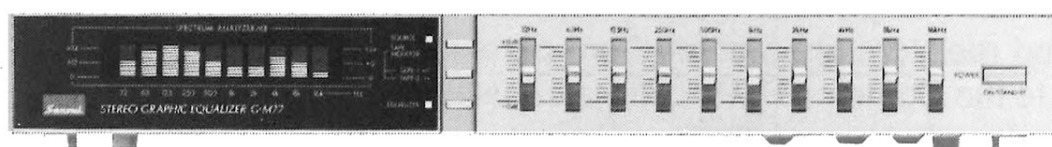


SERVICE MANUAL

STEREO GRAPHIC EQUALIZER

SANSUI G-M77



•SPECIFICATIONS

Input sensitivity and impedance (1 kHz)	
INPUT, TAPE PLAY-1,2	150 mV/47 kilohms
	(Max. input capability; 5V, 20 Hz to 20 kHz)
Output level (1 kHz)	
TAPE REC-1,2	150 mV/47 kilohms
OUTPUT	150 mV/47 kilohms
	(Max. output level; 5V/47 kilohms at 0.5% total harmonic distortion)
Total harmonic distortion (2V, 20 Hz to 20 kHz)	
INPUT, TAPE PLAY-1,2	0.01%
Frequency response	
(Graphic equalizer controls: "0" position)	
INPUT, TAPE PLAY-1,2	20 Hz to 20 kHz, +0 dB, -2 dB
Signal to noise ratio (Short-circuit, A-network)	
INPUT, TAPE PLAY-1,2	75 dB
Equalizer frequency	32 Hz, 63 Hz, 125 Hz, 250 Hz, 500 Hz, 1 kHz, 2 kHz, 4 kHz, 8 kHz, 16 kHz
Level variation range	±12 dB
Others	
Power voltage	120/220/240V (50/60 Hz)
	For U.S.A. and Canada
	120V (60 Hz)
Power consumption	10 watts
Dimensions	345 mm (13-5/8") (W) 46 mm (1-7/8") (H) 220 mm (8-11/16") (D)
Weight	2.0 kg (4.4 lbs) net 2.8 kg (6.2 lbs) packed

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

CAUTION

1. Parts identified by the \triangle symbol on the schematic diagram and 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.

Sansui

SANSUI ELECTRIC CO., LTD.

CAUTION

1. The symbols, UL, CSA, BS, UK, EU, AS and XX in the parts list and schematic diagram mean followings respectively.
 - UL..... Manufactured for U.S.A market
(Underwriters Laboratories approved model.)
 - CSA..... Manufactured for Canadian 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.

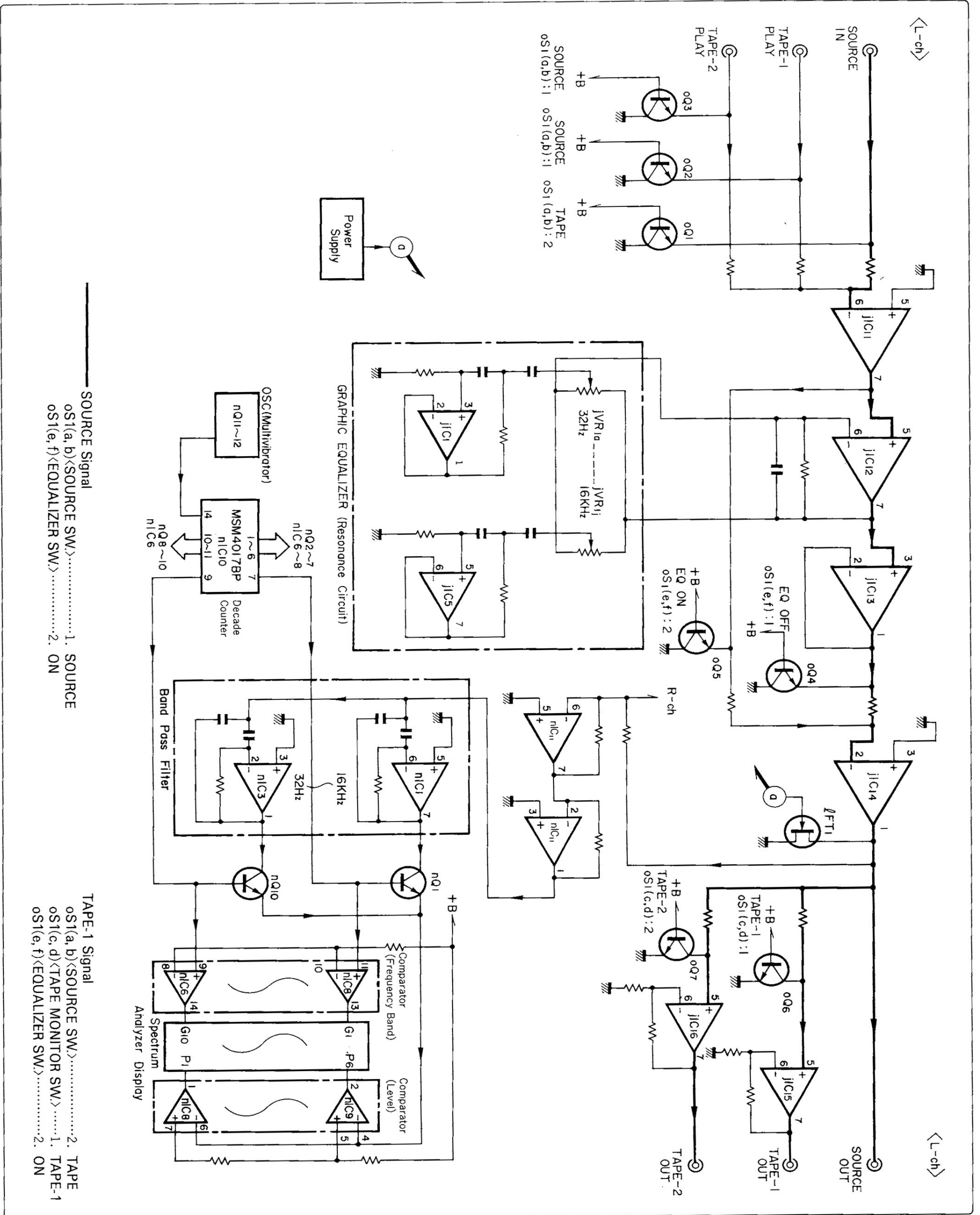
3. Since some of capacitors and resistors are omitted from parts lists in this service manual, refer to the Common Parts List for capacitors & resistors, which was issued on February 1983.

4. Abbreviations in this service manual are as follows.

•Abbreviations List

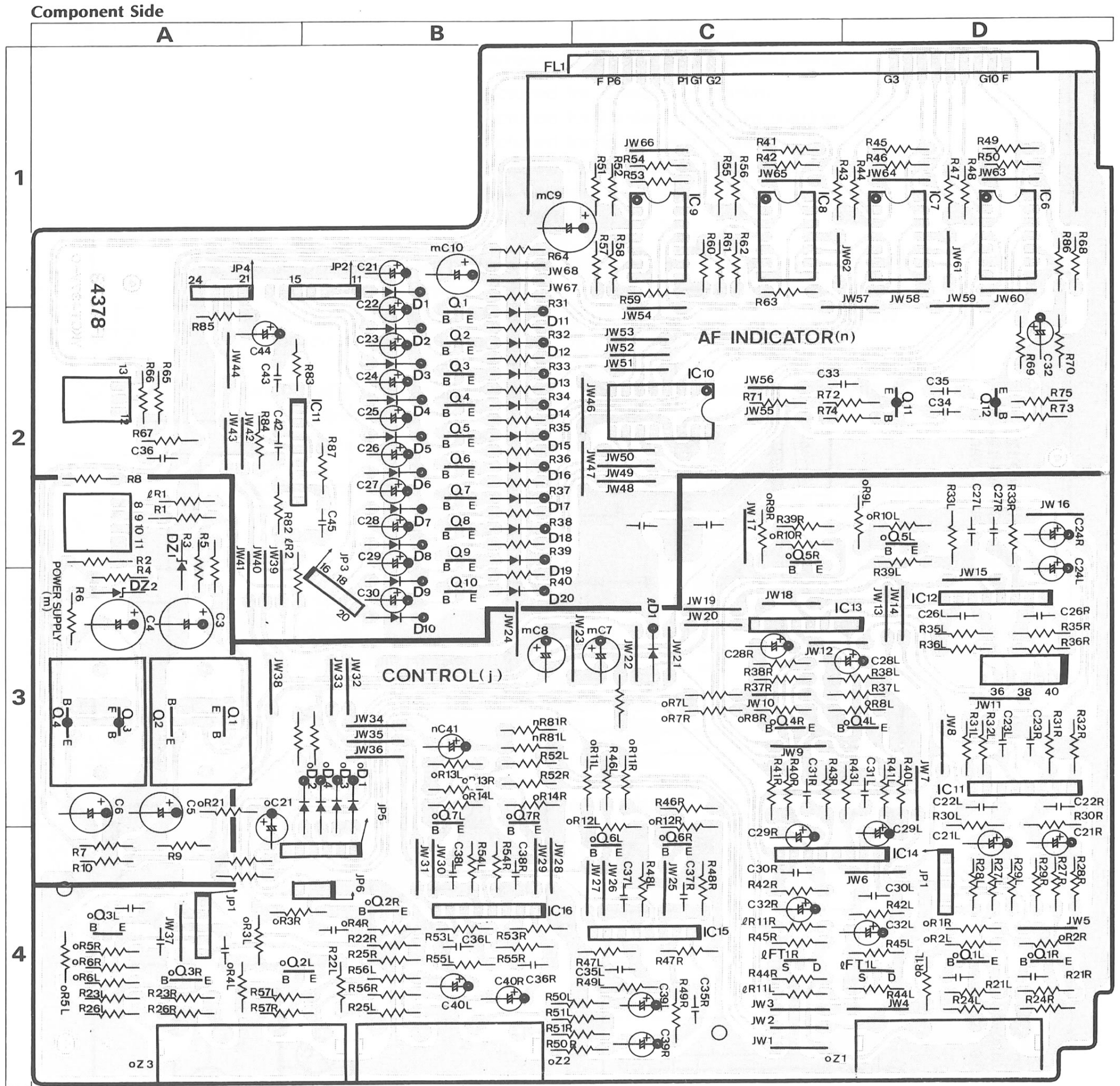
C.R.	: Carbon Resistor	E.B.	: Bi-Polar Electrolytic Capacitor
S.R.	: Solid Resistor	E.B.L.	: Low Leak Bi-Polar Electrolytic Capacitor
Ce.R.	: Cement Resistor	Ta.C.	: Tantalum Capacitor
M.R.	: Metal Film Resistor	F.C.	: Film Capacitor
F.R.	: Fusing Resistor	M.P.	: Metalized Paper Capacitor
N.I.R.	: Non-Inflammable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

1. BLOCK DIAGRAM



2. PARTS LOCATION & PARTS LIST

2-1. F-4378 Control & Spectrum Analyzer Circuit Board (Stock No. 00768401)

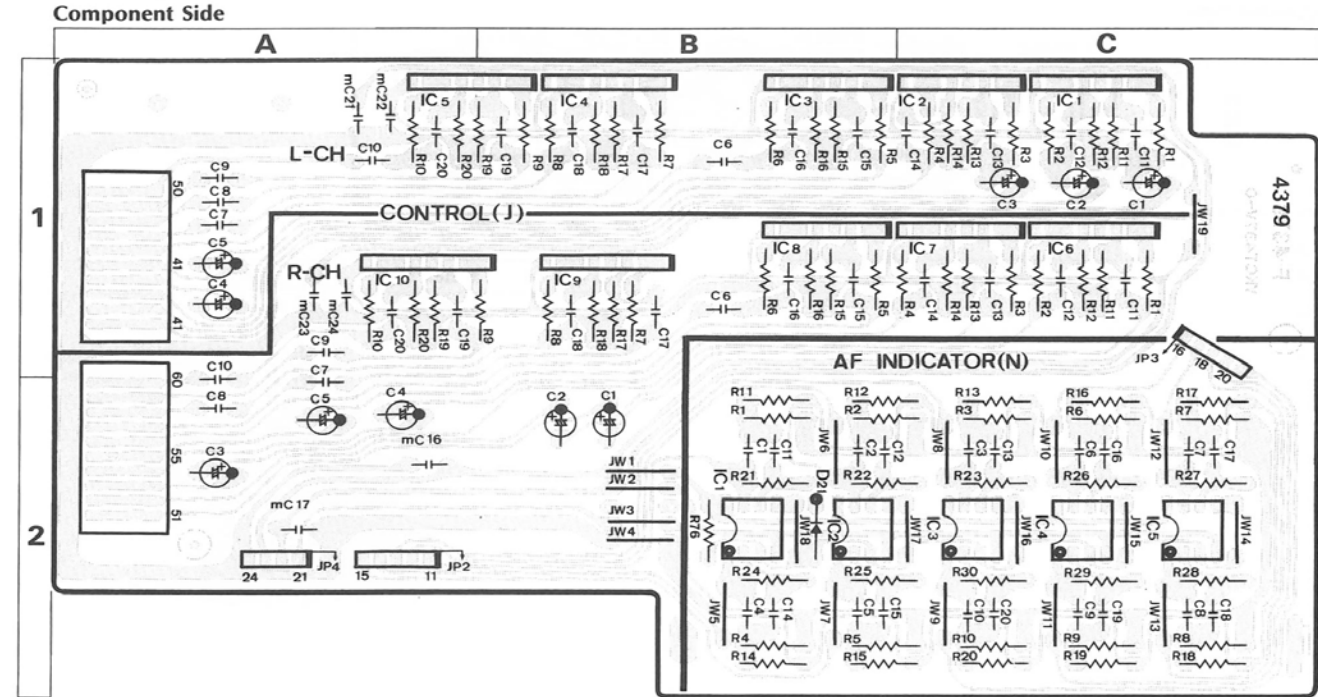


2-2. F-4379 Equalizer Circuit Board (Stock No. 00768501)

Parts List <F-4378>

Parts No.	Stock No.	Description
•IC		
jIC11	46147700	M5218L
jIC12	46147700	M5218L
jIC13	46147700	M5218L
jIC14	46147700	M5218L
jIC15	46147700	M5218L
jIC16	46147700	M5218L
•FET		
IFT1	46643500	2SK163-K1
	or 46643501	2SK163-K2
	or 46643502	2SK163-L1
	or 46643503	2SK163-L2
•Diode		
ID1	03117600	1S2473
	or 46086000	1S1588
•Transistor		
mQ1	46367101	2SC2603
	or 46367301	2SC2458
mQ2	03083901	2SD313AL
mQ3	46367001	2SA1115
	or 46367201	2SA1048
mQ4	03032301	2SB507V11AL
•Zener Diode		
mDZ1	46114700	05Z16-X
	or 46114800	05Z16-Y
mDZ2	46114700	05Z16-X
	or 46114800	05Z16-Y
mR1	00112800	4.7Ω 1/4W F.R.
mR2	00112800	4.7Ω 1/4W F.R.
mR7	46227800	10Ω 1/2W N.I.R.
mR8	46227800	10Ω 1/2W N.I.R.
mR9	46227800	10Ω 1/2W N.I.R.
mR10	46227800	10Ω 1/2W N.I.R.
•Transistor		
nQ1	46367101	2SC2603
	or 46367301	2SC2458
nQ2	46367101	2SC2603
	or 46367301	2SC2458
nQ3	46367101	2SC2603
	or 46367301	2SC2458
nQ4	46367101	2SC2603
	or 46367301	2SC2458
nQ5	46367101	2SC2603
	or 46367301	2SC2458
nQ6	46367101	2SC2603
	or 46367301	2SC2458
nQ7	46367101	2SC2603
	or 46367301	2SC2458
nQ8	46367101	2SC2603
	or 46367301	2SC2458
nQ9	46367101	2SC2603
	or 46367301	2SC2458
nQ10	46367101	2SC2603
	or 46367301	2SC2458
nQ11	46367001	2SA1115
	or 46367201	2SA1048
nQ12	46367001	2SA1115
	or 46367201	2SA1048
•IC		
nIC6	07205300	NJM2901N
	or 46727100	M51209P
nIC7	07205300	NJM2901N
	or 46727100	M51209P
nIC8	07205300	NJM2901N
	or 46727100	M51209P
nIC9	07205300	NJM2901N
	or 46727100	M51209P
nIC10	07205400	MSM4017RS
	or 46727200	M4017BP
nIC11	46147700	M5218L

Parts No.	Stock No.	Description
•Diode		
nD1	03117600	1S2473
	or 46086000	1S1588
nD2	03117600	1S2473
	or 46086000	1S1588
nD3	03117600	1S2473
	or 46086000	1S1588
nD4	03117600	1S2473
	or 46086000	1S1588
nD5	03117600	1S2473
	or 46086000	1S1588
nD6	03117600	1S2473
	or 46086000	1S1588
nD7	03117600	1S2473
	or 46086000	1S1588
nD8	03117600	1S2473
	or 46086000	1S1588
nD9	03117600	1S2473
	or 46086000	1S1588
nD10	03117600	1S2473
	or 46086000	1S1588
nD11	03117600	1S2473
	or 46086000	1S1588
nD12	03117600	1S2473
	or 46086000	1S1588
nD13	03117600	1S2473
	or 46086000	1S1588
nD14	03117600	1S2473
	or 46086000	1S1588
nD15	03117600	1S2473
	or 46086000	1S1588
nD16	03117600	1S2473
	or 46086000	1S1588
nD17	03117600	1S2473
	or 46086000	1S1588
nD18	03117600	1S2473
	or 46086000	1S1588
nD19	03117600	1S2473
	or 46086000	1S1588
nD20	03117600	1S2473
	or 46086000	1S1588
nFL1	46727400	Display Tube (Spectrum Analyzer) FG60SA6
nR86	46229500	270Ω 1/2W N.I.R.
•Transistor		
oQ1	46540801	2SC2878
	or 46604301	2SC3327
oQ2	46540801	2SC2878
	or 46604301	2SC3327
oQ3	46540801	2SC2878
	or 46604301	2SC3327
oQ4	46540801	2SC2878
	or 46604301	2SC3327
oQ5	46540801	2SC2878
	or 46604301	2SC3327
oQ6	46540801	2SC2878
	or 46604301	2SC3327
oQ7	46540801	2SC2878
	or 46604301	2SC3327
•Diode		
oD1	03117600	1S2473
	or 46086000	1S1588
oD2	03117600	1S2473
	or 46086000	1S1588
oD3	03117600	1S2473
	or 46086000	1S1588
oD4	03117600	1S2473
	or 46086000	1S1588
oR21	46229600	330Ω 1/2W N.I.R.
oZ1	07249100	4P Terminal Board, SOURCE (INPUT/OUTPUT)
oZ2	07249100	4P Terminal Board, TAPE-1 (PLAY/REC)
oZ3	07249100	4P Terminal Board, TAPE-2 (PLAY/REC)

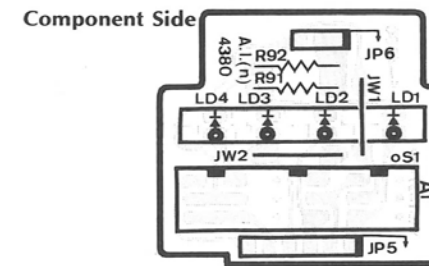


Parts List

Parts No.	Stock No.	Description
•IC		
jIC1	46147700	M5218L
jIC2	46147700	M5218L
jIC3	46147700	M5218L
jIC4	46147700	M5218L
jIC5	46147700	M5218L
jIC6	46147700	M5218L
jIC7	46147700	M5218L
jIC8	46147700	M5218L
jIC9	46147700	M5218L
jIC10	46147700	M5218L
jC6	46284100	0.1μF 50V F.C.
jC11	46284100	0.1μF 50V F.C.
jC12	46283700	0.047μF 50V F.C.

Parts No.	Stock No.	Description
jC13	46283400	0.027μF 50V F.C.
jC14	46283000	0.012μF 50V F.C.
jC15	46282700	6800pF 50V F.C.
jC16	46282300	2700pF 50V F.C.
•IC		
nIC1	46580100	M5218P
nIC2	46580100	M5218P
nIC3	46580100	M5218P
nIC4	46580100	M5218P
nIC5	46580100	M5218P
•Diode		
nD21	03117600	1S2473
	or 46086000	1S1588

2-3. F-4380 Switch Circuit Board

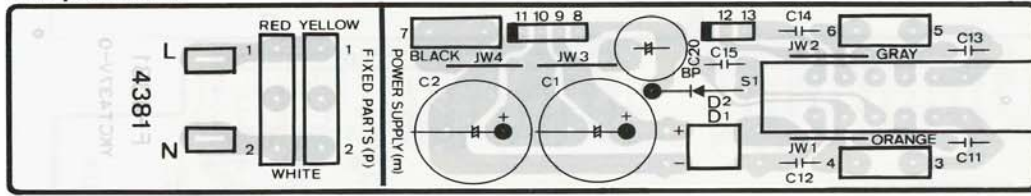


Parts List

Parts No.	Stock No.	Description
•LED		
nLD1	46176900	TLS-123
	or 46470200	SEL2210S
nLD2	46176900	TLS-123
	or 46470200	SEL2210S
nLD3	46176900	TLS-123
	or 46470200	SEL2210S
nLD4	46176900	TLS-123
	or 46470200	SEL2210S
oS1	46727300	Push SW., SOURCE/TAPE MONITOR/EQUALIZER

2-4. F-4381 Power Supply Circuit Board

Component Side



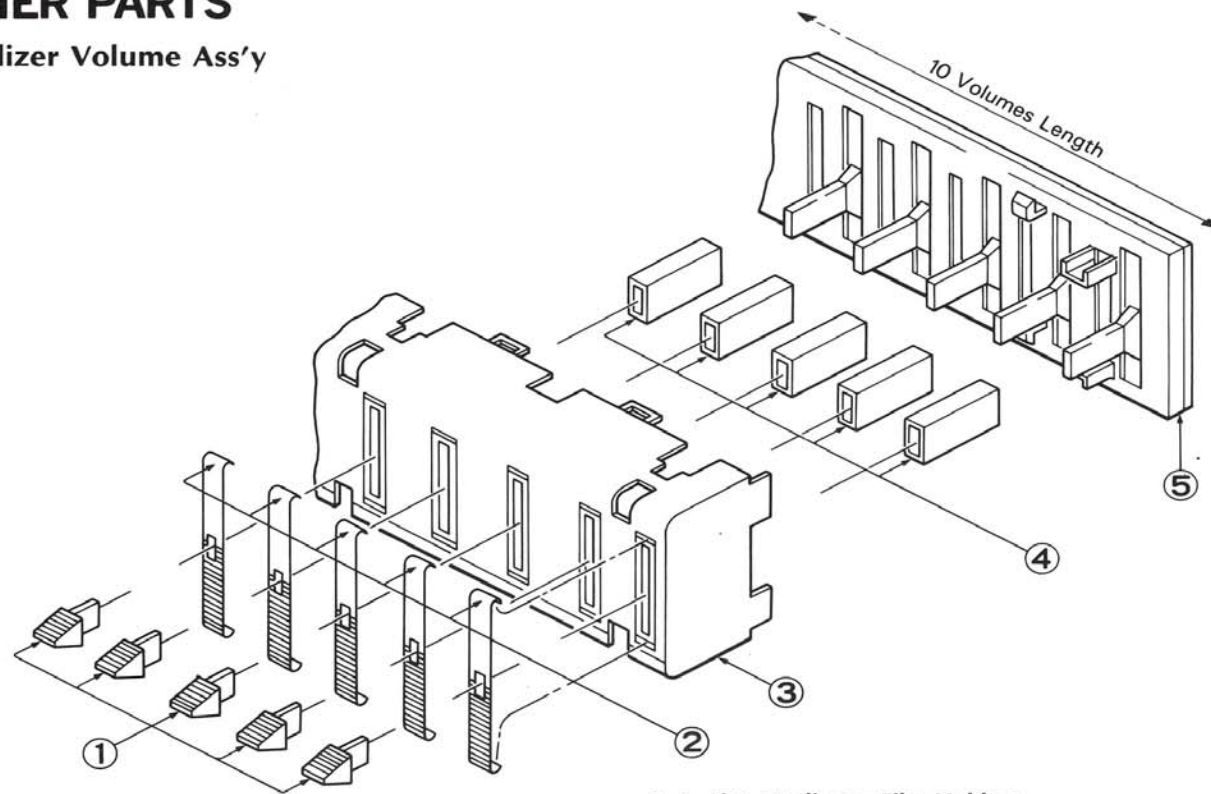
Parts List

Parts No.	Stock No.	Description
•Diode		
mD1	46273600	DBB10-B
mD2	03117700	10E-2

Parts No.	Stock No.	Description
mC20	08462800	22μF 50V E.B.
Δ mS1	46412500	Push SW., POWER (XX.UL.CSA)
Δ	46412400	Push SW., POWER (EU.BS.AS)

3. OTHER PARTS

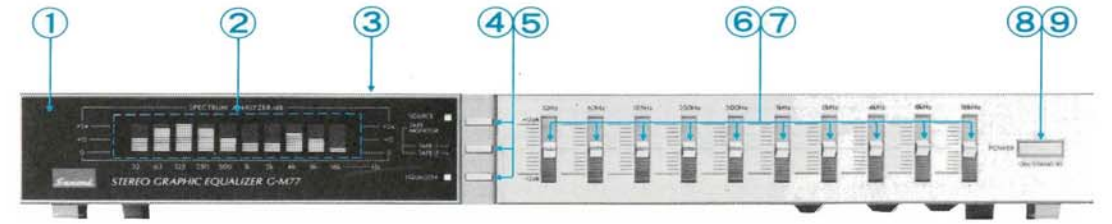
3-1. Equalizer Volume Ass'y



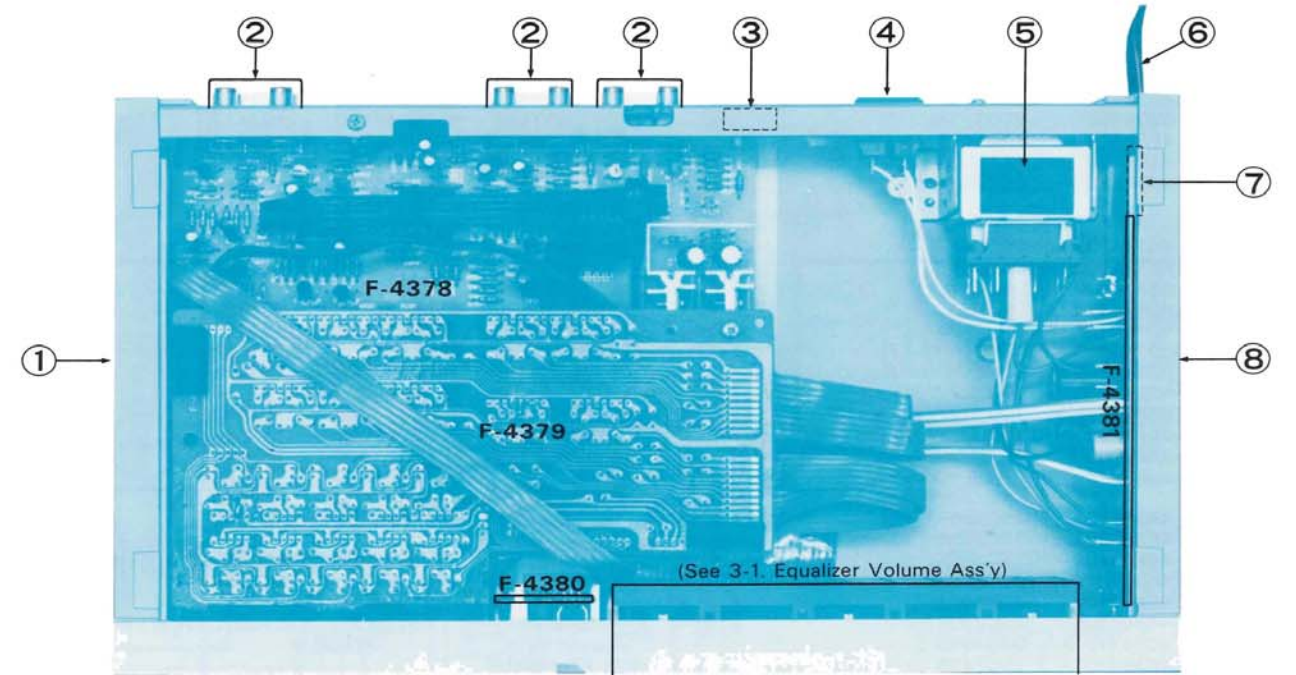
Parts List <Indicator Film Holder>

Parts No.	Stock No.	Description
1	47318200	Slide Knob, EQUALIZER
2	47318500	Indicator Film
3	47295500	Indicator Film Holder
4	47318100	Joint Shaft
5	46727000	200kΩ × 2-10 Slide V.R. Ass'y, EQUALIZER.

3-2. Front View



3-3. Top View



Parts List <Front View>

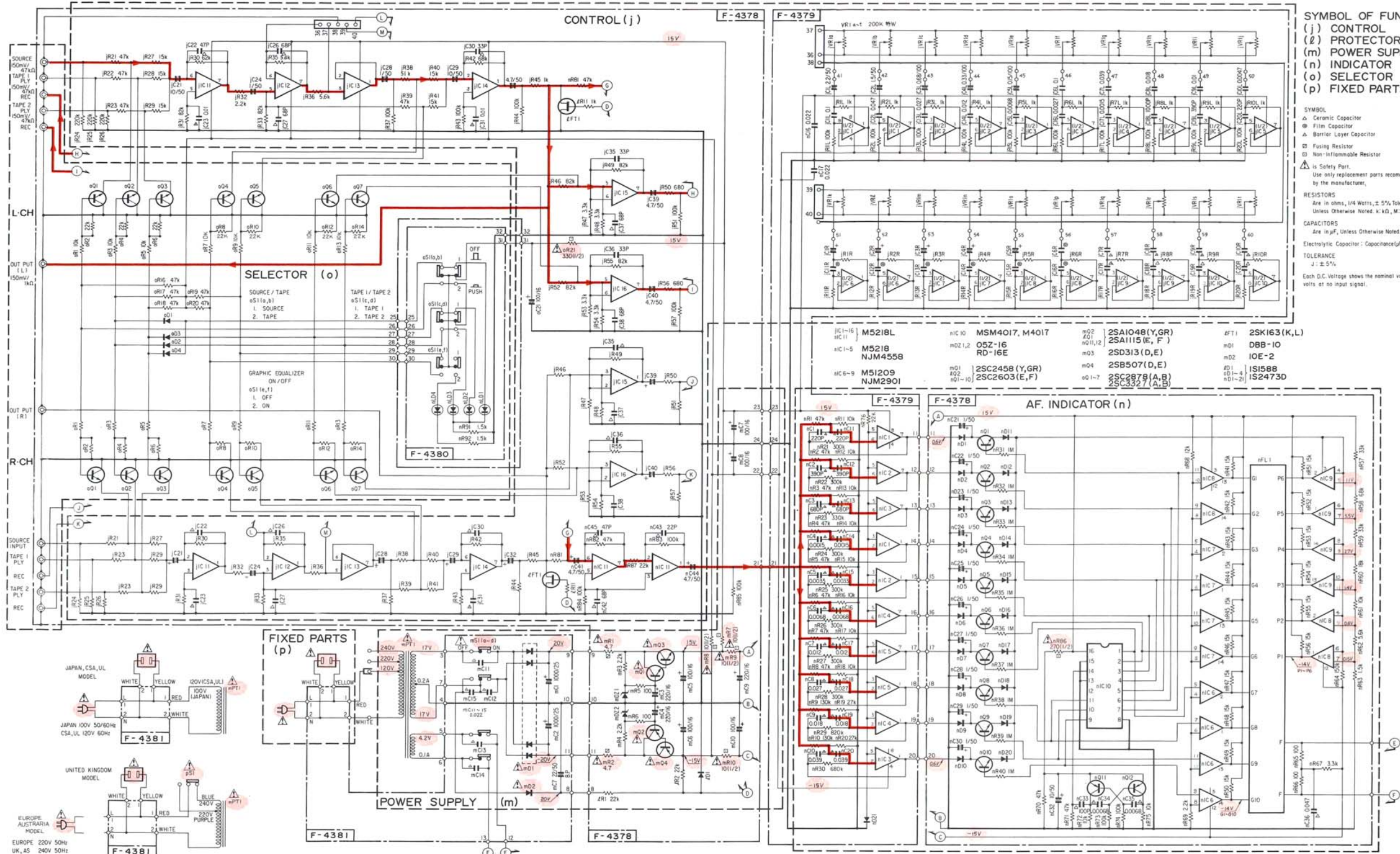
Parts No.	Stock No.	Description
1	47319000	Front Panel Ass'y
2	46727400	Display Tube (Spectrum Analyzer)
3	47319300	Bonnet
4	47318300	Push knob, SOURCE/TAPE MONITOR/EQUALIZER
5	46727300	Push SW., SOURCE/TAPE MONITOR/EQUALIZER
6	47318200	Slide knob, EQUALIZER
7	46727000	200kΩ × 2—10 Slide V.R. Ass'y, EQUALIZER
8	47168800	Push knob, POWER
Δ 9	46412500	Push SW., POWER (XX.UL.CSA)
Δ	46412400	Push SW., POWER (EU.BS.AS)

Parts List <Top View>

Parts No.	Stock No.	Description
1	47228100	Side Panel (Left)
2	07249100	4P Terminal Board, SOURCE/TAPE-1/TAPE-2
Δ 3	07204700	Slide SW., Voltage Selector <220/240V> (EU.BS.AS)
Δ 4	46364900	AC Outlet (XX.UL.CS)
Δ	46161000	AC Outlet (EU)
Δ	46364800	AC Outlet (BS)
Δ 5	15014001	Power Transformer (XX)
Δ	15014002	Power Transformer (UL.CSA)
Δ	15014005	Power Transformer (EU.BS.AS)
Δ 6	38005400	Power Supply Cord (XX)
Δ	38004700	Power Supply Cord (UL.CSA)
Δ	38004500	Power Supply Cord (EU)
Δ	38004300	Power Supply Cord (BS)
Δ	07204200	Power Supply Cord (AS)
7	47168600	Power Supply Cord Cover
8	47228200	Side Panel (Right)

4. SCHEMATIC DIAGRAM

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



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

RESISTORS
 Are in ohms, 1/4 Watt, ± 5% Tolerance
 Unless Otherwise Noted: k, M, MQ

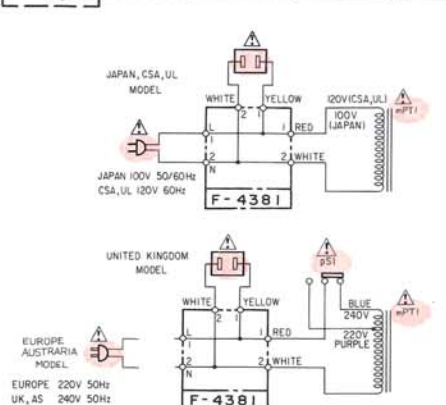
CAPACITORS
 Are in μF, Unless Otherwise Noted: P, pF
 Electrolytic Capacitor: Capacitance(μF)/Volt(V)

TOLERANCE
 J: ± 5%

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

IC 1-16 M5218L	IC 1-5 M5218 NJM4558	IC 6-9 M51209 NJM2901	MSM4017, M4017	MS2-16 RD-16E	MS1-16 RD-16E	MS4-16 RD-16E	MS5-16 RD-16E	MS6-16 RD-16E	MS7-16 RD-16E	MS8-16 RD-16E	MS9-16 RD-16E	MS10-16 RD-16E	MS11-16 RD-16E	MS12-16 RD-16E	MS13-16 RD-16E	MS14-16 RD-16E	MS15-16 RD-16E	MS16-16 RD-16E	MS17-16 RD-16E	MS18-16 RD-16E	MS19-16 RD-16E	MS20-16 RD-16E	MS21-16 RD-16E	MS22-16 RD-16E	MS23-16 RD-16E	MS24-16 RD-16E	MS25-16 RD-16E	MS26-16 RD-16E	MS27-16 RD-16E	MS28-16 RD-16E	MS29-16 RD-16E	MS30-16 RD-16E	MS31-16 RD-16E	MS32-16 RD-16E	MS33-16 RD-16E	MS34-16 RD-16E	MS35-16 RD-16E	MS36-16 RD-16E	MS37-16 RD-16E	MS38-16 RD-16E	MS39-16 RD-16E	MS40-16 RD-16E	MS41-16 RD-16E	MS42-16 RD-16E	MS43-16 RD-16E	MS44-16 RD-16E	MS45-16 RD-16E	MS46-16 RD-16E	MS47-16 RD-16E	MS48-16 RD-16E	MS49-16 RD-16E	MS50-16 RD-16E	MS51-16 RD-16E	MS52-16 RD-16E	MS53-16 RD-16E	MS54-16 RD-16E	MS55-16 RD-16E	MS56-16 RD-16E	MS57-16 RD-16E	MS58-16 RD-16E	MS59-16 RD-16E	MS60-16 RD-16E	MS61-16 RD-16E	MS62-16 RD-16E	MS63-16 RD-16E	MS64-16 RD-16E	MS65-16 RD-16E	MS66-16 RD-16E	MS67-16 RD-16E	MS68-16 RD-16E	MS69-16 RD-16E	MS70-16 RD-16E	MS71-16 RD-16E	MS72-16 RD-16E	MS73-16 RD-16E	MS74-16 RD-16E	MS75-16 RD-16E	MS76-16 RD-16E	MS77-16 RD-16E	MS78-16 RD-16E	MS79-16 RD-16E	MS80-16 RD-16E	MS81-16 RD-16E	MS82-16 RD-16E	MS83-16 RD-16E	MS84-16 RD-16E	MS85-16 RD-16E	MS86-16 RD-16E	MS87-16 RD-16E	MS88-16 RD-16E	MS89-16 RD-16E	MS90-16 RD-16E	MS91-16 RD-16E	MS92-16 RD-16E	MS93-16 RD-16E	MS94-16 RD-16E	MS95-16 RD-16E	MS96-16 RD-16E	MS97-16 RD-16E	MS98-16 RD-16E	MS99-16 RD-16E	MS100-16 RD-16E
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- 2SC2878 2SA1048
- 2SC3327 2SA1115
- 2SC2458 2SC2603
- 2SB507V11AL
- 2SD313AL
- 2SK163
- M5218L
- M4017BP
- MSM4017RS
- M51209P
- NJM2901N
- M5218P
- DBB10-B
- SEL2210S
- TLS-123
- 1S1588
- 1S2473
- 10E-2
- 05Z16-X
- 05Z16-Y

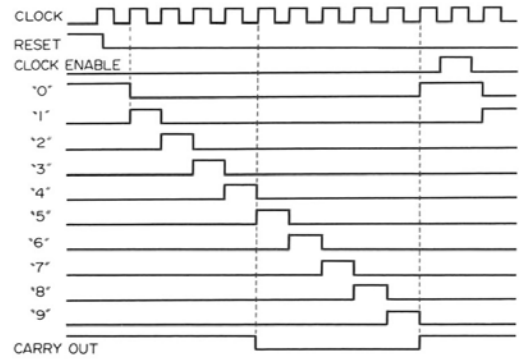
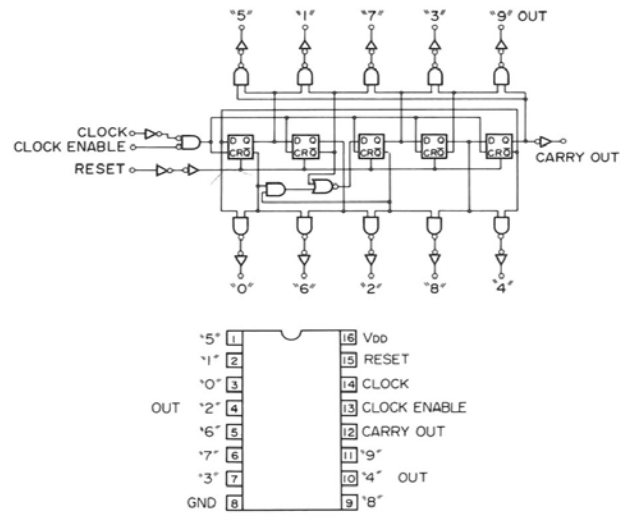


— Signal Line(SOURCE-EQUALIZER ON)

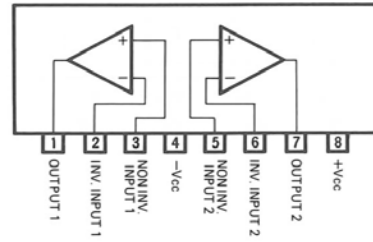
1
2
3
4
5

5. INTERIOR BLOCK DIAGRAM OF IC

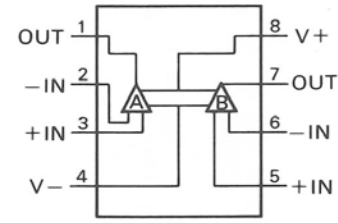
•MSM4017BP (Decade Counter IC)
M4017BP (Decade Counter IC)



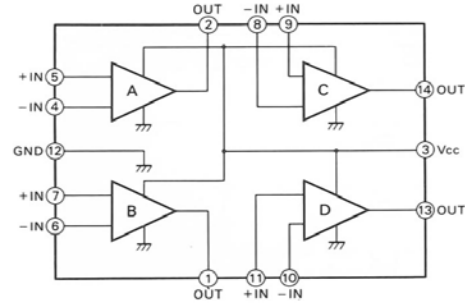
•M5218L (OP AMP IC)



•M5218P (OP AMP IC)



•NJM2901N (Quad Comparator)
M51201P (Quad Comparator)

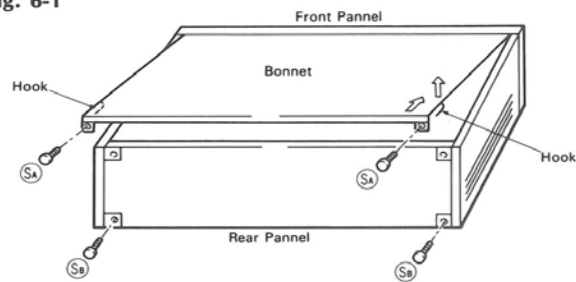


6. MAIN PARTS REPLACEMENT

A. Bonnet (See Fig. 6-1)

- 1) Remove two screws (S_A).
- 2) Push the rear side of the bonnet to remove the hooks and then remove bonnet.

Fig. 6-1



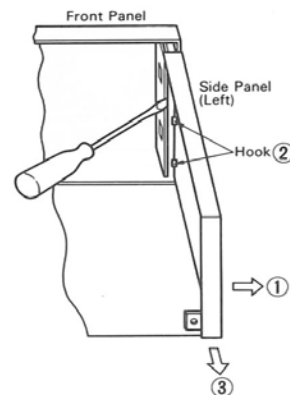
B. Bottom Plate

- 1) Remove two screws (S_B) (Fig. 6-1).
- 2) Push the rear side of the bonnet or remove the hooks and then remove bottom plate.

C. Side Panel L(R) (See Fig. 6-2)

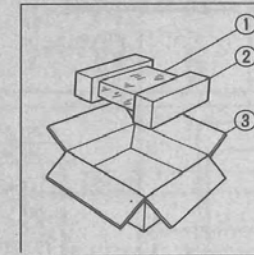
- 1) Remove bonnet and bottom plate.
- 2) Shift the position of the side panel L(R) 1.5 cm in the arrow direction ①.
- 3) Remove the hooks ② of the side panel from front panel and then pull it the arrow direction ③ to remove the side panel L(R).

Fig. 6-2



7. PACKING LIST

Parts No.	Stock No.	Description
1	07805200	Vinyl Cover
2	47339700	Styrofoam Packing
3	47318700	Carton Case



8. ACCESSORY LIST

Stock No.	Description
38103200	PJP Cord
47320700	Player Stand (R)
47320800	Player Stand (L)
46898600	Wiring Notice Sheet
46726400	Operating Instruction



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SANSUI ELECTRONICS CORPORATION:
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