copy Switch |
| 59 | 1190240 | Play Back Switch |
| 60 | 1190220 | Sensitivity Switch |
| 61 | 1190220 | Pickup Load Switch |



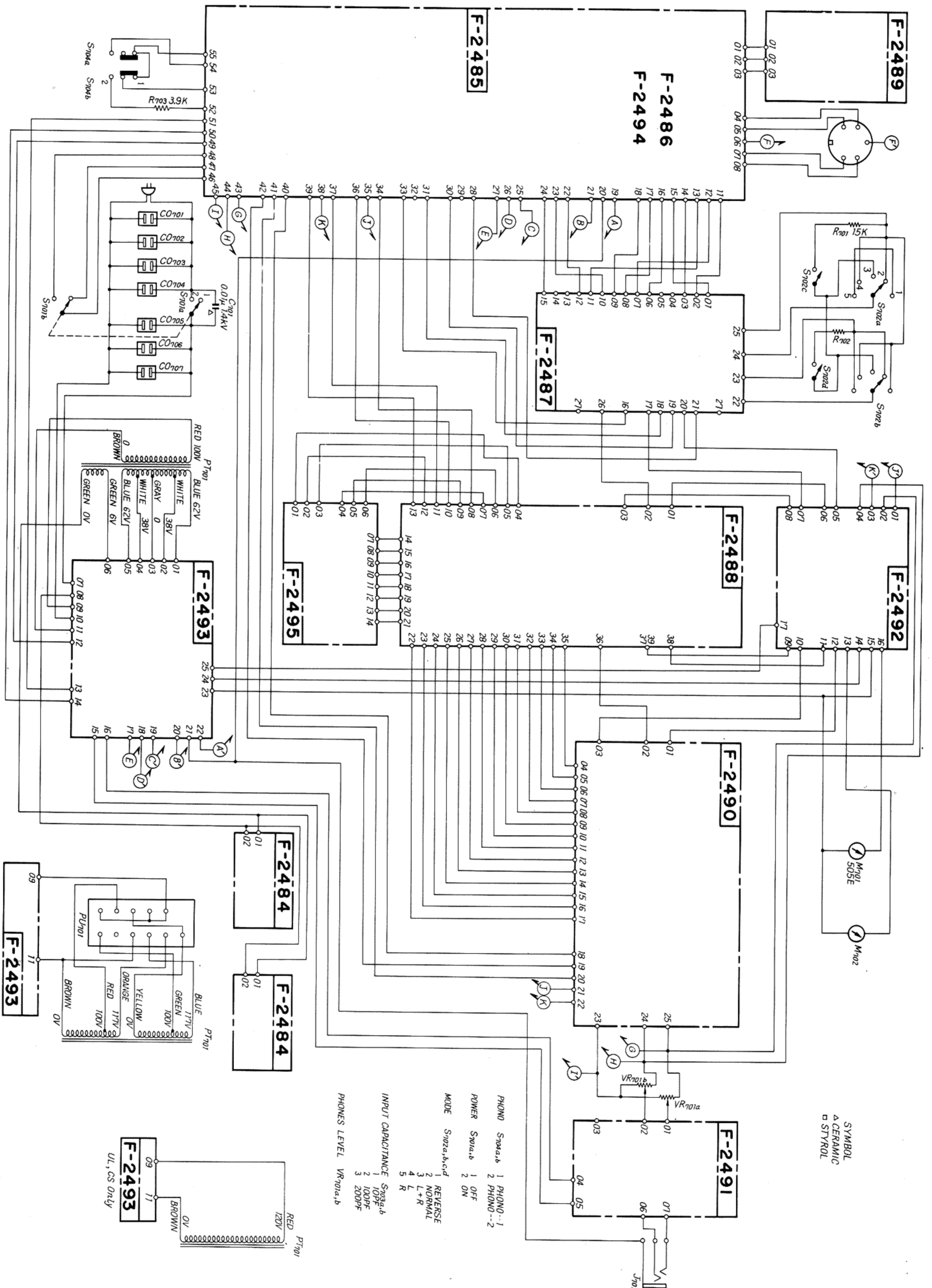
| Parts No. | Stock No. | Description |
|-----------|-----------|---------------------------|
| 62 | 6906480 | Spring, Push Knob |
| 63 | 5326530 | Push Knob |
| 64 | 1131070 | Phono Switch |
| 65 | 5101149 | Binding Head Screw, M3×16 |
| 66 | 5286780 | Illumination Cover |
| 67 | 0420040 | Meter Lamp, 7V 320MA |

| Parts No. | Stock No. | Description |
|-----------|-----------|----------------------------------|
| 68 | 5442640 | Illumination Plate |
| 69 | 5109222 | Binding Head Tapping Screw, M3×8 |
| 70 | 5109222 | Binding Head Tapping Screw, M3×8 |
| 71 | 5109222 | Binding Head Tapping Screw, M3×8 |
| 72 | 5058390 | Bottom Plate |
| 73 | 5101163 | Binding Head Screw, M4×10 |

| Parts No. | Stock No. | Description |
|-----------|-----------|----------------------------------|
| 74 | 5517050 | Leg |
| 75 | 5101163 | Binding Head Screw, M4×10 |
| 76 | 5517050 | Leg |
| 77 | 5109221 | Binding Head Tapping Screw, M3×6 |
| 78 | 5109221 | Binding Head Tapping Screw, M3×8 |

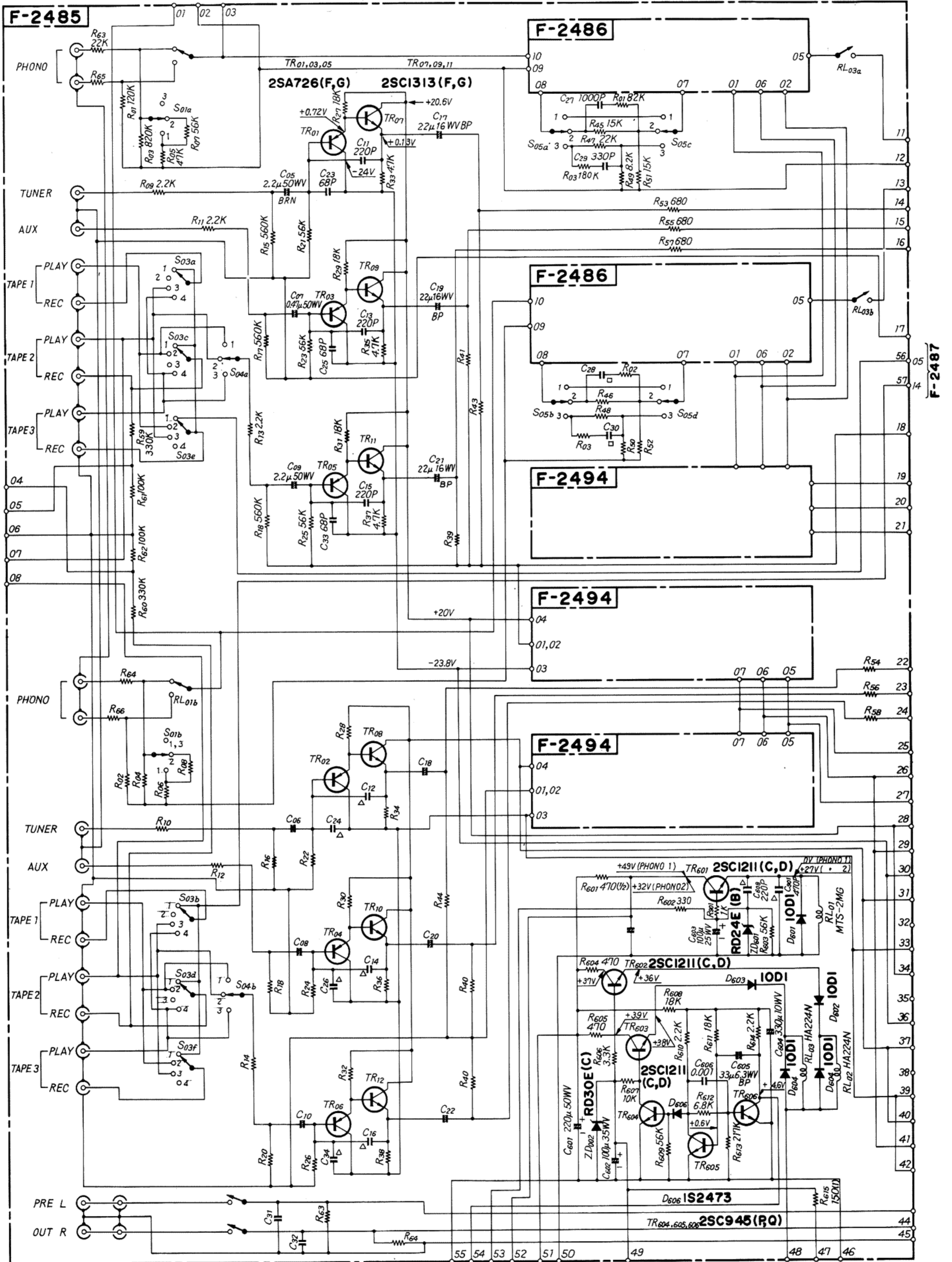
6. SCHEMATIC DIAGRAM

6-1. Connection Diagram



6-2. Input Circuit Board

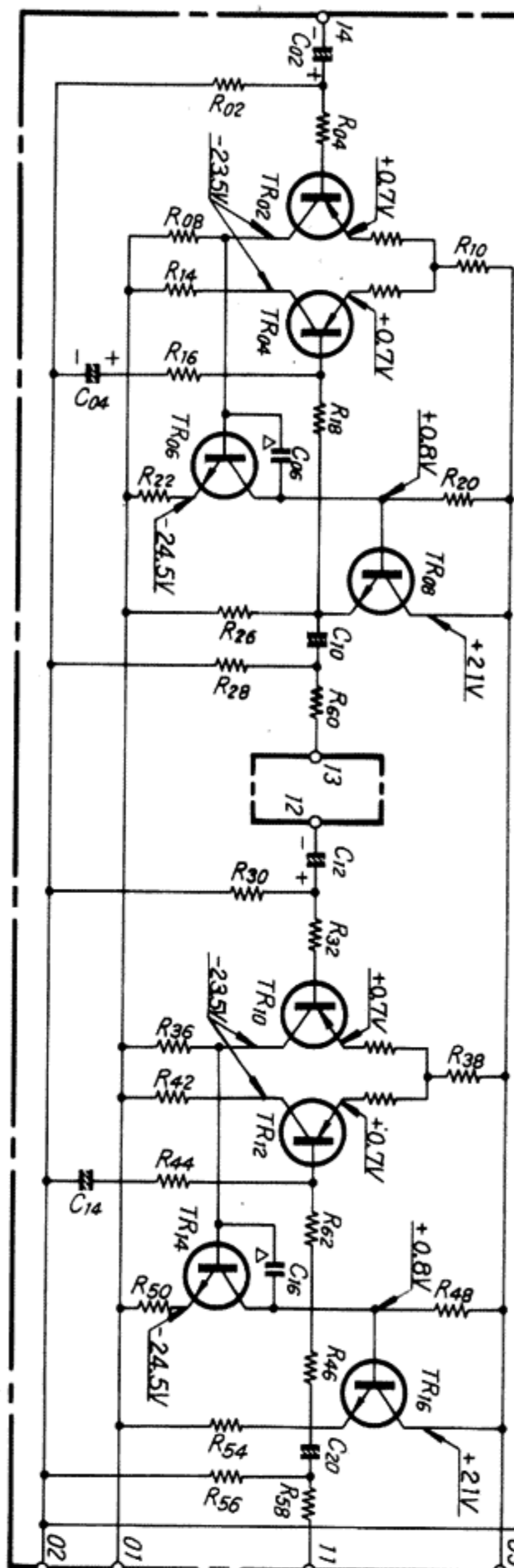
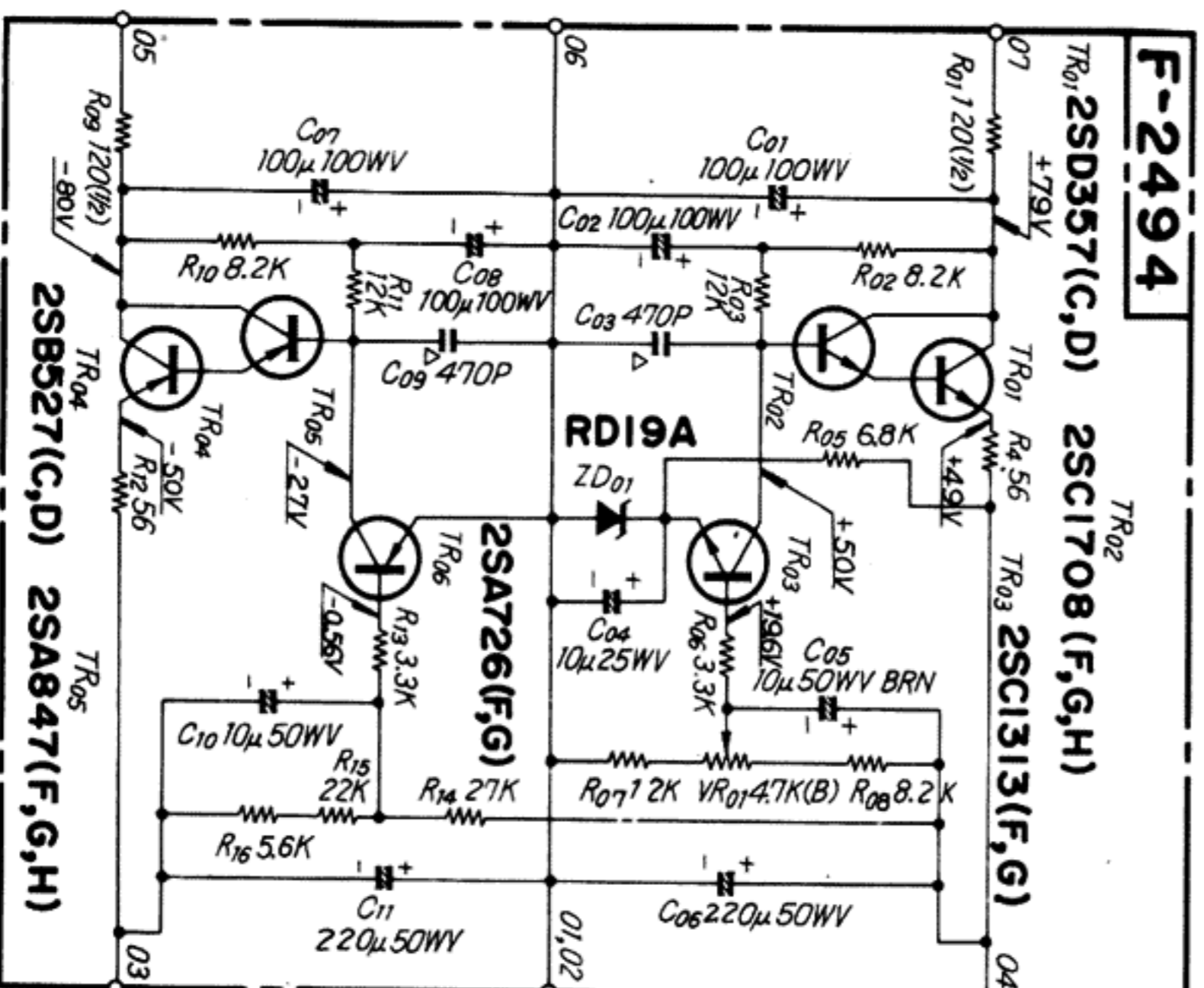
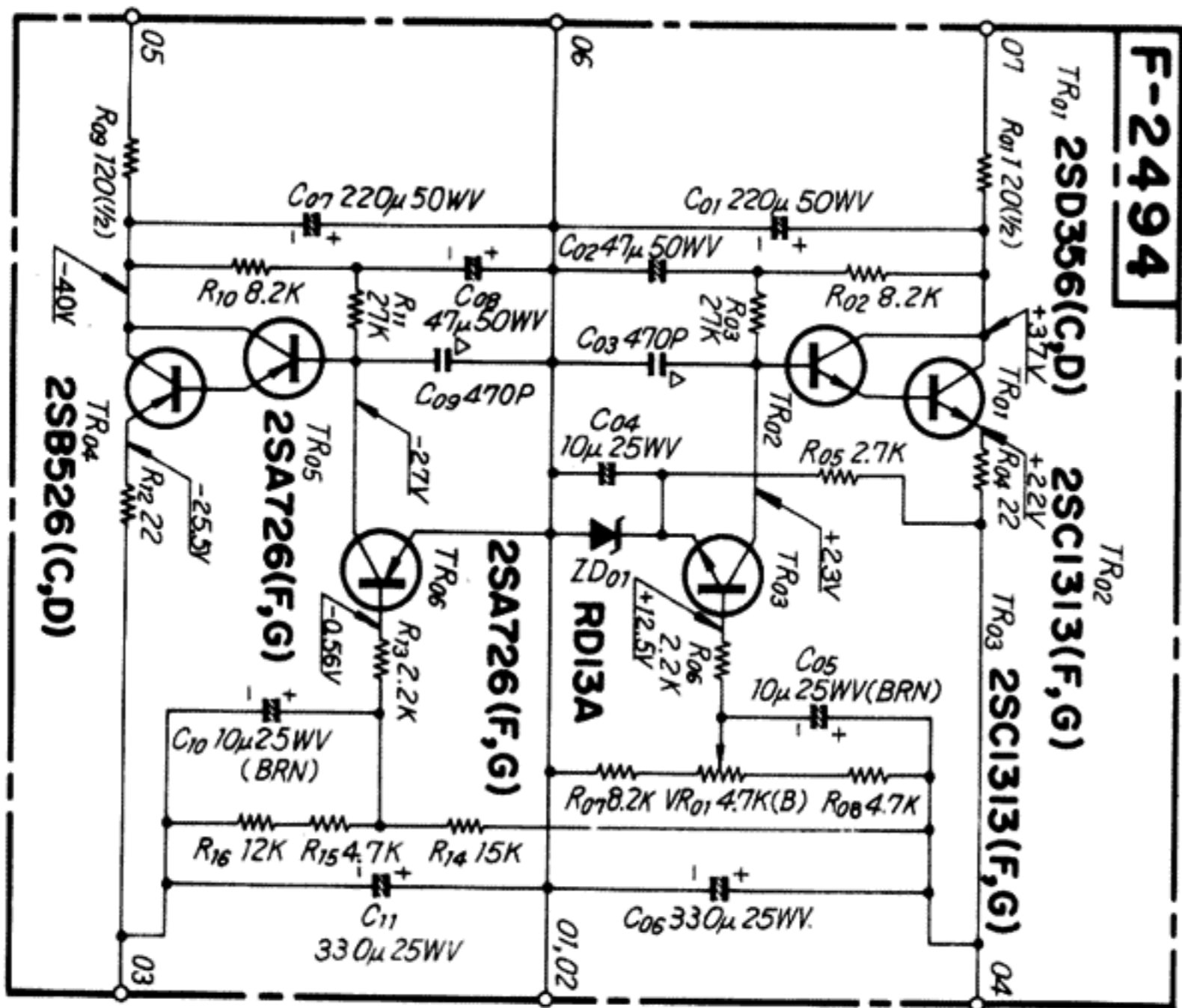
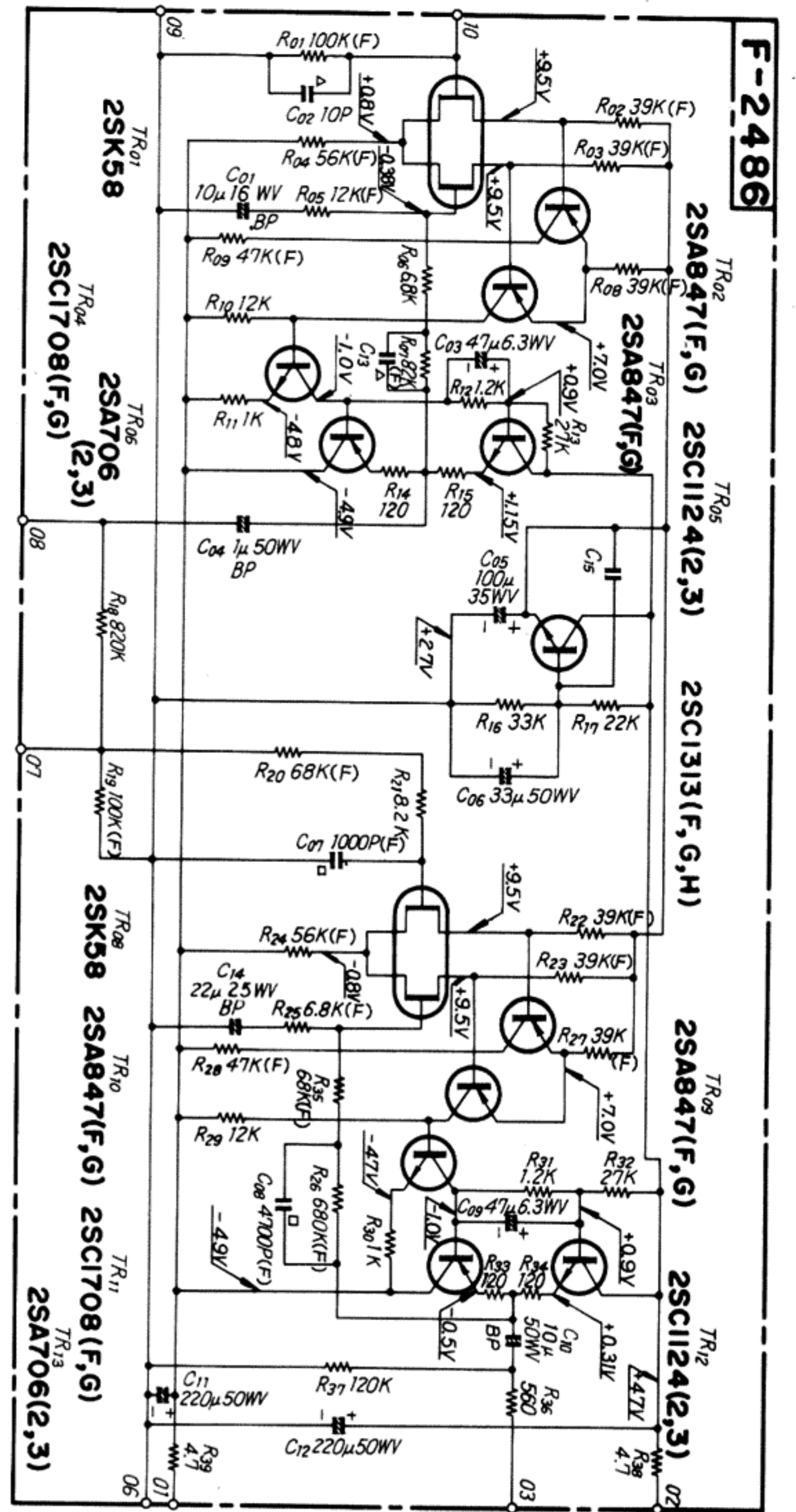
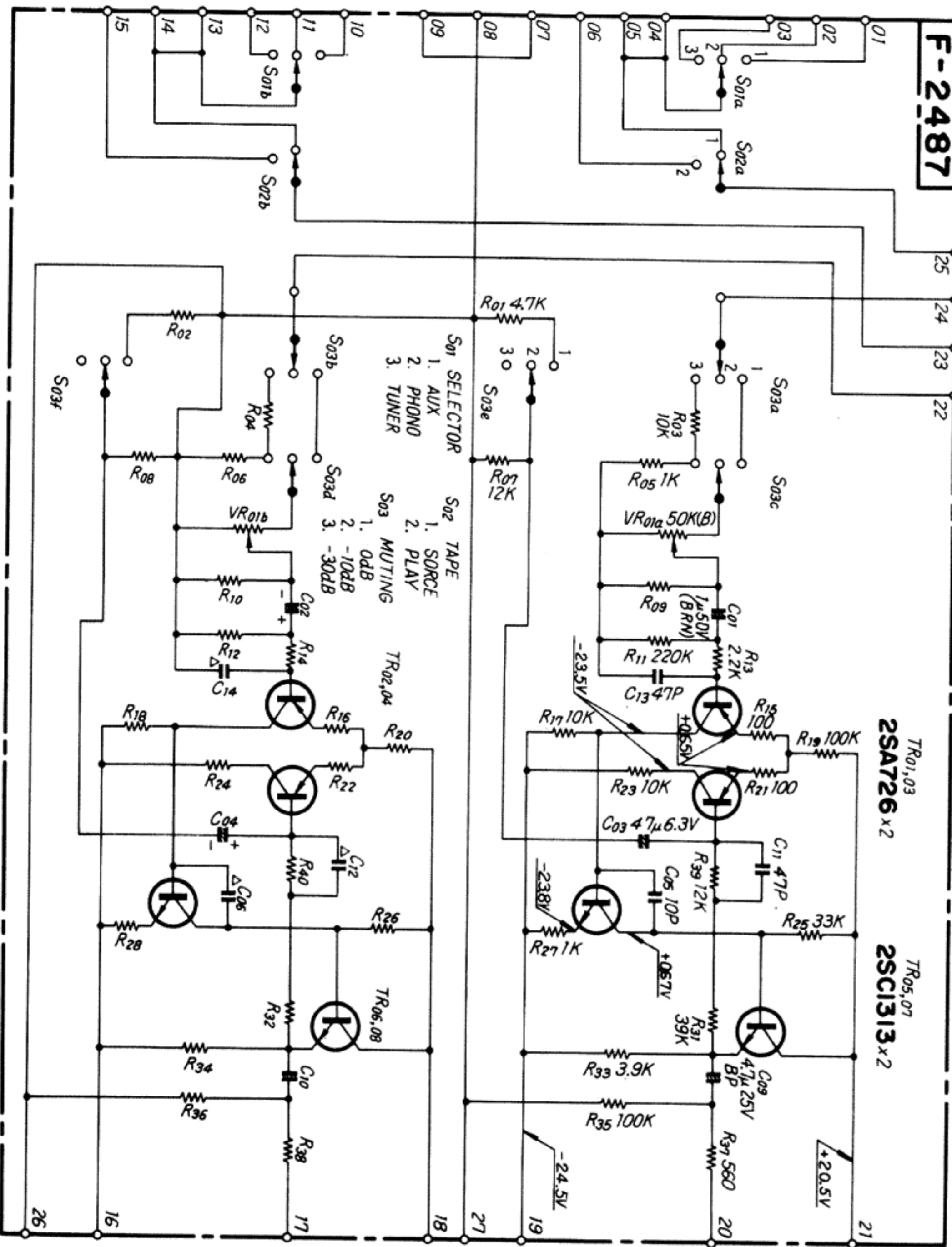
* La présentation et les spécifications sont susceptibles d'être modifiées sans préavis par suites d'améliorations éventuelles.
 * Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.
 * Design and specifications subject to change without notice for improvement.



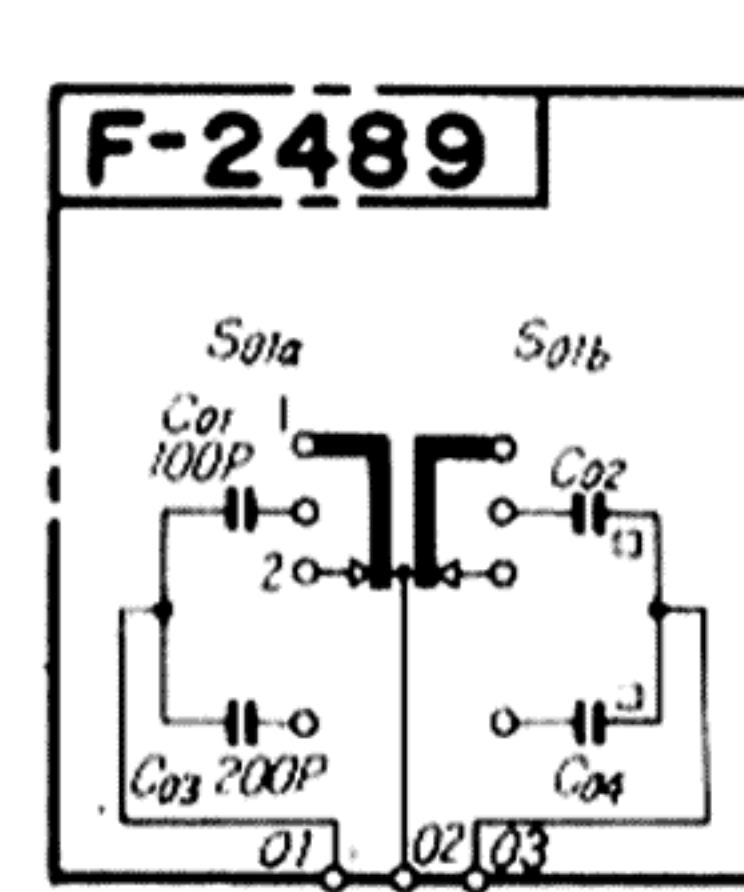
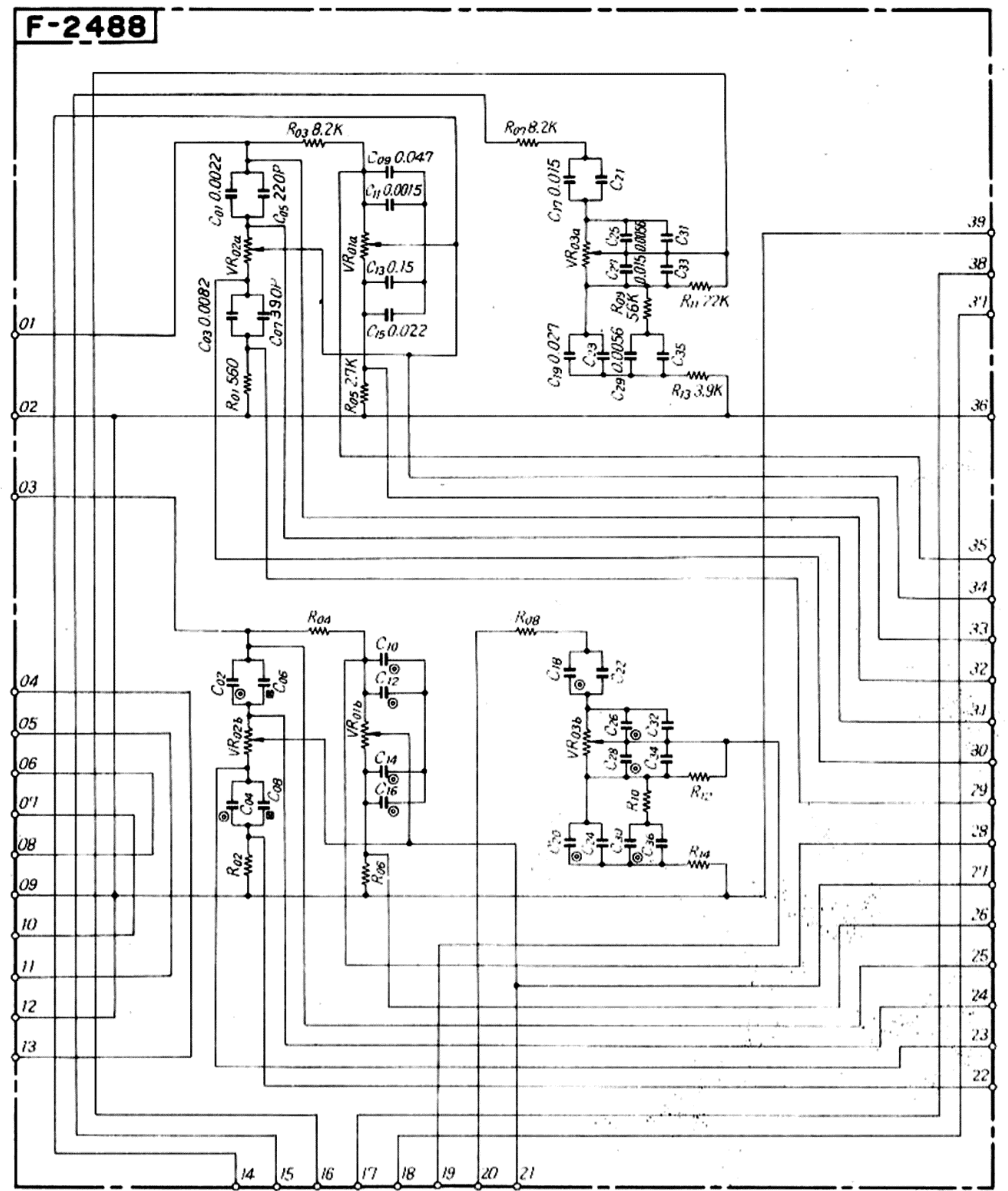
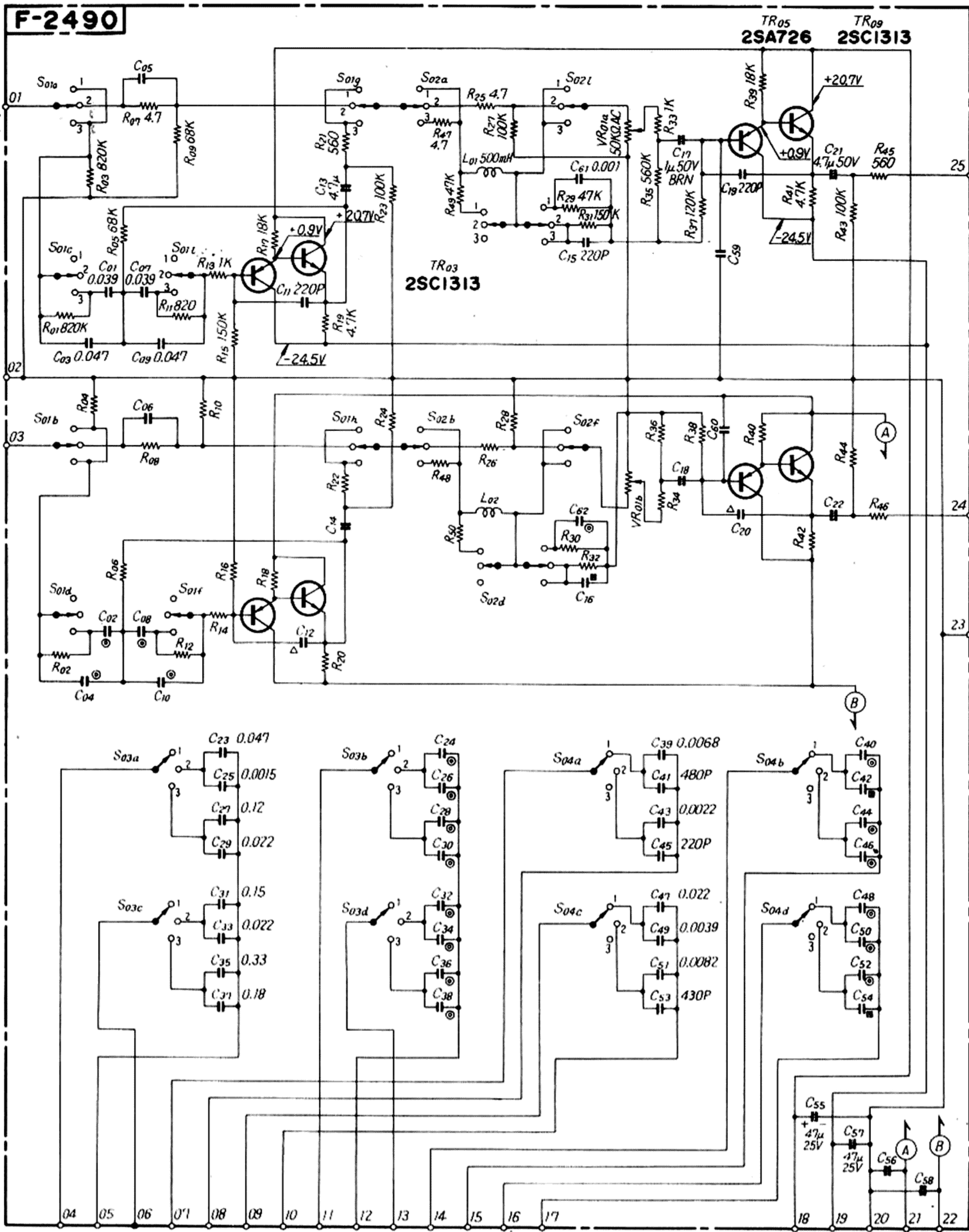
| | | | |
|-----------------|-----------------|---------------|-----------------|
| S01 PICKUP LOAD | S03 COPY SOURCE | S04 PLAY BACK | S05 SENSITIVITY |
| 3 : 100K | 1 : SOURCE | 1 : TAPE 1 | 1 : 1.5 mV |
| 2 : 50K | 2 : TAPE 2 | 2 : TAPE 2 | 2 : 3 mV |
| 1 : 30K | 3 : TAPE 3 | 3 : TAPE 3 | 3 : 6 mV |

◁ No. 2 ▷

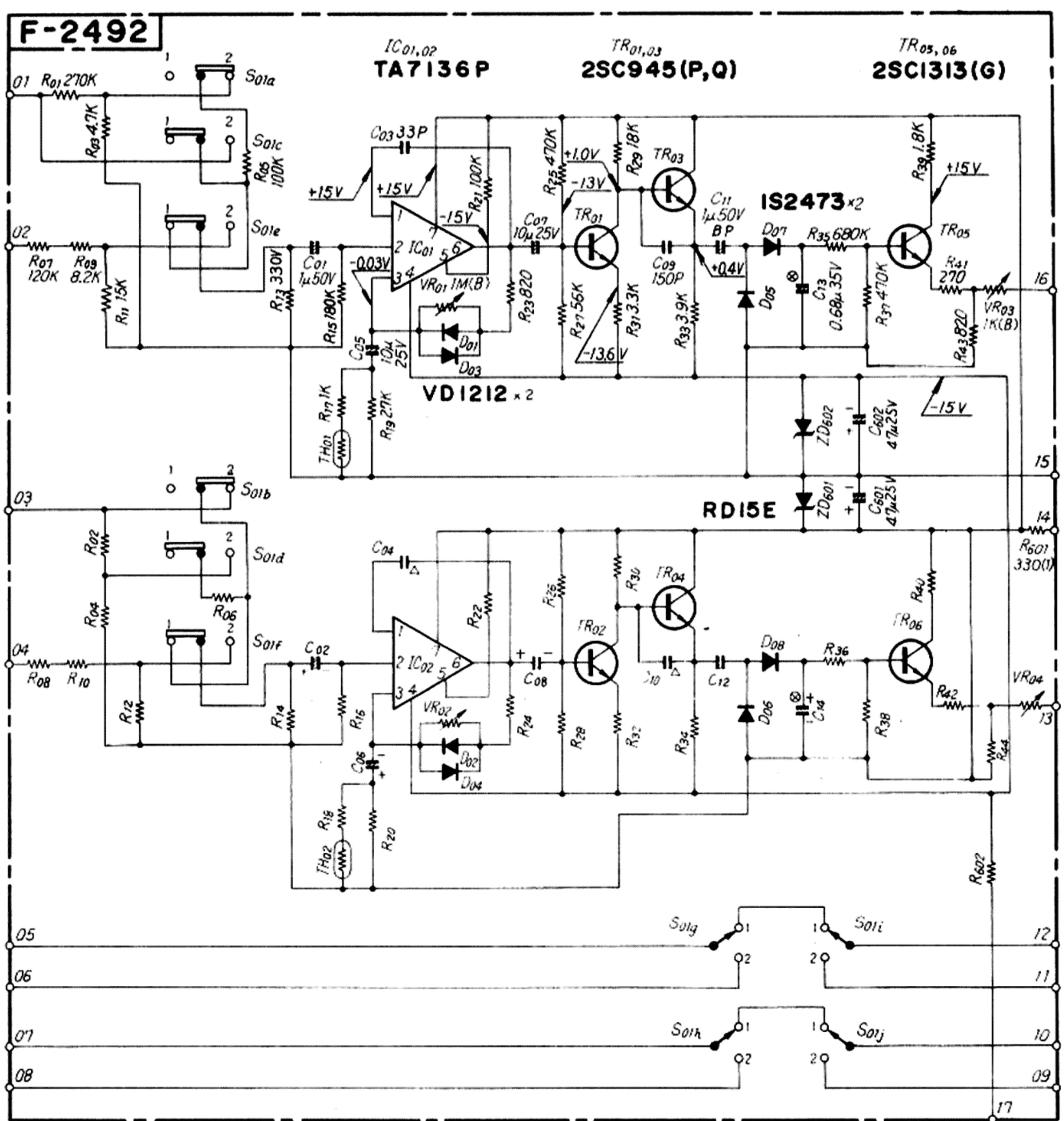
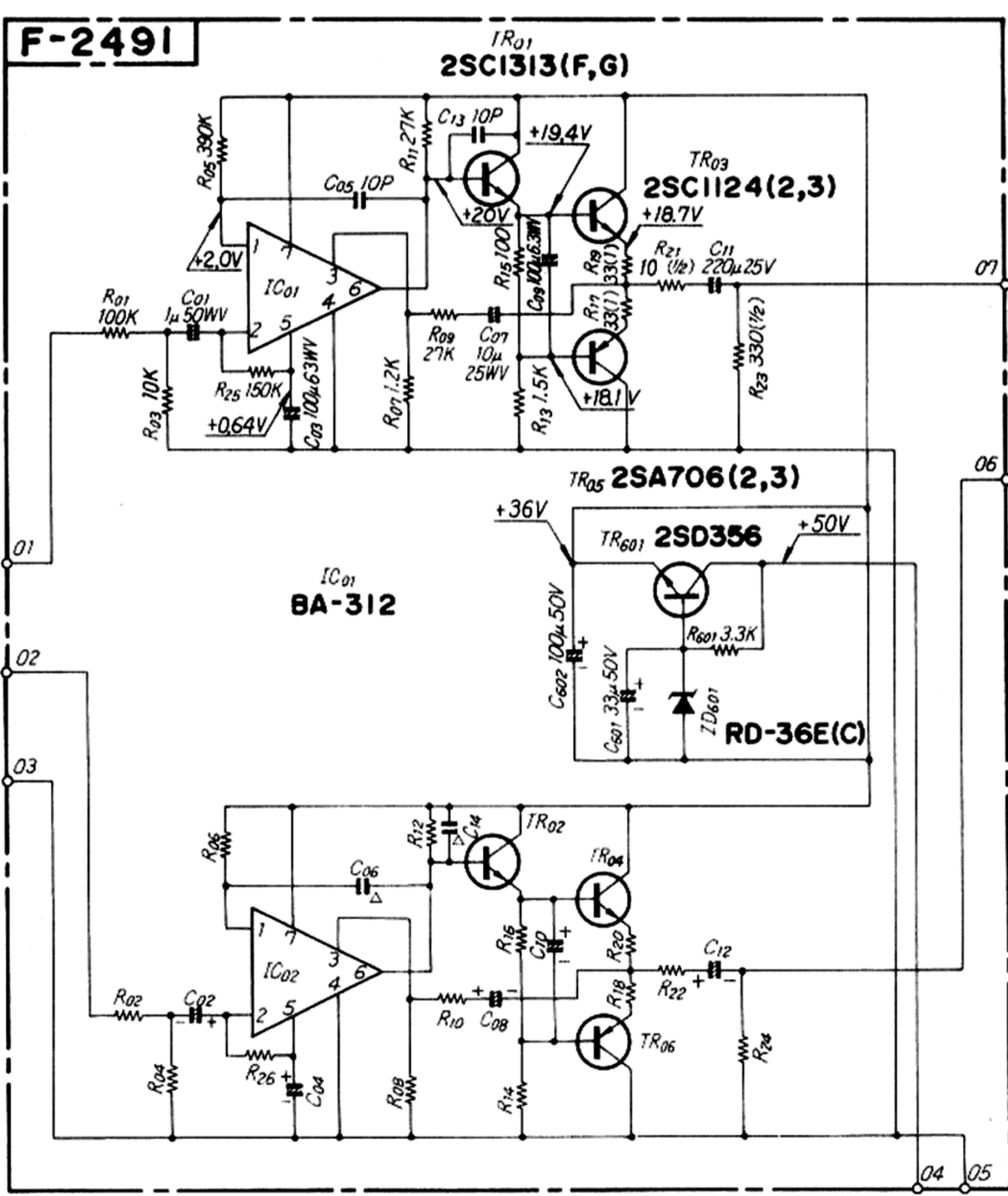
* Operation block diagram is shown on page 4.



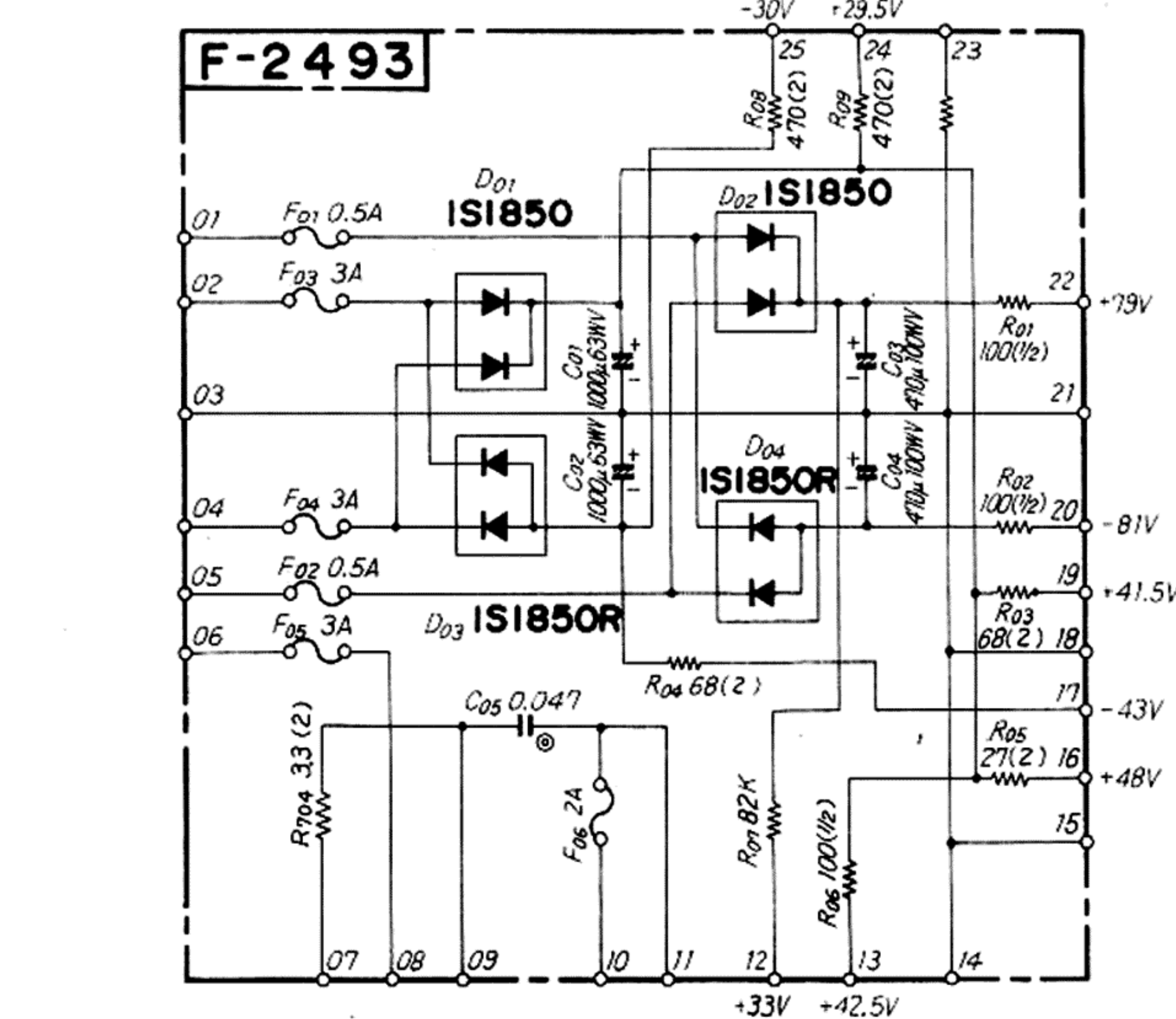
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 * Design and specifications subject to change without notice for improvement.



- F-2490**
- S01: LOW FILTER
 - 1. 40Hz
 - 2. 0UT
 - 3. 20Hz
 - S02: HIGH FILTER
 - 1. 7kHz
 - 2. 0UT
 - 3. 12kHz
 - S03: BASS TONE SELECTOR
 - 1. 10P
 - 2. 400Hz
 - 3. 200Hz
 - S04: TREBLE TONE SELECTOR
 - 1. 3kHz
 - 2. 4kHz
 - 3. 7kHz
- F-2489**
- S01: INPUT CAPACITANCE
 - 1. 10P
 - 2. 100P
 - 3. 200P

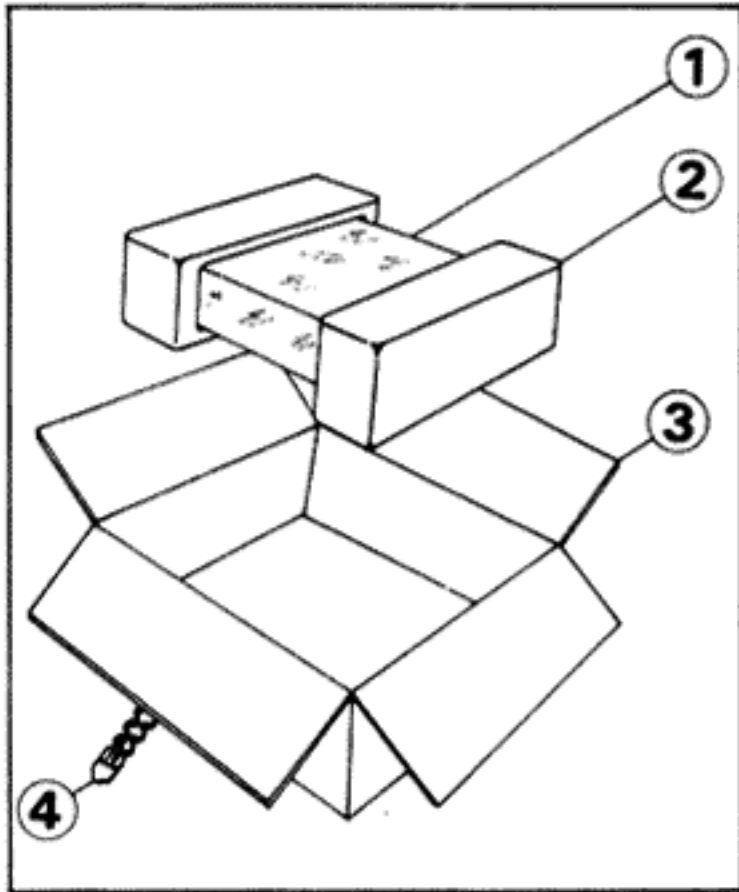


- R13 NS2
- R15 NS2
- S01-a: METER 切换
 - a. -40dB
 - b. 0dB
 - c. OUTPUT
- S01-b: TONE 切换
 - 1. DEFEAT
 - 2. IN



7. PACKING LIST

| Parts No. | Stock No. | Description |
|-----------|-----------|-------------------|
| 1 | 9116051 | Vinyl Cover |
| 2 | 9027880 | Stylofoam Packing |
| 3 | 9008300 | Carton Case |
| 4 | 5996080 | Curl Stopper |



8. ACCESSORY PARTS LIST

| Stock No. | Description |
|-----------|------------------------|
| 9208890 | Operating Instructions |
| 3810180 | Pin Plug Cord MJB-3 |
| 5066250 | Input Terminal Cover |
| 2410560 | Short Pin Plug |
| 9238770 | Schematic Diagram |



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