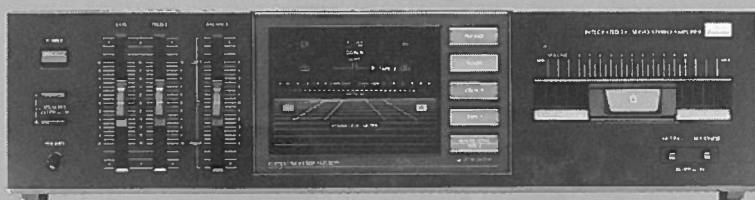


SERVICE MANUAL

INTEGRATED DC SERVO
STEREO AMPLIFIER

SANSUI A-1200
CLASSIQUE **A-1230**



CAUTION

1. Parts identified by the Δ 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

A-1200

Power output

Min. RMS, both channels driven, from 20 to 20,000 Hz,
with no more than 0.05% total harmonic distortion
125 watts per channel into 8 ohms

Load impedance..... 8 ohms

Total harmonic distortion

..... less than 0.05% at or below
rated min. RMS power output

Frequency response (at 1 watt)

..... 5 to 60,000 Hz
+1 dB, -2 dB

RIAA curve deviation (PHONO, 20 Hz to 20 kHz)

..... +0.5 dB, -0.5 dB

Input sensitivity and impedance

(1 kHz, for rated power output)

PHONO..... 2.5 mV/47 kilohms

(Max. input capability; 120mV at 1 kHz, less than
0.1% total harmonic distortion)

TUNER, TAPE PLAY.... 150 mV/47 kilohms

Output level (1 kHz)

TAPE REC..... 130 mV into 47 kilohms

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

PHONO..... 72 dB

TUNER, TAPE PLAY.... 95 dB

Power requirements

Power voltage..... 120/220/240V (50/60 Hz)

For U.S.A. & Canada

..... 120V (60 Hz)

Power consumption.... 360 watts 470 VA Rated
540 watts Maximum

Dimensions

430 mm (16-15/16") W

112 mm (4-7/16") H

250 mm (9-7/8") D

Weight.....

7.5 kg (16.5 lbs.) net

8.1 kg (17.8 lbs.) packed

CLASSIQUE A-1230

Power voltage..... 120V (60 Hz)

Power consumption..... 360 watts

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

112 mm (4-7/16") H

250 mm (9-7/8") D

Weight..... 7.5 kg (16.5 lbs.) net

8.1 kg (17.8 lbs.) packed

* 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.

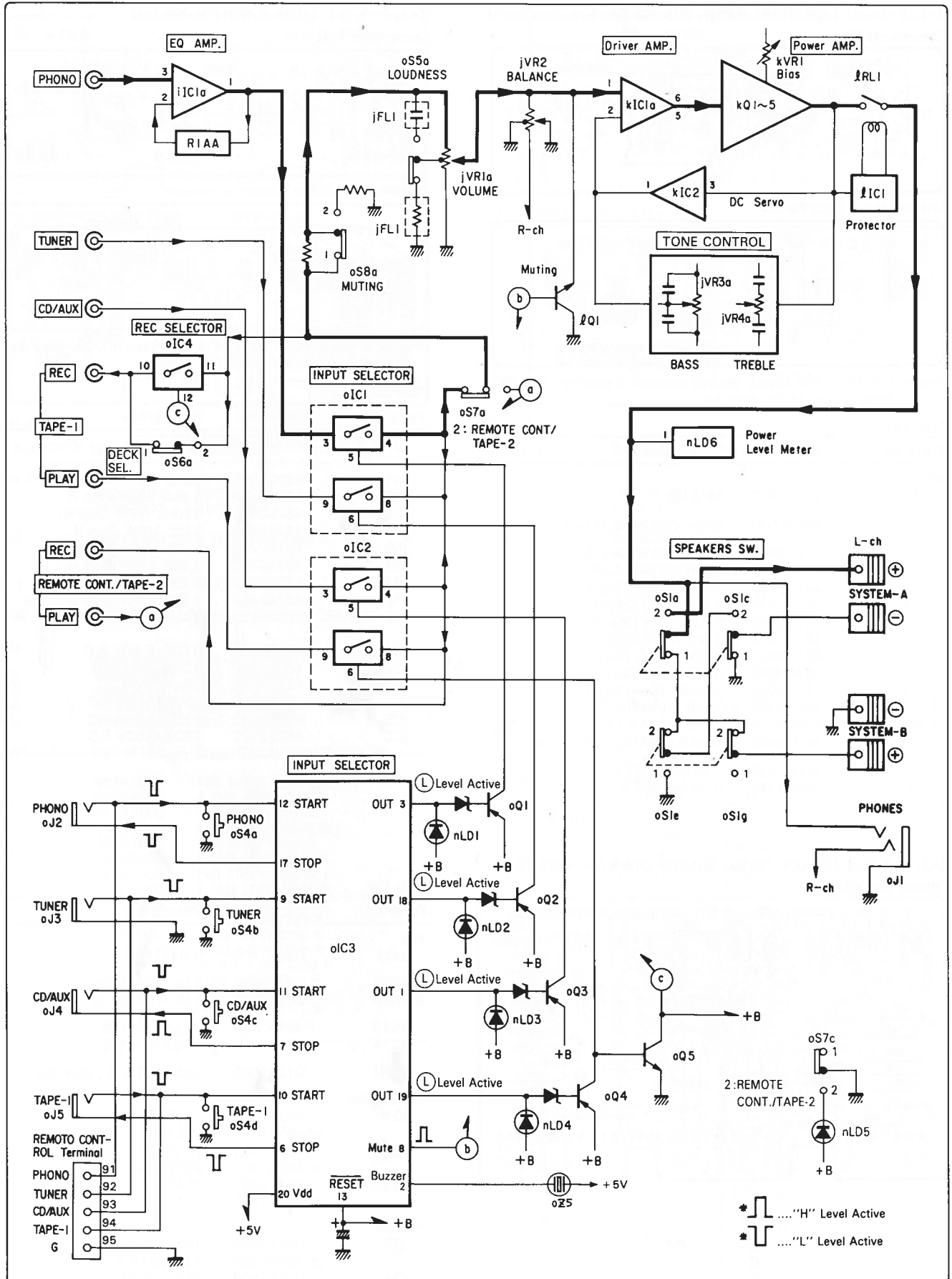
CAUTION

1. The symbols, UL, CSA, SA, BS, UK, EU, AS and XX on the parts list and the schematic diagram mean followings respectively.
UL..... Manufactured for U.S.A market.
(Underwriters Laboratories approved model.)
CSA..... Manufactured for Canadian market.
SA..... Manufactured for South African market.
BS, UK Manufactured for United Kingdom market.
EU Manufactured for European market.
AS..... Manufactured for Australian market.
XX..... Standard Version.
NON MARK Common Parts.
2. Some printed circuit boards are not supplied as the assembled.
To separate these in this service manual, the stock No's are not indicated at the ends of the board names. However, the individual parts on the circuit boards are provided by orders.
3. 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 issued on February 1983.
4. Abbreviations in this service manual are as follows.

•Abbreviations List

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

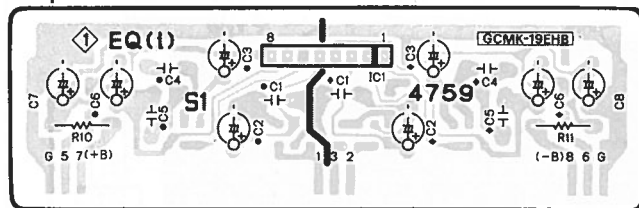
1. BLOCK DIAGRAM



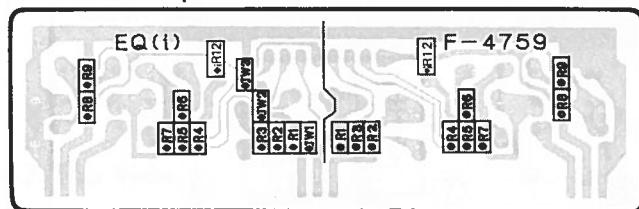
2. PARTS LOCATION & PARTS LIST

2-1. F-4759 Equalizer Amp. Board (Stock No. 00852601)

Component Side



Pattern Side < Chip Parts >



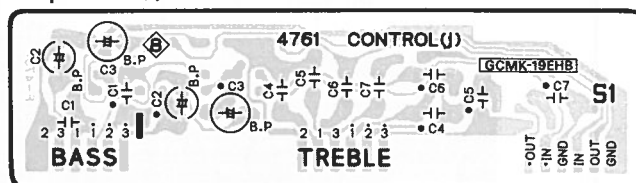
•Note: On this circuit board, the left channel is specified by "●" mark on top of the parts No.

Parts List

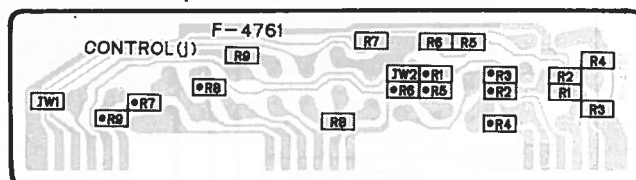
Parts No.	Stock No.	Description
•IC		
iC1	46078900	M5218L
iJW1 ~ 3	46741100	Cross Conductor (Chip)
iR1	46752400	100kΩ 1/8W Chip R.
iR2	46746800	470Ω 1/8W Chip R.
iR3	46752400	100kΩ 1/8W Chip R.
iR4	46746900	510Ω 1/8W Chip R.
iR5	46746900	510Ω 1/8W Chip R.
iR6	46750800	22kΩ 1/8W Chip R.
iR7	46753500	300kΩ 1/8W Chip R.
iR8	46746800	470Ω 1/8W Chip R.
iR9	46752400	100kΩ 1/8W Chip R.
ΔiR10	46229000	100Ω 1/2W N.I.R.
ΔiR11	46229000	100Ω 1/2W N.I.R.
iR12	46752400	100kΩ 1/8W Chip R.
iC4	46282400	3300pF 50V F.C.
iC5	46283000	0.012μF 50V F.C.

2-2. F-4761 Tone Control Board

Component Side



Pattern Side < Chip Parts >



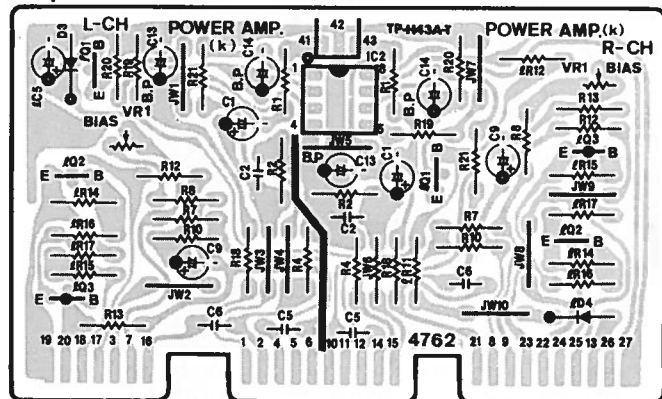
•Note: On this circuit board, the left channel is specified by "●" mark on top of the parts No.

Parts List

Parts No.	Stock No.	Description
iJW1,2	46741100	Cross Conductor (Chip)
iR1	46750200	12kΩ 1/8W Chip R.
iR2	46748200	1.8kΩ 1/8W Chip R.
iR3	46753400	270kΩ 1/8W Chip R.
iR4	46751000	27kΩ 1/8W Chip R.
iR5	46751700	51kΩ 1/8W Chip R.
iR6	46748400	2.2kΩ 1/8W Chip R.
iR7	46749400	5.6kΩ 1/8W Chip R.
iR8	46749600	6.8kΩ 1/8W Chip R.
iR9	46747200	680Ω 1/8W Chip R.
iC1	46283600	0.039μF 50V F.C.
iC2	46937000	0.22μF 50V E.B.
iC3	48101800	47μF 10V E.B.
iC4	46281800	1000pF 50V F.C.
iC5	46282800	8200pF 50V F.C.
iC6	46282700	6800pF 50V F.C.

2-3. F-4762 Driver Amp. Board (Stock No. 00921701)

Component Side



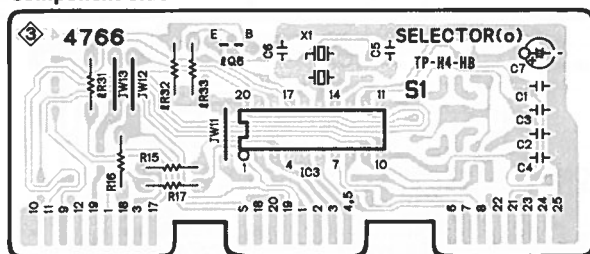
Parts List

Parts No.	Stock No.	Description
•IC		
kIC2	03607700	NJM4558D
ΔkR12	46228600	47Ω 1/2W N.I.R.
ΔkR13	46228600	47Ω 1/2W N.I.R.
kC13	48103500	2.2μF 50V E.B.
kC14	48102400	4.7μF 25V E.B.
kVR1	07261600	1kΩ (B) S.V.R., Bias Adj.
•Transistor		
IQ1	46367301	2SC2458
or	46581701	2SC1845
IQ2	46367101	2SC2603
or	46367301	2SC2458
IQ3	46367001	2SA1115
or	46367201	2SA1048
•Diode		
ID3	03117600	1S2473T77
or	46086000	1S1588TP-3
ID4	03117600	1S2473T77
or	46086000	1S1588TP-3

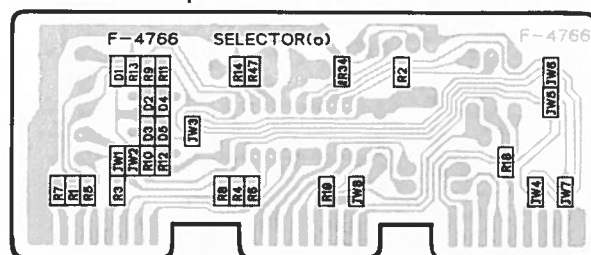
2-4. F-4766 INPUT SELECTOR Control Board

(Stock No. 00921901)

Component Side



Pattern Side <Chip Parts>



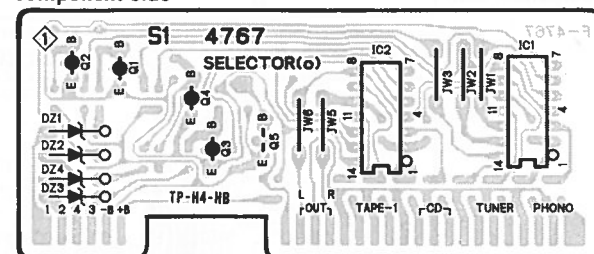
Parts List

Parts No.	Stock No.	Description
•Transistor		
IQ6	46367101 or 46367301	2SC2603 2SC2458
IR34	46749200	4.7kΩ 1/8W Chip R.
•IC		
oIC3	48158300	M50761-450P
oX01	46396200	Ceramic Element CSB400P
•Diode		
oD1	46852000	RLS-73 (Chip)
oD2	46852000	RLS-73 (Chip)
oD3	46852000	RLS-73 (Chip)
oD4	46852000	RLS-73 (Chip)
oD5	46852000	RLS-73 (Chip)
oJW1 ~ 7	46741100	Cross Conductor (Chip)
oR1	46747600	1kΩ 1/8W Chip R.
oR2	46749200	4.7kΩ 1/8W Chip R.
oR3	46747600	1kΩ 1/8W Chip R.
oR4	46748000	1.5kΩ 1/8W Chip R.
oR5	46747600	1kΩ 1/8W Chip R.
oR6	46748000	1.5kΩ 1/8W Chip R.
oR7	46747600	1kΩ 1/8W Chip R.
oR8	46748000	1.5kΩ 1/8W Chip R.
oR9	46750000	10kΩ 1/8W Chip R.
oR10	46750000	10kΩ 1/8W Chip R.
oR11	46750000	10kΩ 1/8W Chip R.
oR12	46750000	10kΩ 1/8W Chip R.
oR13	46752400	100kΩ 1/8W Chip R.
oR14	46754800	1MΩ 1/8W Chip R.
oR18	46746600	390Ω 1/8W Chip R.
oR19	46751800	56kΩ 1/8W Chip R.
oR47	46748700	3kΩ 1/8W Chip R.

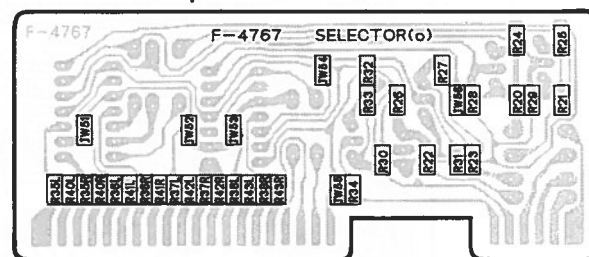
2-5. F-4767 Input Signal Selector Board

(Stock No. 00922001)

Component Side



Pattern Side <Chip Parts>

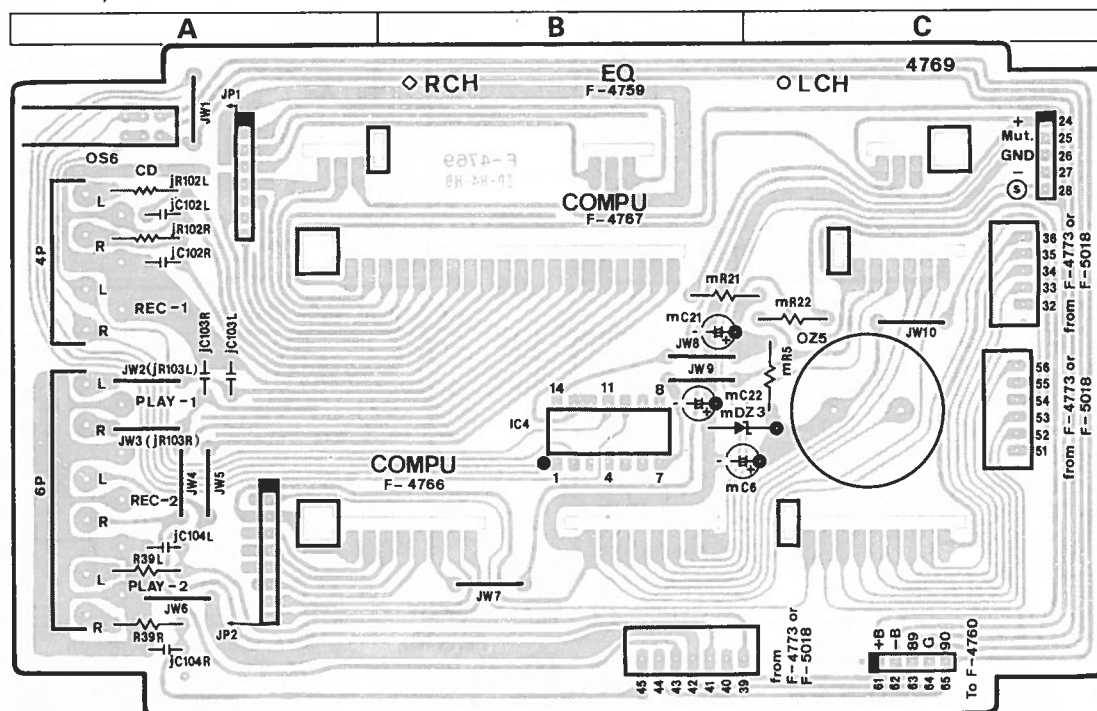


Parts List

Parts No.	Stock No.	Description
•Transistor		
oQ1	46188601 or 46367001 or 46367201	2SA1015 2SA1115 2SA1048
oQ2	46188601 or 46367001 or 46367201	2SA1015 2SA1115 2SA1048
oQ3	46188601 or 46367001 or 46367201	2SA1015 2SA1115 2SA1048
oQ4	46188601 or 46367001 or 46367201	2SA1015 2SA1115 2SA1048
oQ5	46188701 or 46367101 or 46367301	2SC1815 2SC2603 2SC2458
•IC		
oIC1	46255000 or 48056800	LC4066BH LC4966
oIC2	46255000 or 48056800	LC4066BH LC4966
•Zener Diode		
oDZ1	46112700	05Z8.2-Y
oDZ2	46112700	05Z8.2-Y
oDZ3	46112700	05Z8.2-Y
oDZ4	46112700	05Z8.2-Y
oJW51 ~ 56	46741100	Cross Conductor (Chip)
oR20	46747200	680Ω 1/8W Chip R.
oR21	46747200	680Ω 1/8W Chip R.
oR22	46747200	680Ω 1/8W Chip R.
oR23	46747200	680Ω 1/8W Chip R.
oR24	46749200	4.7kΩ 1/8W Chip R.
oR25	46749200	4.7kΩ 1/8W Chip R.
oR26	46749200	4.7kΩ 1/8W Chip R.
oR27	46749200	4.7kΩ 1/8W Chip R.
oR28	46751600	47kΩ 1/8W Chip R.
oR29	46751600	47kΩ 1/8W Chip R.
oR30	46751600	47kΩ 1/8W Chip R.
oR31	46751600	47kΩ 1/8W Chip R.
oR32	46750800	22kΩ 1/8W Chip R.
oR33	46749200	4.7kΩ 1/8W Chip R.
oR34	46751600	47kΩ 1/8W Chip R.
oR35	46749200	4.7kΩ 1/8W Chip R.
oR36	46749200	4.7kΩ 1/8W Chip R.
oR37	46749200	4.7kΩ 1/8W Chip R.
oR38	46749200	4.7kΩ 1/8W Chip R.
oR40	46754000	470kΩ 1/8W Chip R.
oR41	46754000	470kΩ 1/8W Chip R.
oR42	46754000	470kΩ 1/8W Chip R.
oR43	46754000	470kΩ 1/8W Chip R.

2-6. F-4769 CD/AUX, TAPE-1 & TAPE-2 Terminal Board (Stock No. 00922201)

Component Side



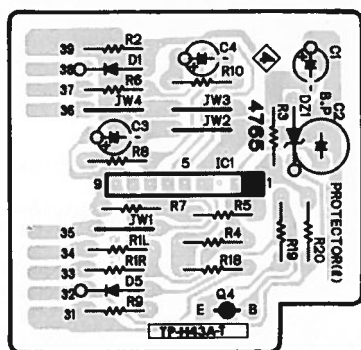
Parts List

Parts No.	Stock No.	Description
• Zener Diode mDZ3	46100900	05Z5.1-X
△ mR5	46229600	330Ω 1/2W N.I.R.
• IC oIC4	46255000 or 48056800	LC4066BH LC4966

Parts No.	Stock No.	Description
•Diode		
oD6	07176400	1S2473HS
oS6	46670600	Push SW., DECK SELECTOR
oZ3	46546800	6P Terminal, TAPE-1 PLAY, TAPE-2
oZ5	48178400	Buzzer
	or 48268200	Buzzer
oZ6	46371500	4P Terminal, CD/AUX, TAPE-1 REC

2-7. F-4765 Protector Board (Stock No. 00921801)

Component Side

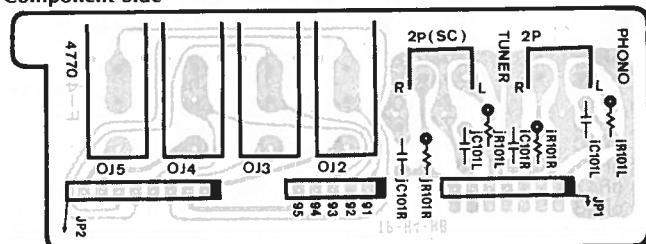


Parts List

Parts No.	Stock No.	Description
• Transistor		
IQ4	07299601	2SA1115
	or 46367201	2SA1048
• IC		
IIC1	46207600	TA7317P
• Diode		
ID1	03117600	1S2473T77
	or 46086000	1S1588TP-3
ID5	03117600	1S2473T77
	or 46086000	1S1588TP-3
• Zener Diode		
IDZ1	46115400	05Z20-Y
IC2	48101500	100 μ F 6.3V E.B.

2-8. F-4770 PHONO, TUNER COMPU SELECTOR Terminal Board

Component Side

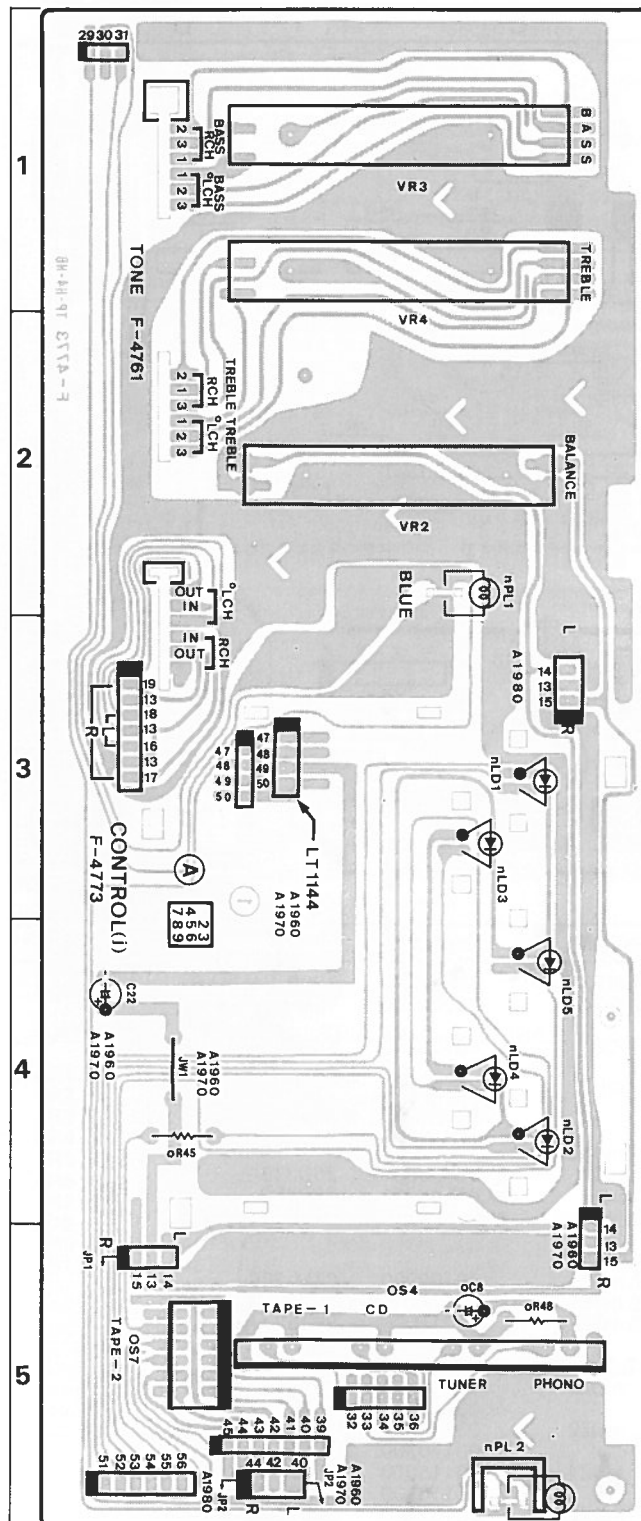


Parts List

Parts No.	Stock No.	Description
oJ2	46547200	Mini Jack, PHONO
oJ3	46547200	Mini Jack, TUNER
oJ4	46547200	Mini Jack, CD/AUX
oJ5	46547200	Mini Jack, TAPE-1
oZ2	46438100	2P Terminal, PHONO
oZ7	46363700	2P Terminal, TUNER

2-9. F-4773 Tone Control & Indicator Board (Stock No. 00922401)

Component Side

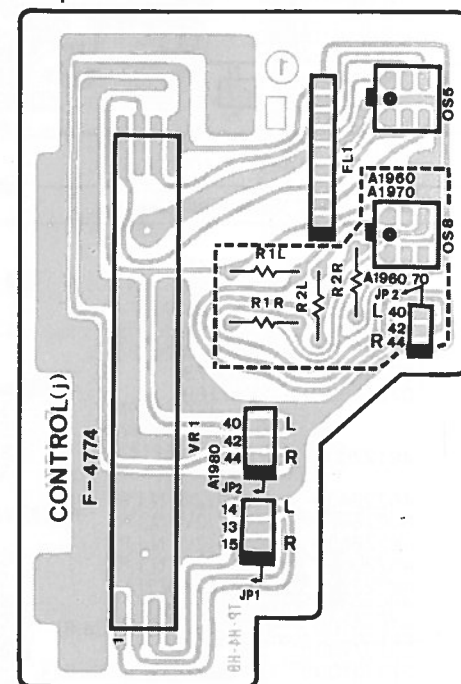


Parts List

Parts No.	Stock No.	Description
jVR2	48171100	250K (W) V.R., BALANCE
jVR3	48171200	50kΩ (C) V.R., BASS
jVR4	48171200	50kΩ (C) V.R., TREBLE
•LED		
nLD1	48172100	BR3447S
nLD2	48172100	BR3447S
nLD3	48172100	BR3447S
nLD4	48172100	BR3447S
nLD5	48172100	BR3447S
nLD6	48185810	LT1144
nPL1	48191900	12V 0.15A Pilot Lamp
nPL2	46286600	12V 0.15A Pilot Lamp
oS4	48178600	Push SW., INPUT SELECTOR
oS7	46556300	Push SW., REMOTE CONT./TAPE-2

2-10. F-4774 VOLUME, MUTING & LOUDNESS Board

Component Side

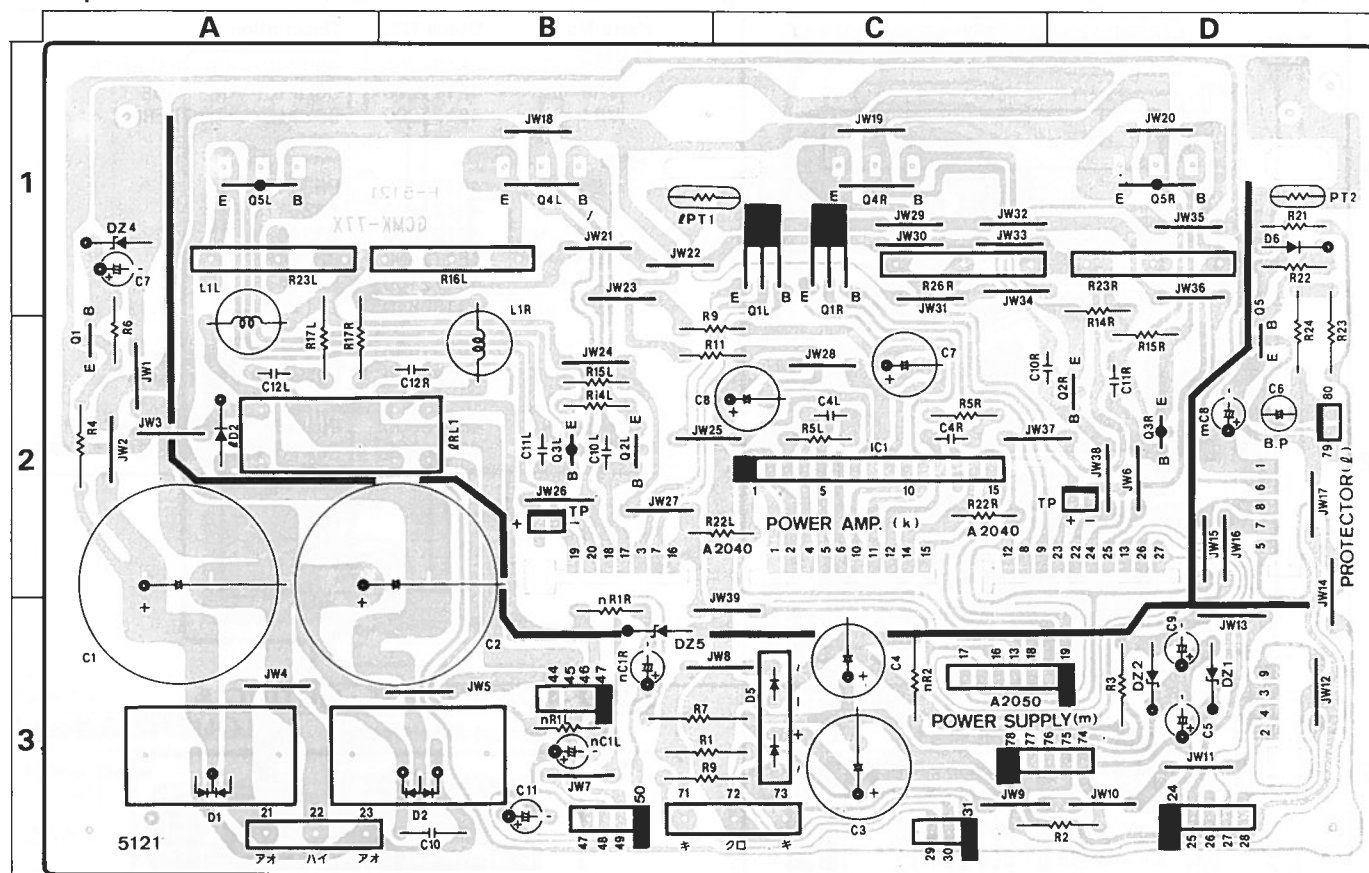


Parts List

Parts No.	Stock No.	Description
jFL1	48172000	CR Module
jVR1	48171000	150kΩ (B) V.R., VOLUME
oS5	48224600	Push SW., LOUDNESS
oS8	48224600	Push SW., MUTING

2-11. F-5121 Power Amp. & Power Supply Board (Stock No. 00922101)

Component Side



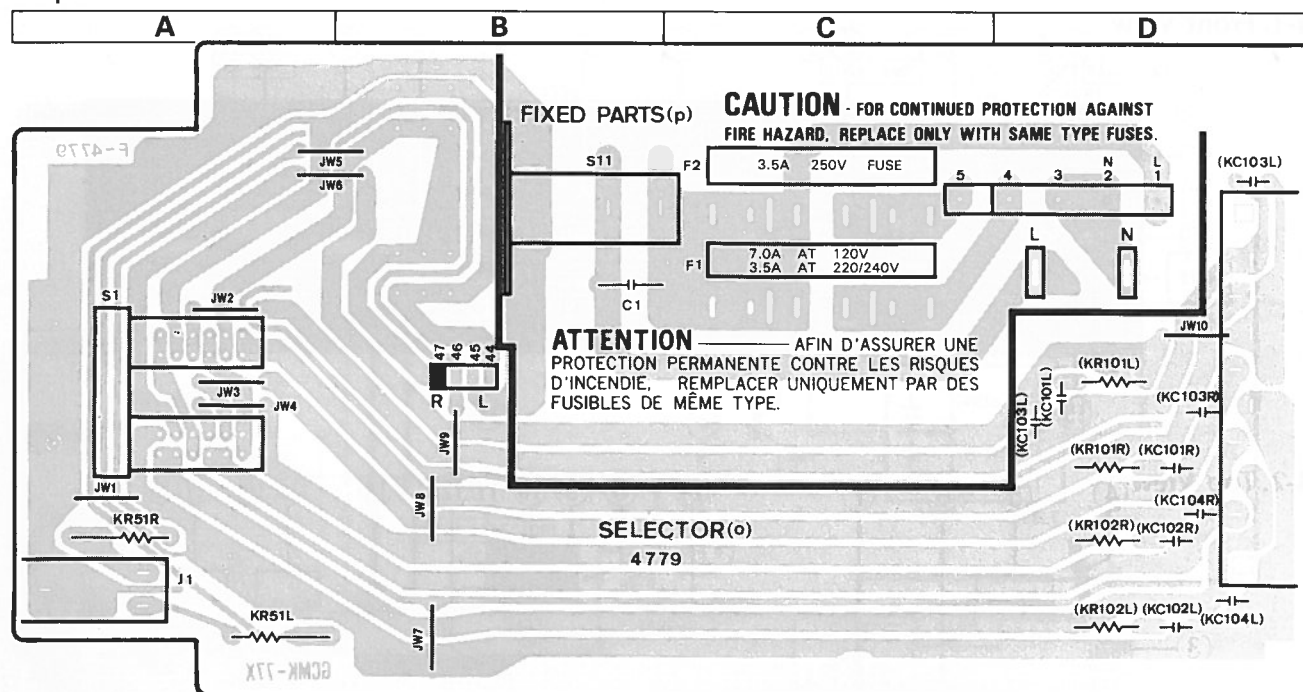
Parts List

Parts No.	Stock No.	Description
•Transistor		
ΔkQ1	03067401	2SC1845
ΔkQ2	48170001	2SC2592
Δ	or 48263101	2SC3298A
ΔkQ3	48169901	2SA1112
Δ	or 48263001	2SA1306A
ΔkQ4	07246801	2SC2773
ΔkQ5	07246601	2SA1169
•IC		
kIC1	48127000	STK3152-3
ΔkR9	46228400	33Ω 1/2W N.I.R.
ΔkR11	46228400	33Ω 1/2W N.I.R.
ΔkR12	46228600	47Ω 1/2W N.I.R.
ΔkR13	46228600	47Ω 1/2W N.I.R.
ΔkR14	46229200	150Ω 1/2W N.I.R.
ΔkR15	46229200	150Ω 1/2W N.I.R.
ΔkR16	07235100	0.47Ω 5WX2 3P Ce.R.
ΔkR17	00137700	10Ω 1W N.I.R.
ΔkR23	07235100	0.47Ω 5WX2 3P Ce.R.
kC7	46312800	47μF 100V E.C.
kC8	46312800	47μF 100V E.C.
kC12	46283700	0.047μF 50V F.C.
kL1	46851901	Filter Coil 0.82μH
•Transistor		
IQ5	48059501	2SC3244
•Diode		
ID2	48123600	11E-2
ID6	03117600	1S2473T77
	or 46086000	1S1588TP-3
IPT1	48262800	Posistor
ΔIPT2	48262700	Posistor

Parts No.	Stock No.	Description
ΔIR23	46249300	100Ω 1W N.I.R.
ΔIR24	46249300	100Ω 1W N.I.R.
IC6	48108300	3.3μF 50V E.B.
IRL1	48183100	Relay
	or 48183200	Relay
•Transistor		
ΔmQ1	03083901	2SD313AL
Δ	or 46546701	2SD880
Δ	or 48073601	2SD1061
•Diode		
ΔmD1	48159900	CTM-22S
ΔmD2	48159800	CTM-22R
ΔmD5	03117000	RB152-LFF
•Zener Diode		
mDZ1	03150601	EQB01-12
	or 03170300	RD12F
mDZ2	03150601	EQB01-12
	or 03170300	RD12F
mDZ4	46116000	05Z24-Y
	or 46116100	05Z24-Z
mDZ5	03156000	EQB01-10
	or 03169900	RD10F
ΔmR1	46248700	33Ω 1W N.I.R.
ΔmR2	46624500	150Ω 2W N.I.R.
ΔmR3	46249600	180Ω 1W N.I.R.
ΔmR4	46250300	680Ω 1W N.I.R.
ΔmR7	46624400	120Ω 2W N.I.R.
ΔmR9	46248700	33Ω 1W N.I.R.
mC1	48201400	8200μF 80V E.C.
mC2	48201400	8200μF 80V E.C.
mC10	08680400	0.01μF 500V C.C.

2-12. F-4779 PHONES Jack, SPEAKERS SW. & POWER SW. Board

Component Side



Parts List

Parts No.	Stock No.	Description
△KR51	46229400	220Ω 1/2W N.I.R.
oS1	48170900	Push SW., SPEAKERS
oJ1	46265700	Jack, PHONES
oZ4	46947500	8P Terminal, SPEAKERS
△pC1	46425800	0.01μF 400V C.C.
△	or 46943200	0.01μF 400V C.C.

Parts No.	Stock No.	Description
△pF1	48267500	Fuse 7A 250V for A-1200 (UL) & CLASSIQUE A-1230
△	07188900	Fuse 3.5A 250V for A-1200 (XX)
△	or 48267100	Fuse 3.5A 250V for A-1200 (XX)
△pF2	07188900	Fuse 3.5A 250V for A-1200 (XX)
△	or 48267100	Fuse 3.5A 250V for A-1200 (XX)
△pS11	48113300	Push SW., POWER

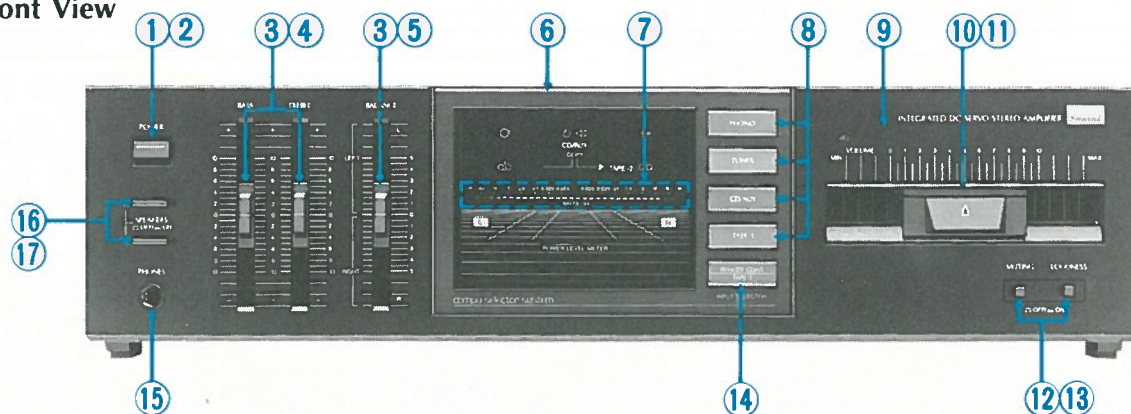
3. ADJUSTMENT (See Top View on page 9)

- Note: 1) Master Volume Minimum
 2) Room Temperature 18°C ~ 28°C (65°F ~ 83°F)
 3) For this adjustment, run the unit for more than 5 minutes after the power is switched ON.
 4) Before turning ON power switch, set kVR1 on F-4762 to center position.

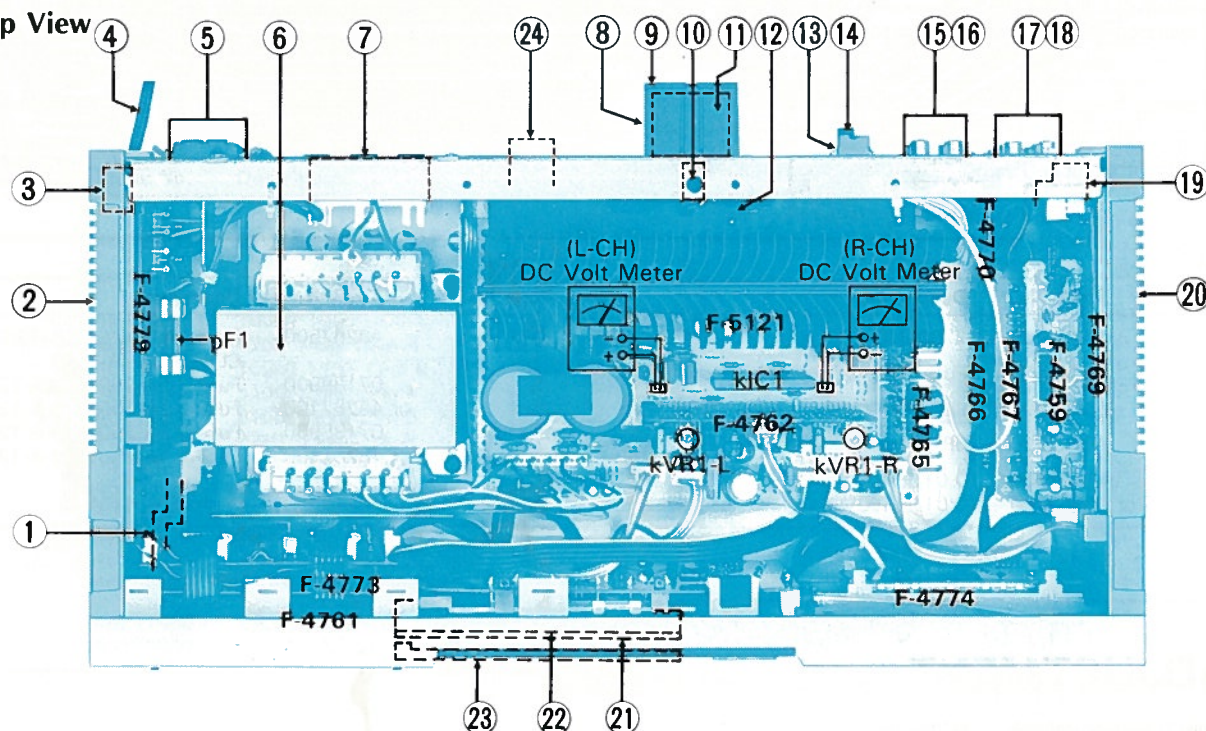
STEP	SUBJECT	MEASURE OUTPUT	ADJUST	ADJUST FOR	REMARKS
1.	Bias Current Adj. L-CH	Test Terminal (TP) <Between emitters of power transistors (kQ4L & kQ5L)>	kVR1, L-ch (F-4762)	DC 15mV ± 2mV	•This bias value is converted from current value into voltage by ohms law.
2.	Bias Current Adj. R-CH	Test Terminal (TP) <Between emitters of power transistors (kQ4R & kQ5R)>	kVR1, R-ch (F-4762)	DC 15mV ± 2mV	

4. OTHER PARTS

4-1. Front View



4-2. Top View



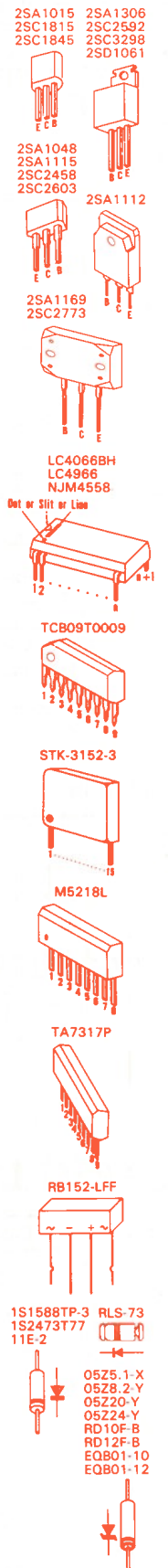
Parts List <Front View>

Parts No.	Stock No.	Description
1	47746900	Knob, POWER
2	48113300	Push SW., POWER
3	47732900	Knob, BASS, TREBLE, BALANCE
4	48171200	50kΩ (C) Slide V.R., BASS, TREBLE
5	48171100	250kΩ Slide V.R., BALANCE
6	47910200	Bonnet
7	48185810	Power Level Meter
8	48178600	Push SW., PHONO, TUNER, CD/AUX, TAPE-1
9	27018000	Front Panel Ass'y for A-1200
	27018100	Front Panel Ass'y for CLASSIQUE A-1230
10	47825600	Knob Ass'y, VOLUME
11	48171000	150kΩ (B) V.R., VOLUME
12	47763510	Knob, LOUDNESS, MUTING
13	48224600	Push SW., LOUDNESS, MUTING
14	46556300	Push SW., REMOTE CONT./TAPE-2
15	46265700	Jack, PHONES
16	07911000	Knob, SPEAKERS
17	48170900	Push SW., SPEAKERS

Parts List <Top View>

Parts No.	Stock No.	Description
1	47809700	Joint Shaft, Power SW.
2	47924200	Side Panel Ass'y (Left)
3	47770900	Power Supply Cord Cover
4	38004700	Power Supply Cord
5	46947500	8P Terminal, SPEAKERS
6	15021709	Power Transformer with socket for A-1200 (XX)
	15021702	Power Transformer for A-1200 (UL) & CLASSIQUE A-1230
7	46360100	AC OUTLET
8	47808100	Holder, DC Motor
9	47808000	Cover, DC Motor
10	47878000	Sleeve, DC Motor
11	46737500	DC Motor
12	07255000	Fan
13	16406800	5P-Terminal, Remote Control
14	22301510	Ground Terminal
15	46438100	2P-Terminal, PHONO
16	46363700	2P-Terminal, TUNER
17	46546800	6P-Terminal, TAPE-1 PLAY, TAPE-2
18	46371500	4P-Terminal, CD/AUX, TAPE-1 REC
19	46670600	Push SW., DECK SELECTOR
20	47924000	Side Panel Ass'y (Right)
21	47807700	Mask Plate
22	47822400	Mask Plate Holder
23	47868300	Scale Plate, POWER LEVEL METER
24	48175200	Plug, VOLTAGE SELECTOR for A-1200 (XX)

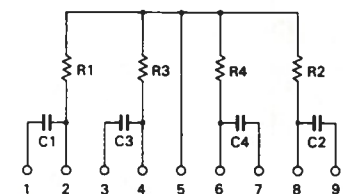
- * Design and specifications subject to change without notice for improvement.
- * La présentation et les spécifications sont susceptibles d'être modifiées sans préavis par suites d'améliorations éventuelles.
- * Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.



SYMBOL OF FUNCTION

- (g) MIC
- (i) EQ
- (j) CONTROL
- (k) POWER AMP
- (l) PROTECTOR
- (m) POWER SUPPLY
- (n) INDICATOR
- (o) SELECTOR
- (p) FIXED PARTS

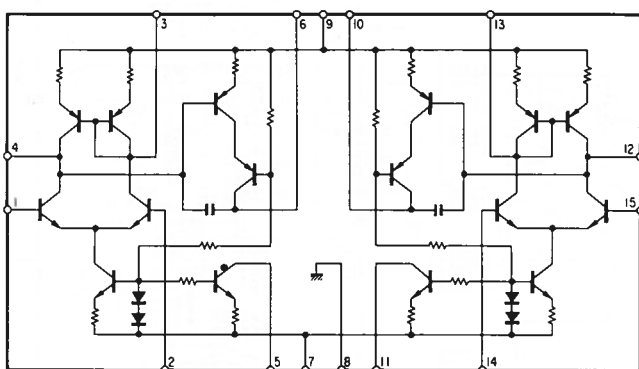
●TCB09T0009 (CR Module)



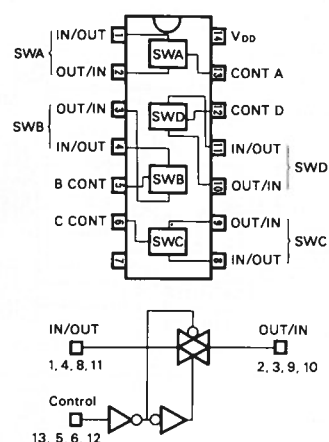
 Signal Line
 N.F.B. Line

6. INTERIOR BLOCK DIAGRAM OF IC

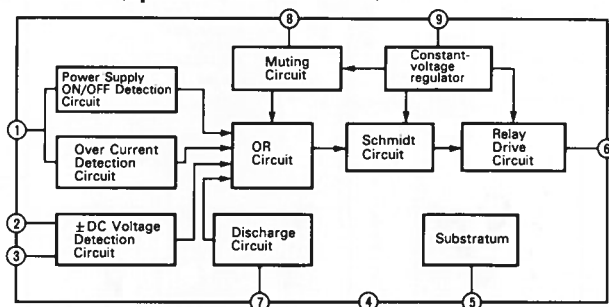
•STK3152-III (Driver Amp. IC)



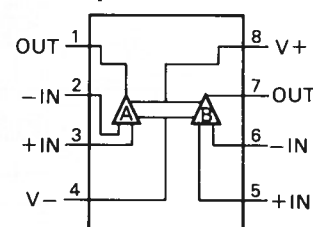
•LC4066BH/LC4966 (Quad Analog SW. IC)



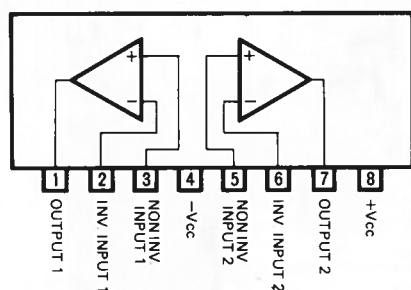
•TA7317P (Speaker Protector IC)



•NJM4558D (OP Amp. IC)

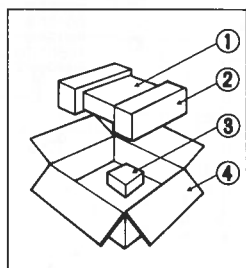


•M5218L (OP Amp. IC)



7. PACKING LIST

Parts No.	Stock No.	Description
1	47859900	Vinyl Bag
2	47764610	Styrofoam Packing
3	47933600	Sub Packing
4	27018500	Carton Case for A-1200 <XX>
	27018400	Carton Case for A-1200
	27018600	Carton Case for CLASSIQUE A-1230



8. ACCESSORY LIST

Stock No.	Description
46985500	Operating Instruction for A-1200
46985600	Operating Instruction for CLASSIQUE A-1230

Sansui

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