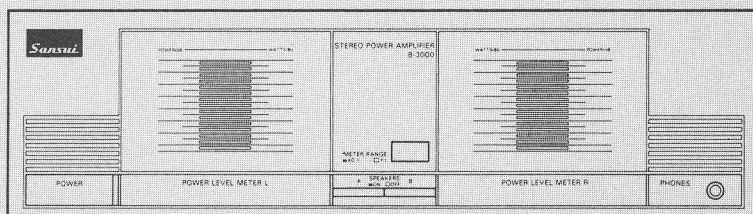


SERVICE MANUAL

STEREO POWER AMPLIFIER

SANSUI B-3000/1000



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.

•SPECIFICATIONS

< B-3000 >

Power output

Min. RMS, both channels driven, from 20 to 20,000 Hz, with no more than 0.05% total harmonic distortion.

120 watts per channel into 8 ohms

Load impedance..... 8 to 16 ohms

Intermodulation distortion (70 Hz: 7 kHz=4:1, SMPTE method) less than 0.01% at rated power output

Frequency response (at 1 watt)

..... 5 to 100,000 Hz,
+0 dB, -2 dB

Input sensitivity and impedance (at 1 kHz)

..... 1 V/33 kohms

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

..... 110 dB

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

For U.S.A. & Canada .. AC 120V, 60 Hz

Power consumption 440 watts 540 VA Rated

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

127 mm (5") H

224 mm (8-13/16") D

Weight 9.6 kg (21.2 lbs) net

< B-1000 >

Power output

Min. RMS, both channels driven, from 20 to 20,000 Hz, with no more than 0.05% total harmonic distortion.

75 watts per channel into 8 ohms

Load impedance..... 8 to 16 ohms

Intermodulation distortion (70 Hz: 7 kHz=4:1, SMPTE method) less than 0.01% at rated power output

Frequency response (at 1 watt)

..... 5 to 100,000 Hz,
+0 dB, -2 dB

Input sensitivity and impedance (at 1 kHz)

..... 1 V/33 kohms

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

..... 110 dB

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

Power consumption 300 watts

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

127 mm (5") H

224 mm (8-13/16") D

Weight 7.0 kg (15.4 lbs) net

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

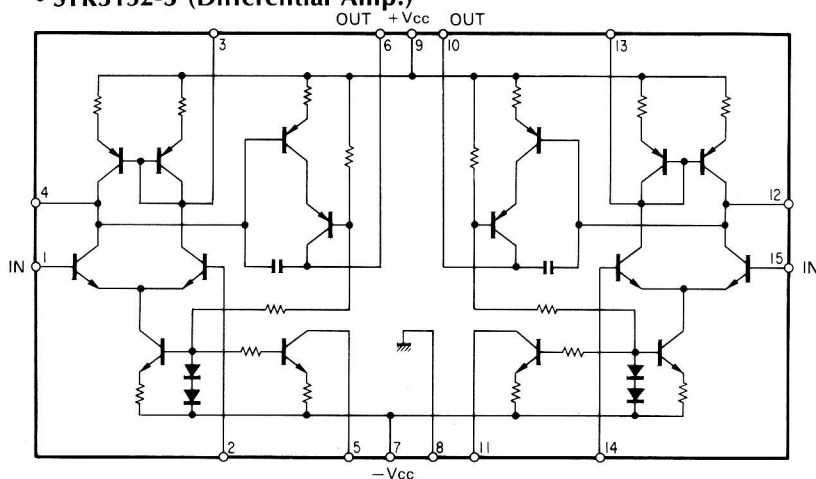
* Due to local laws and regulations, this unit sold in some areas are not equipped with variable voltage selectors.

Sansui

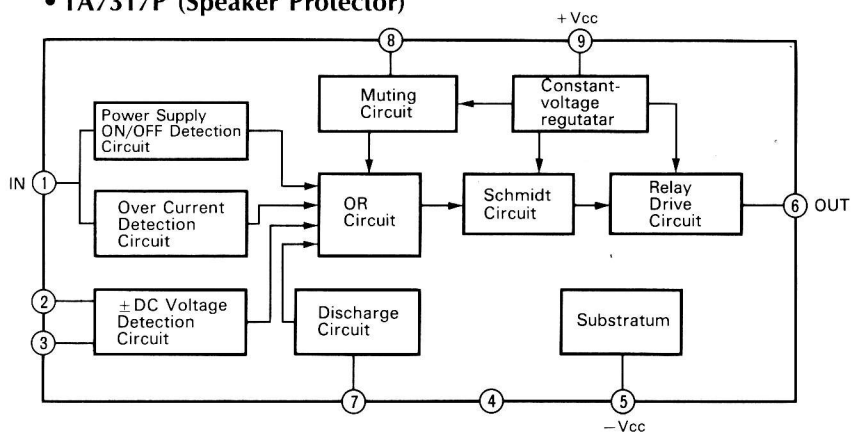
SANSUI ELECTRIC CO., LTD.

1. INTERIOR BLOCK DIAGRAM OF IC

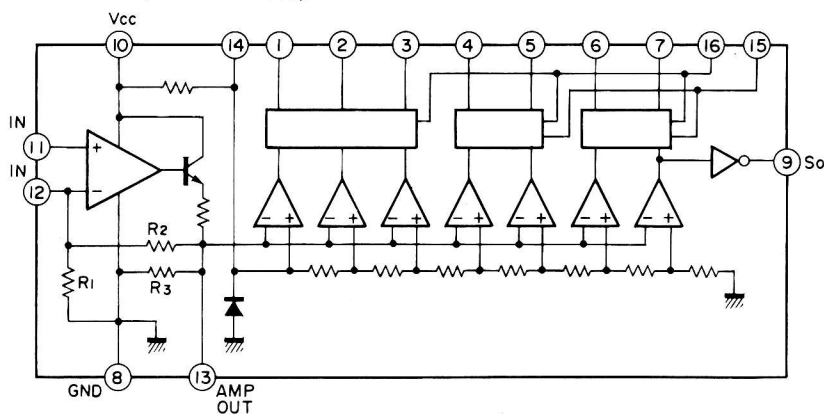
• STK3152-3 (Differential Amp.)



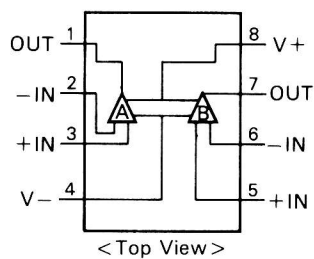
• TA7317P (Speaker Protector)



• IR2E29 (L.E.D. Drive)



• M5218P/NJM4558D (OP Amp.)



2. PARTS LIST OF BOARD

2-1. F-5778 Main Amp Board (Stock No. 01045301 = B-3000/01046201 = B-1000)

Parts No.	Stock No.	Description
•Transistor		
△kQ1	03067401	2SC1845
△kQ2	48263101	2SC3298A <B-3000>
△	07206401	2SD600K <B-1000>
△	or 48849101	2SC3944A <B-3000>
△kQ3	48263001	2SA1306A <B-3000>
△	07206301	2SB631K <B-1000>
△	or 48849001	2SA1535A <B-3000>
△kQ4	46541401	2SC2921 <B-3000>
△	48490801	2SC3855 <B-1000>
△kQ5	46541301	2SA1215 <B-3000>
△	48490701	2SA1491 <B-1000>
•IC		
kIC1	48127000	STK3152-3 <B-3000>
	48904300	STK3082-2A <B-1000>
kIC2	03607700	NJM4558D
	or 46580100	M5218P
△kR9	46228400	33Ω 1/2W N.I.R.
△kR12	46228600	47Ω 1/2W N.I.R.
△kR13	46228600	47Ω 1/2W N.I.R.
△kR16	48197000	0.22Ω + 0.22Ω 7W Ce.R. <B-3000>
△	46184100	0.22Ω + 0.22Ω 5W Ce.R. <B-1000>
△kR17	46623100	10Ω 2W N.I.R.
△kR23	46622300	2.2Ω 2W N.I.R.
△kR51	46624700	220Ω 2W N.I.R.
kC13	48103500	2.2μF 50V E.B.
kC14	48103700	4.7μF 50V E.B.
kL1	83020100	Inductor
kM1	83020800	MOTOR <B-3000>
kVR1	83006800	500Ω S.V.R., Bias
•Transistor		
IQ2	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
IQ3	46367001	2SA1115
	or 46367201	2SA1048
	or 48058601	2SA933S
IQ4	46367001	2SA1115 <B-3000>
	or 46367201	2SA1048 <B-3000>
	or 48058601	2SA933S <B-3000>
IQ5	48059401	2SA1284 <B-3000>
IQ6	48863701	2SC2857
	or 48863901	2SC1473

Parts No.	Stock No.	Description
IQ7	03010901	2SA992
•IC		
IIC1	46207600	TA7317P
•Diode		
ID1	83000100	1N4148
ID2	83000100	1N4148
ID3	83000100	1N4148
ID5	83000100	1N4148 <B-3000>
ID6	83000100	1N4148 <B-3000>
ID7	83005000	1N4002
IPT1	48262800	Thermistor ZPP221C501A110
△IPT2	48262700	Thermistor ZPP220T501A80
IC2	48101500	100μF 6.3V E.B.
△IR14	46229000	100Ω 1/2W N.I.R.
△IR15	46229000	100Ω 1/2W N.I.R.
△IR16	46229300	180Ω 1/2W N.I.R. <B-3000>
△	46229100	120Ω 1/2W N.I.R. <B-1000>
△IR17	46229300	180Ω 1/2W N.I.R. <B-3000>
△	46229100	120Ω 1/2W N.I.R. <B-1000>
△IR23	46249100	120Ω 1/2W N.I.R. <B-3000>
△IR24	46249100	120Ω 1/2W N.I.R. <B-3000>
△IR28	46229100	120Ω 1/2W N.I.R.
△IR29	46227400	4.7Ω 1/2W N.I.R.
IRL1	48524300	Relay, (DC 12V)
	or 48524400	Relay, (DC 12V)
•Transistor		
△mQ1	46614101	2SC3243
△mQ2	46614001	2SA1283
•Diode		
△mD2	83004800	KBP02
•Zener Diode		
mDZ1	46113900	05Z12-Y
	or 46114000	05Z12-Z
mDZ2	46113900	05Z12-Y
	or 46114000	05Z12-Z
△nR6	46230300	1.2kΩ 1/2W N.I.R.
oS1	83004700	Push SW., SPEAKERS
oJ1	83002600	Jack, PHONES
oZ1	83003900	2P Terminal, INPUT

2-2. F-5779 Power Supply Board

Parts No.	Stock No.	Description
•Diode △mD1	83020900	KBPC802
△mR1	46626600	8.2kΩ 2W N.I.R.
△mR2	46626600	8.2kΩ 2W N.I.R.
△mR3	46622700	4.7Ω 2W N.I.R.
mC1	48846000	8200μF 80V E.C.
mC2	48846000	8200μF 80V E.C.
mC12	08680400	0.01μF 500V C.C.

2-3. F-5780 Speakers Terminal Board

Parts No.	Stock No.	Description
oZ2	83002300	8P Terminal, Speaker

2-4. F-5781 Meter Range SW., Board

Parts No.	Stock No.	Description
oS2	83004500	Push SW., METER RANGE

2-5. F-5782 Indicator Board

Parts No.	Stock No.	Description
•LED nLD9	48849300	SEL3913K, POWER

2-6. F-5784 Fuse Board

Parts No.	Stock No.	Description
△pF1	83022000	Fuse 4A <B-3000> (XX-V•SS)
	83029100	Fuse 8A <B-3000> (UL.CSA)
△	83021800	Fuse 2.5A <B-1000> (XX-V•SS)
△pF2	83022000	Fuse 4A <B-3000> (XX-V•SS)
△	83021800	Fuse 2.5A <B-1000> (XX-V•SS)

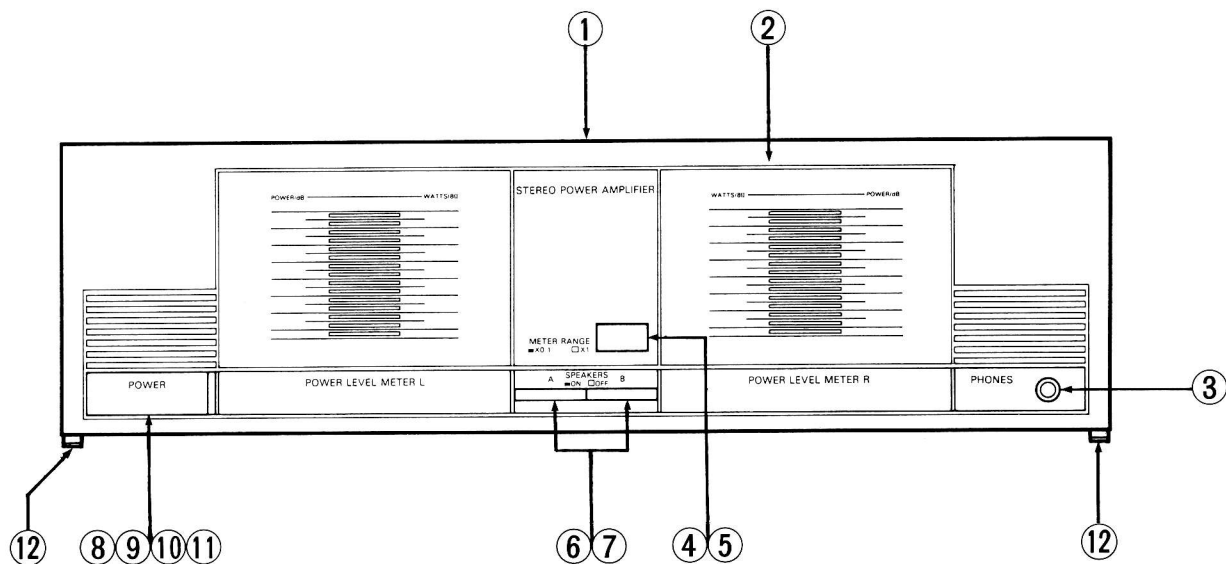
2-7. F-5783 Power Level Meter Board

(Stock No. 01045801)

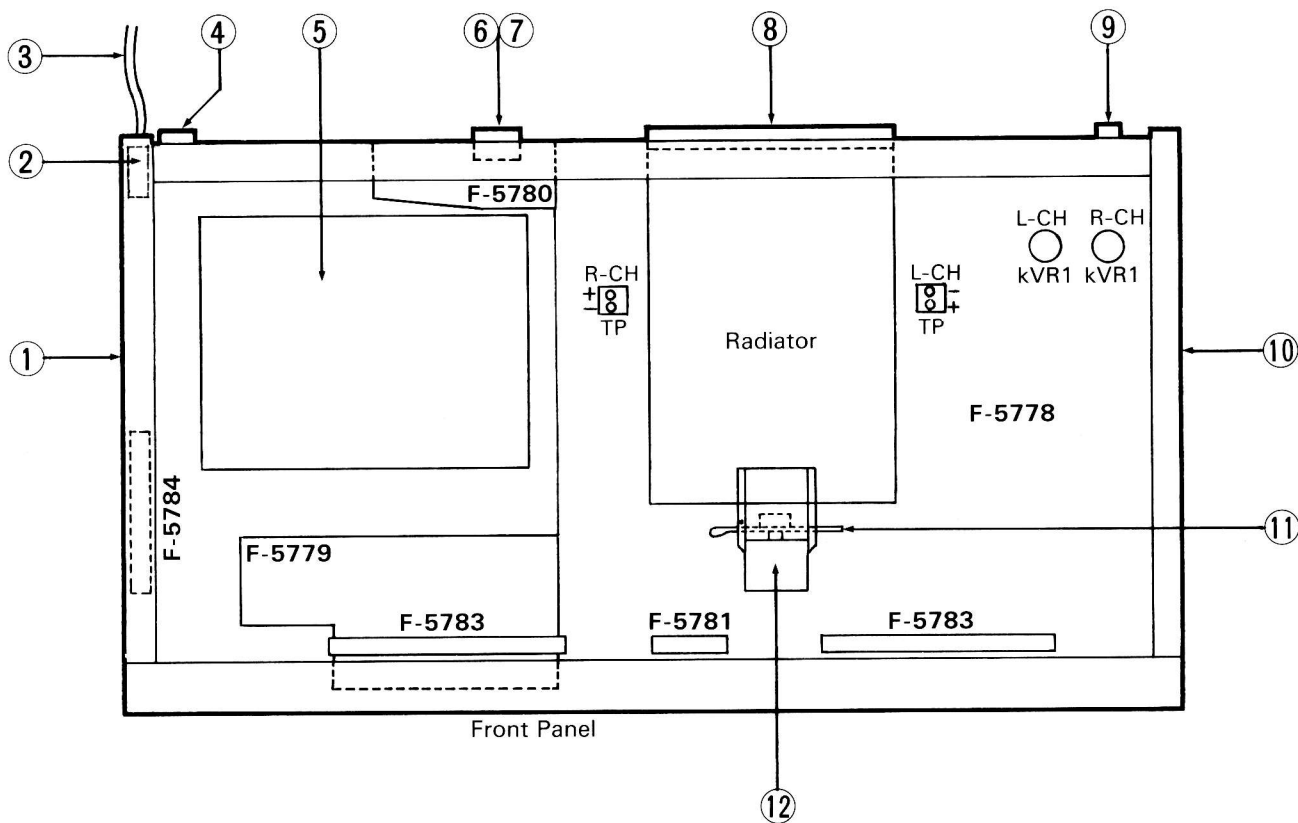
Parts No.	Stock No.	Description
•IC nIC1	46398400	IR2E29
•Zener Diode nDZ1	46109300 or 46109400	05Z3.0-X 05Z3.0-Y
•LED nLD1	48841300	SEL3813A
nLD2	48841300	SEL3813A
nLD3	48841300	SEL3813A
nLD4	48841300	SEL3813A
nLD5	48841300	SEL3813A
nLD6	48841300	SEL3813A
nLD7	48841300	SEL3813A
nLD8	48841300	SEL3813A

3. OTHER PARTS

• Front View



• Top View



•Parts List <Front View>

Parts No.	Stock No.	Description
1	84503900	Bonnet
2	37500101	Front Panel Ass'y <B-1000>
	37500001	Front Panel Ass'y <B-3000>(XX)
	37500002	Front Panel Ass'y <B-3000>(UL.CSA)
3	83002600	Jack, PHONES
4	48508800	Knob, METER RANGE
5	83004500	Push SW., METER RANGE
6	84508900	Knob, SPEAKERS
7	83004700	Push SW., SPEAKERS
8	84517800	Knob, POWER
△ 9	48113300	Push SW., POWER <B-1000>
△	46612900	Push SW., POWER <B-3000>
10	84505100	Spring, POWER
△ 11	46425800	0.01μF 400V C.C.
12	84527700	Leg

4. ADJUSTMENTS

•Notes

1. Room Temperature 18°C~28°C.
2. For this adjustment run the unit for more than 5minutes after the power is switched ON.
3. For the point of adjustment, see the Top View.
4. See Top View on page 5 adjustment position.

STEP	MEASURE OUTPUT	ADJUST	ADJUST FOR
1 L-CH	Terminal (TP) Between emitters of Power transistors (KQ4 & KQ5)	KVR1 (F-5778) L-CH	5mV ± 1mV
2 R-CH	Terminal (TP) Between emitters of Power transistors (KQ4 & KQ5)	KVR1 (F-5778) R-CH	5mV ± 1mV

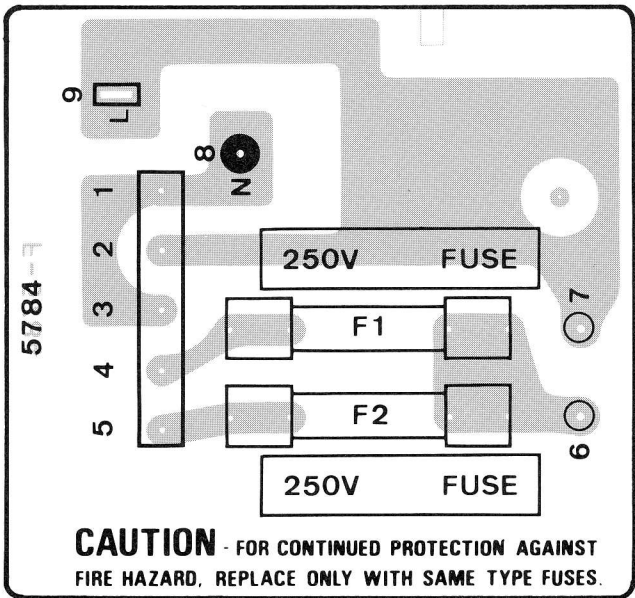
Parts List <Top View>

Parts No.	Stock No.	Description
1	84512000	Side Panel, Left <B-3000/1000>
	84519800	Side Panel, Left (UL.CSA) <B-3000>
2	84514000	AC Cord Holder
△ 3	83020000	Power Supply Cord (XX-V•SS)
△	83003600	Power Supply Cord (UL.CSA) <B-3000>
△	48837700	Power Supply Cord (SS)
△ 4	83004100	AC Outlet (XX-V•SS)
△	83002200	AC Outlet-Polarized (XX-V•SS)
△	83002200	AC Outlet (UL) <B-3000>
△ 5	83011509	Power Transformer with VOLTAGE SELECTOR Socket (XX-V•SS)
△	83011602	Power Transformer (UL.CSA) <B-3000>
6	48175200	Plug, VOLTAGE SELECTOR (XX-V•SS)
7	83002300	8p Terminal, SPEAKERS
8	84507500	HS Cover <B-3000>
9	83003900	2P Terminal, INPUT
10	84512100	Side Panel, Right <B-3000/1000>
	84519900	Side Panel, Right (UL.CSA) <B-3000>
11	07255000	Fan <B-3000>
12	83020800	DC Motor <B-3000>

5. PARTS LOCATION ON BOARD

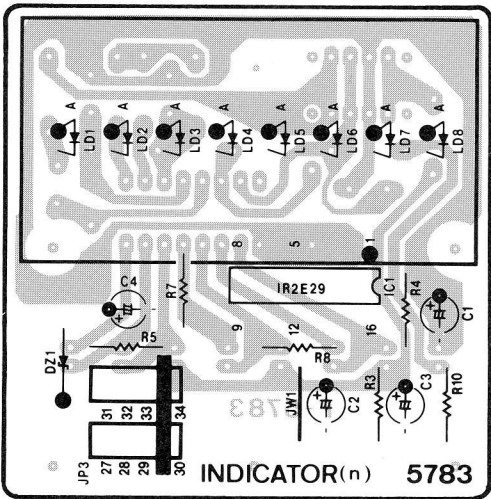
5-1. F-5784 Fuse Board

Component Side



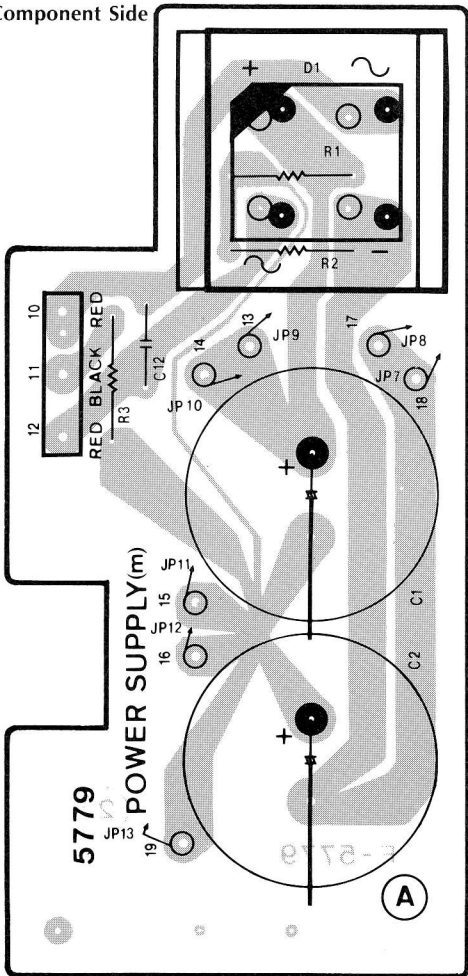
5-3. F-5783 Power Level Meter Board

Component Side



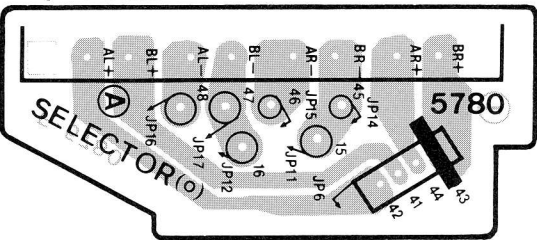
5-2. F-5779 Power Supply Board

Component Side



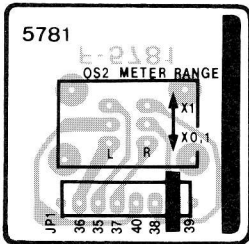
5-4. F-5780 Speakers Terminal Board

Component Side



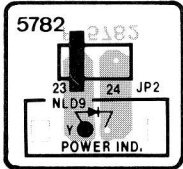
5-5. F-5781 Meter Range SW., Board

Component Side



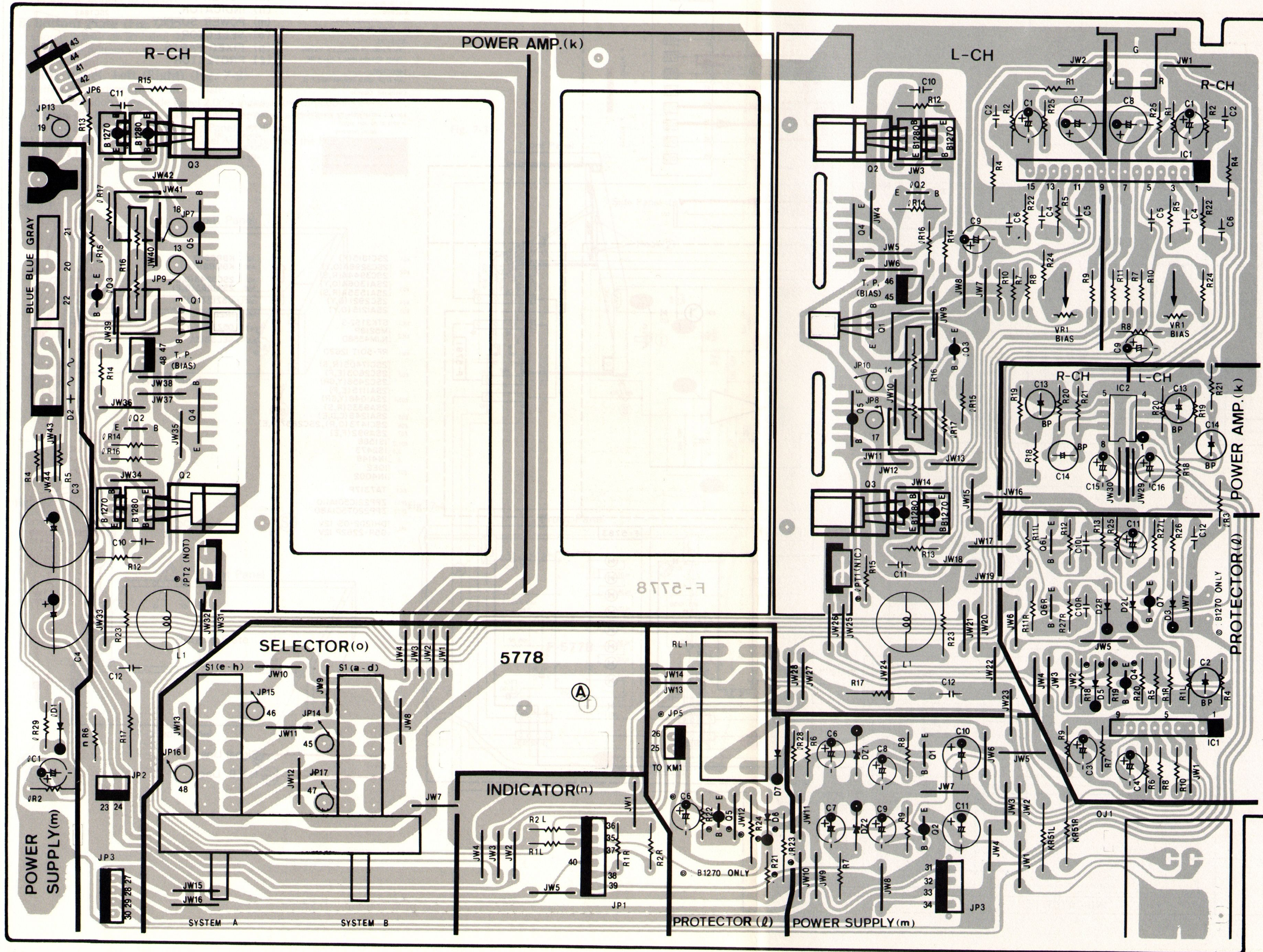
5-6. F-5782 Indicator Board

Component Side



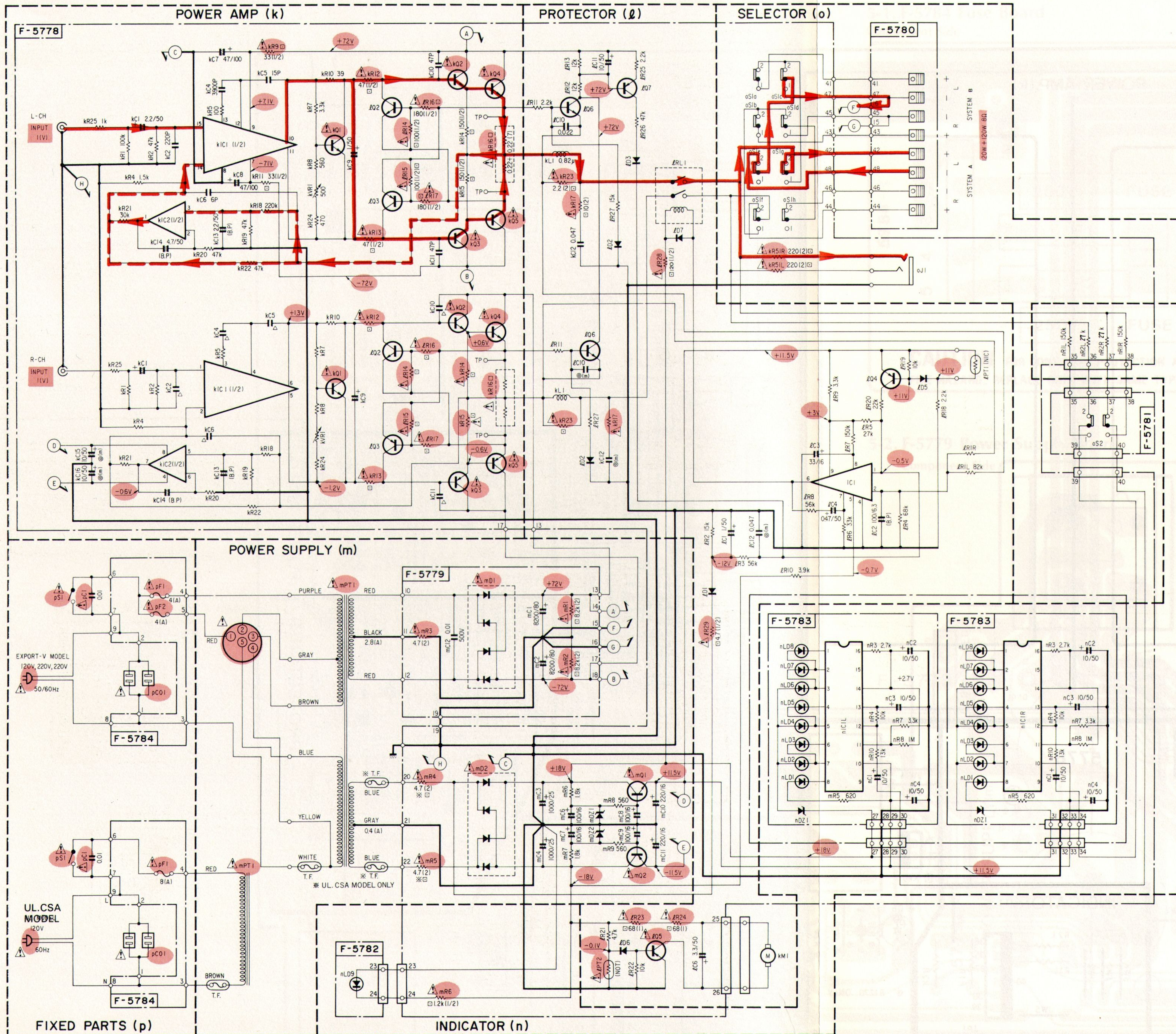
5-7. F-5778 Main Amp Board

Component Side



6. SCHEMATIC DIAGRAM 6-1. B-3000

* 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
 △ Ceramic
 (BP) Bi-Polar Electrolytic
 (m) Mylar
 □ Non-Inflammable Resistor
 □ Cement Resistor

RESISTORS
 Are in ohms, 1/4 Watts, ±5% Tolerance
 Unless Otherwise Noted, K: kΩ, M: MΩ

CAPACITORS
 Are in μF, Unless Otherwise Noted, P: pF

Electrolytic Capacitor
 Capacitance (μF) / Volt (V)

Each D.C. Voltage shows the nominal value in volts at no input signal during recording

△ is Safety Part.
 Use only replacement parts recommended by the manufacturer.

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

SYSTEM A
 oS1e-n 1. OFF 2. ON

SYSTEM B
 oS1e-d 1. OFF 2. ON

METER RANGE
 oS2a,b 1. x1 2. x0.1

KQ1 2SC1815(F)
 KQ2 2SC3298A(O,Y)
 KQ3 2SC3944A(R,S)
 KQ4 2SA1306A(O,Y)
 KQ5 2SA1535A(R,S)
 KQ6 2SC2921(O,Y)
 KQ7 2SA1215(O,Y)

KIC1 STK3152-3
 KIC2 M5218P
 KIC3 NJM4558D

KM1 RF-501T I2620

KQ2 2SC1740S(R,S)
 KQ3 2SC2603(E,F)
 KQ4 2SC2458(Y,GR)
 KQ5 2SA1115(E,F)
 KQ6 2SA1048(Y,GR)
 KQ7 2SA933S(R,S)
 KQ8 2SA1248(C,D,E)
 KQ9 2SC1473(Q,R), 2SC2857(D,E)
 KQ10 2SA992(F,E)

KQ11 1S1588
 KQ12 1S2473
 KQ13 1N4148
 KQ14 10E2
 KQ15 1N4002

KIC1 TA7317P

KPT1 ZPP221C501A110
 KPT2 ZPP220T501A80

KRL1 DH12D2-OS 12V
 G5R-2282P 12V

mD1 KBPC802
 mD2 KBP 02

mQ1 2SC3243(D,E)
 mQ2 2SA1283(D,E)

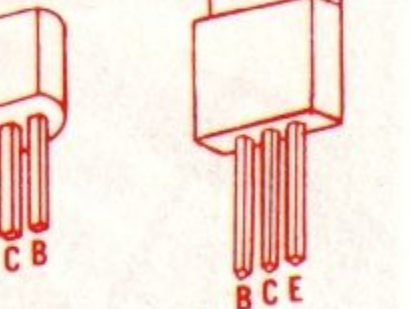
mDZ1,2 05Z12(Y,Z)

nIC1 IR2E29

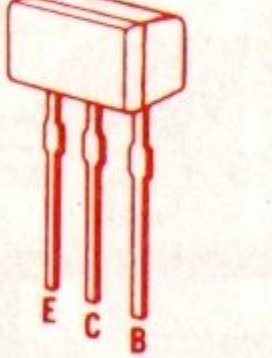
nDZ1 05Z3.0(X,Y)

nLD1-9 SEL3B13A

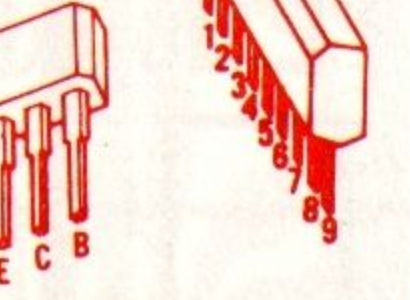
2SA992 2SA1306
 2SA1248 2SA1306A
 2SA1283 2SC3298A
 2SA1284 2SC3944A
 2SC1845 2SC2857



2SC2458

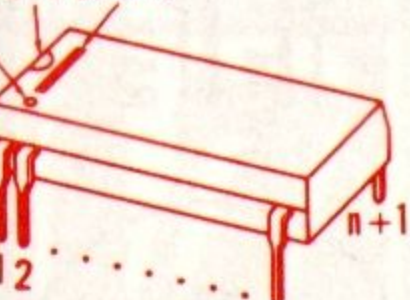
2SC2921
2SA1215

2SA933 TA7317P
 2SA1048
 2SA1115
 2SC1740
 2SC2603

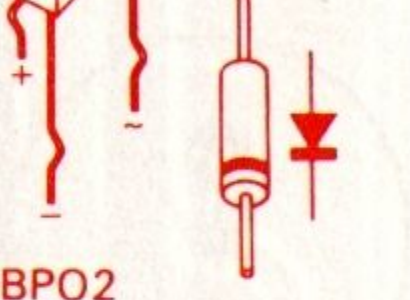


STK3152-3

1R2E29
 M5218P
 NJM4558D
 Det or Silt or Line



KBPC802 1S1588
 1S2473
 10E2
 1N4002
 1N4148



KBP02 05Z3.0
 05Z12

— Signal Line
 - - - N.F.B. Line

1

2

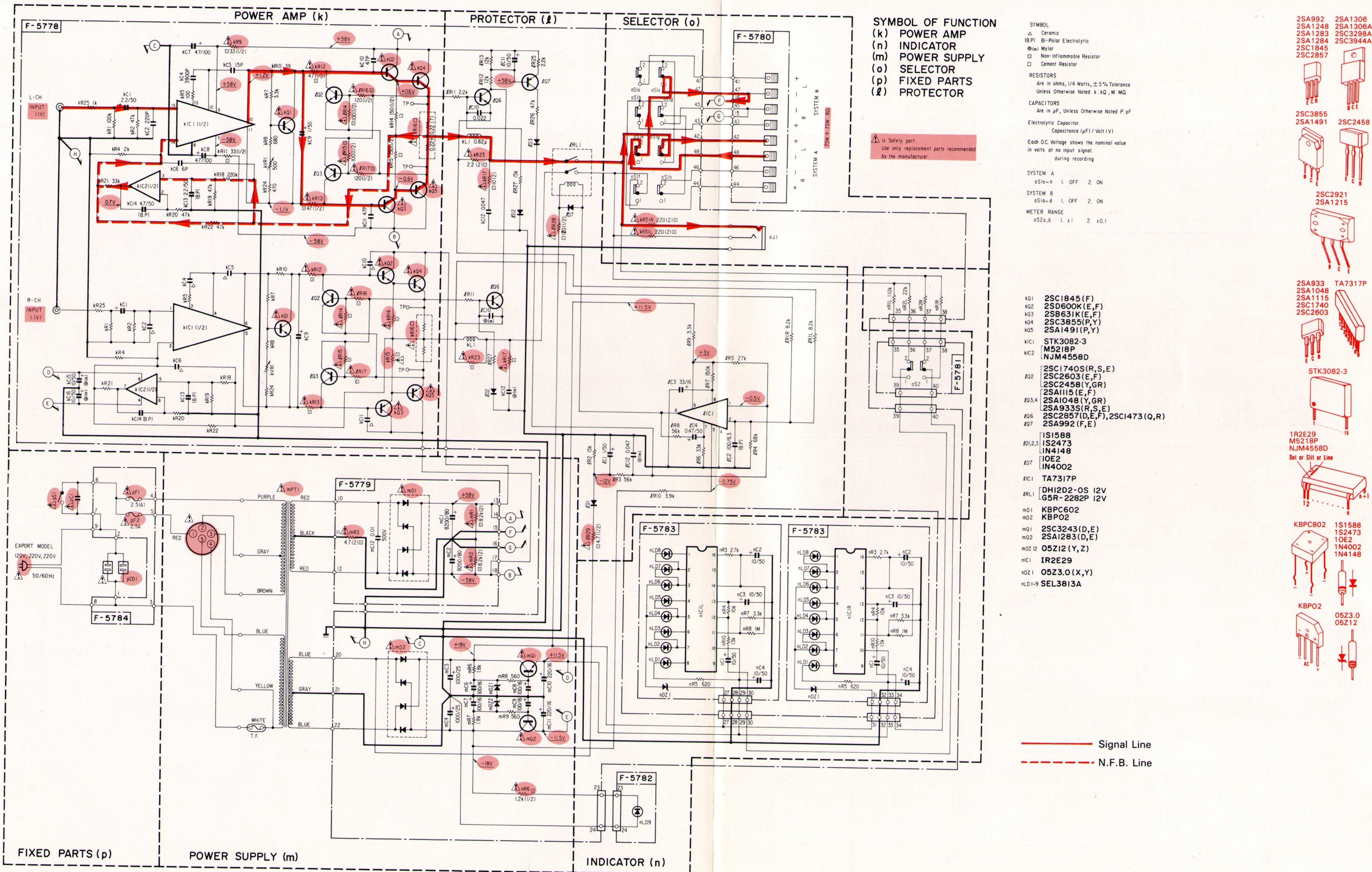
3

4

5

9

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 * 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.



1

2

3

4

5

10

7. MAIN PARTS REPLACEMENT

A. Bonnet (Fig. 7-1)

- 1) Loosen two Screws (SA) fixing the Bonnet.
- 2) Lift up the Bonnet to remove.

B. Bottom Plate (Fig. 7-2)

- 1) Loosen Screws (SB) (SC) fixing the Bottom Plate.
- 2) Lift up the Bottom to remove.

C. Side Panel, Left (Right) (Fig. 7-3)

- 1) Remove the bonnet and Bottom Plate.
- 2) Shift the position of the Side Panel 2.0cm in the arrow direction (1).
- 3) Remove the hooks of side panel from front panel and them pullit the arrow direction (3) to the Side Panel Left (Right).
- 4) Lift up PCB guide (X) of the Front Panel Assy to pull out the PCB (Fig. 7-4).

Fig. 7-1

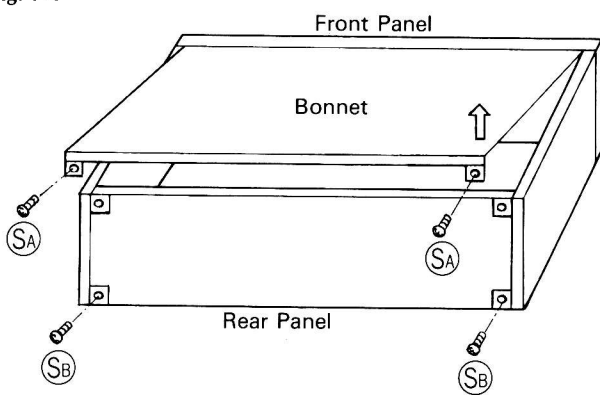


Fig. 7-3

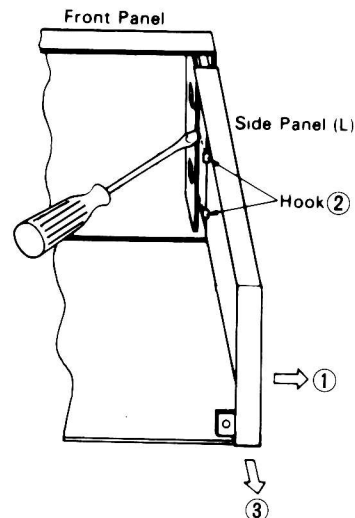


Fig. 7-2

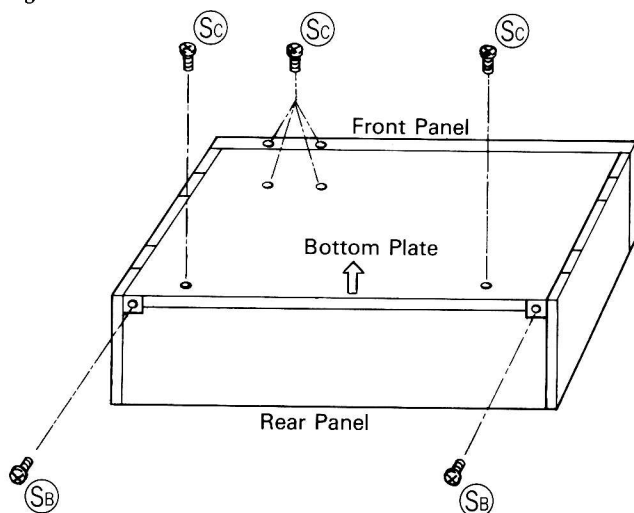
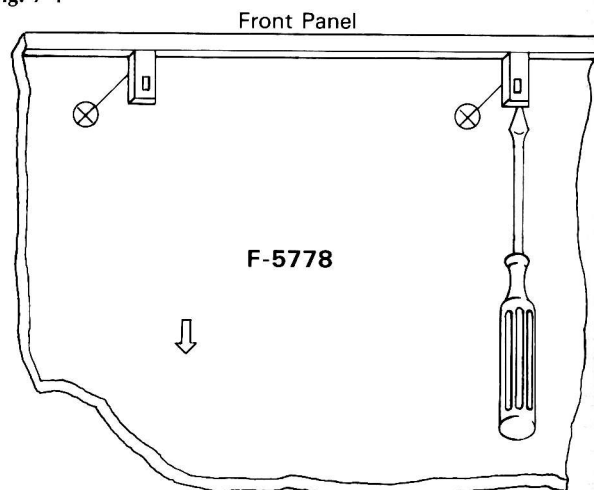
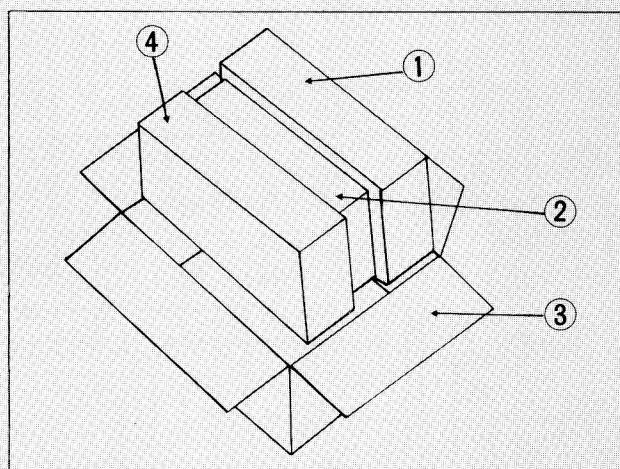


Fig. 7-4



8. PACKING LIST

Parts No.	Stock No.	Description
1	84521900	Styrofoam Packing (Back)
2	84519200	Vinyl Bag
3	84520700	Carton Case <B-1000>
	84520500	Carton Case <B-3000>
4	84522000	Styrofoam Packing (Front)



9. ACCESSORY LIST

Stock No.	Description
49026600	Operating Instruction <B-1000>
49026700	Operating Instruction <B-3000>



SANSUI ELECTRIC CO., LTD.:

SANSUI ELECTRONICS CORPORATION:

SANSUI ELECTRONICS (U.K.) LTD.:
SANSUI ELECTRONICS G.M.B.H.:14-1, Izumi 2-chome, Suginami-ku, Tokyo 168 Japan
PHONE: (03) 324-8891/TELEX: 232-2076 (International Division)

1250 Valley Brook Ave. Lyndhurst, N.J. 07071 U.S.A.

17150 South Margay Ave. Carson, California 90746 U.S.A.

3036 Koapaka Street. Honolulu, Hawaii 96819 U.S.A.

Unit 10A, Lyon Industrial Estate, Rockware Avenue, Greenford, Middx UB6, OAA, England

Paul Ehrlich Strasse 8, 6074 Rödermark 2, West Germany