CONTENTS

1. SPECIFICATIONS 2
2. PANEL DIAGRAM 3
3. DISASSEMBLY 4
4. GENERAL LAYOUT 5
5. SEMICONDUCTOR ELECTRODES 7
6. BLOCK DIAGRAM 8
7. GENERAL CIRCUIT DIAGRAM 9
8. PC BOARD ASSEMBLY PARTS LAYOUT and CIRCUIT DIAGRAM
   - 8-1. AP-52 10
   - 8-2. AP-53 (AP-55) 12
   - 8-3. AP-51 14
9. ADJUSTMENT 16
10. PARTS LIST 17
11. PARTS PICTURE 19

SYSTEM-100 SPECIFICATION

MODEL-103

Input.	
4 channel	
Mic:	1.5mV/2.2K-ohm
Line-H:	75mV/15K-ohm
Line-L:	0.775V/more than 100K-ohm
Output.	
Line Out:	2-ch Stereo Out 0.775V/1K-ohm
Speaker Output:	8-ohm x2
	3W x2 (Max.)
Headphone:	8-ohm stereo Headphones
Echo.	
To ECHO:	140mV
From ECHO:	20mV
Frequency Range:	20Hz –25,000Hz (–3dB) (LINE OUT)
S/N:	60db (Reverb off) (INPUT: LINE-L.H)
Crosstalk:	Better 58 dB

CONTROLS

Input Selector:	Mic, Line-H, Line-L. x4
Input Volume:	x4
Pan-Pot:	x4
Effect Selector:	Echo or Reverb. x4
Effect Volume:	x4
Master Volume:	x1
Balance:	x1
Echo Volume:	x1
Reverb Volume:	x1
Effect Pan-Pot:	x1
Monitor Volume:	x1

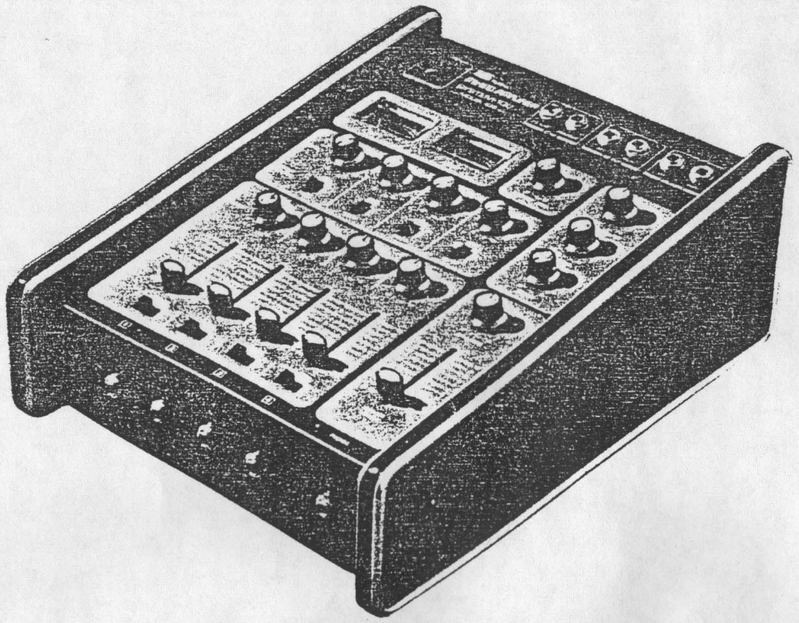
DIMENSIONS AND WEIGHT

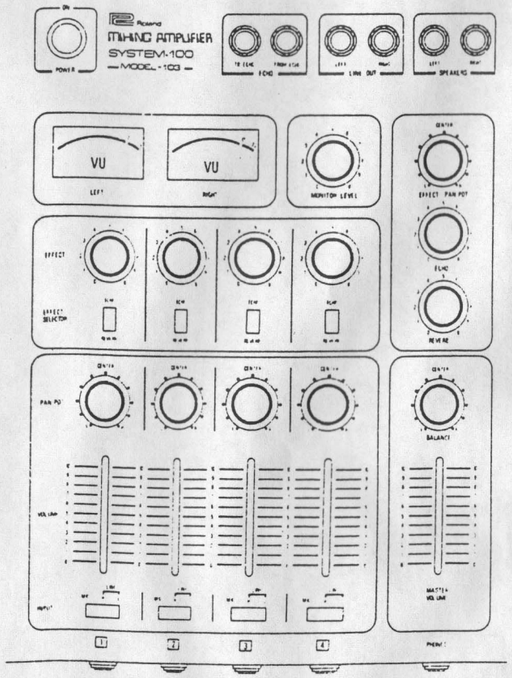
Overall Size:	280m/m wide, 355m/m deep, 145m/m high.
Net Weight:	6.5Kg

POWER REQUIREMENT

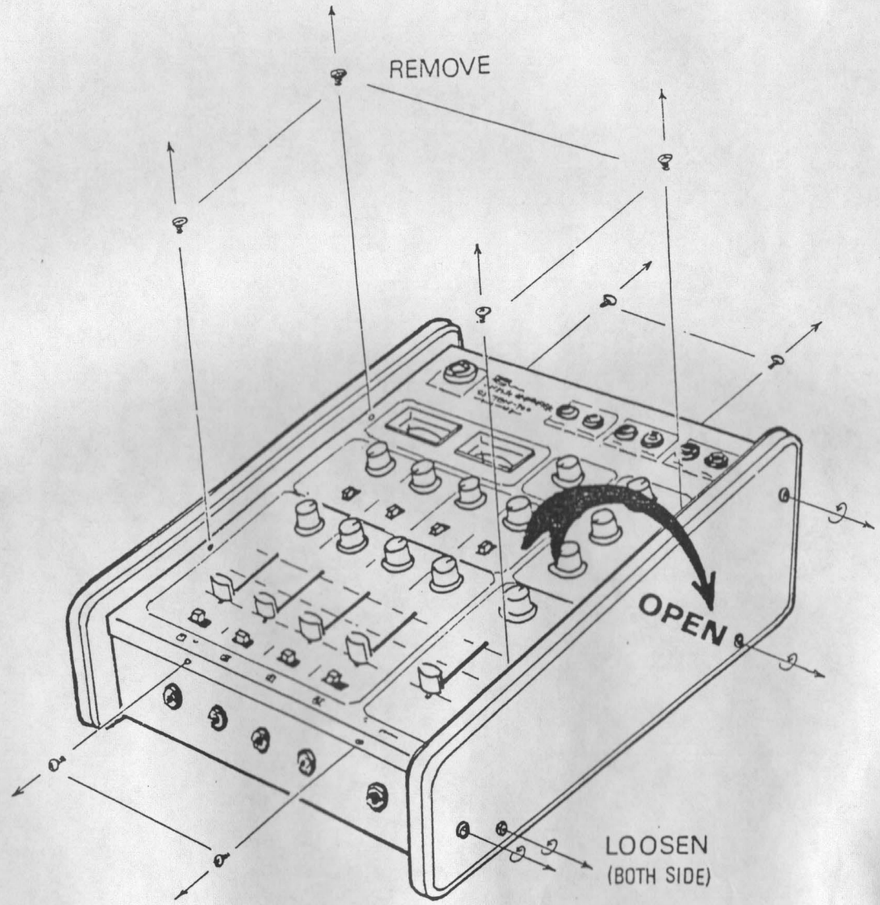
100 – 120V 50 – 60Hz 220 – 250V 50 – 60Hz	25 W max.

PANEL DIAGRAM

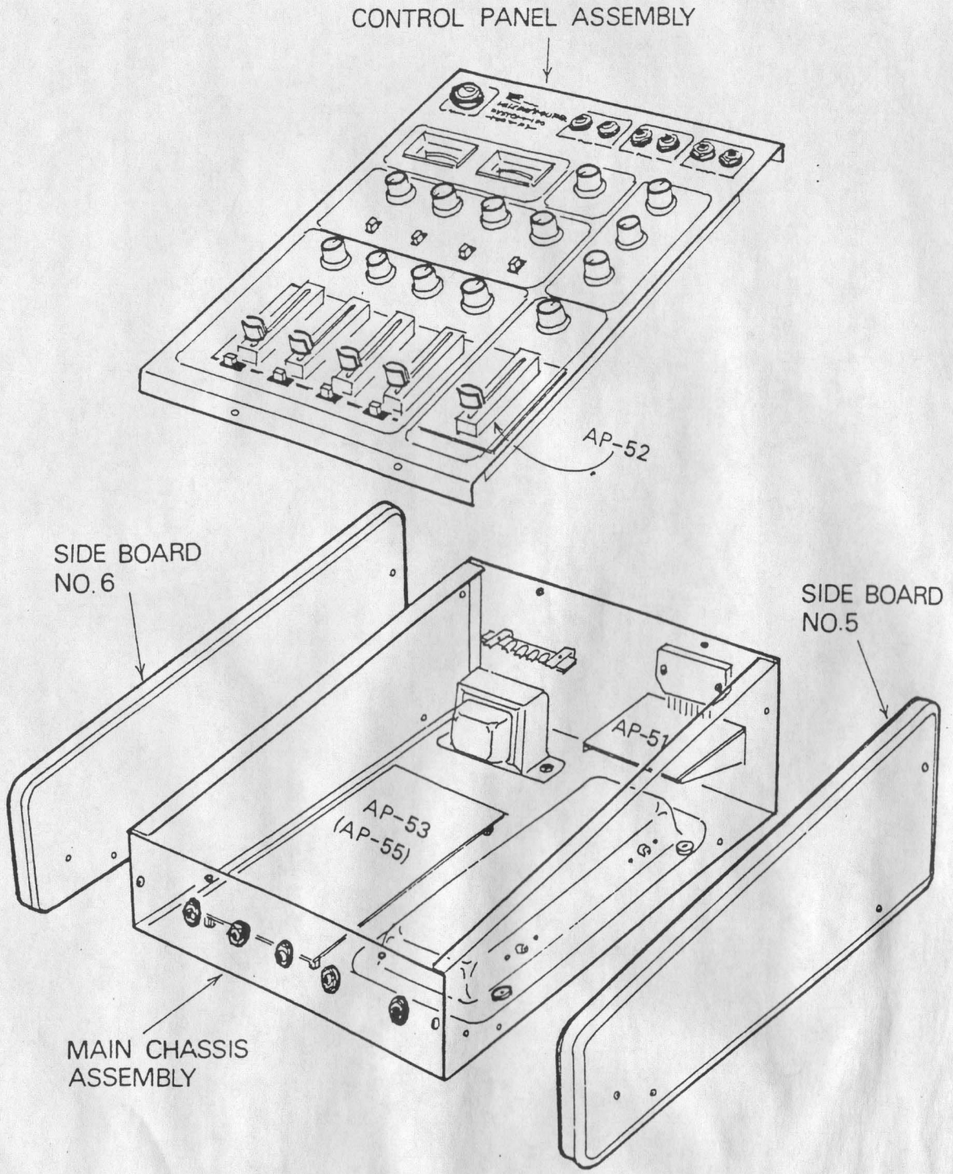




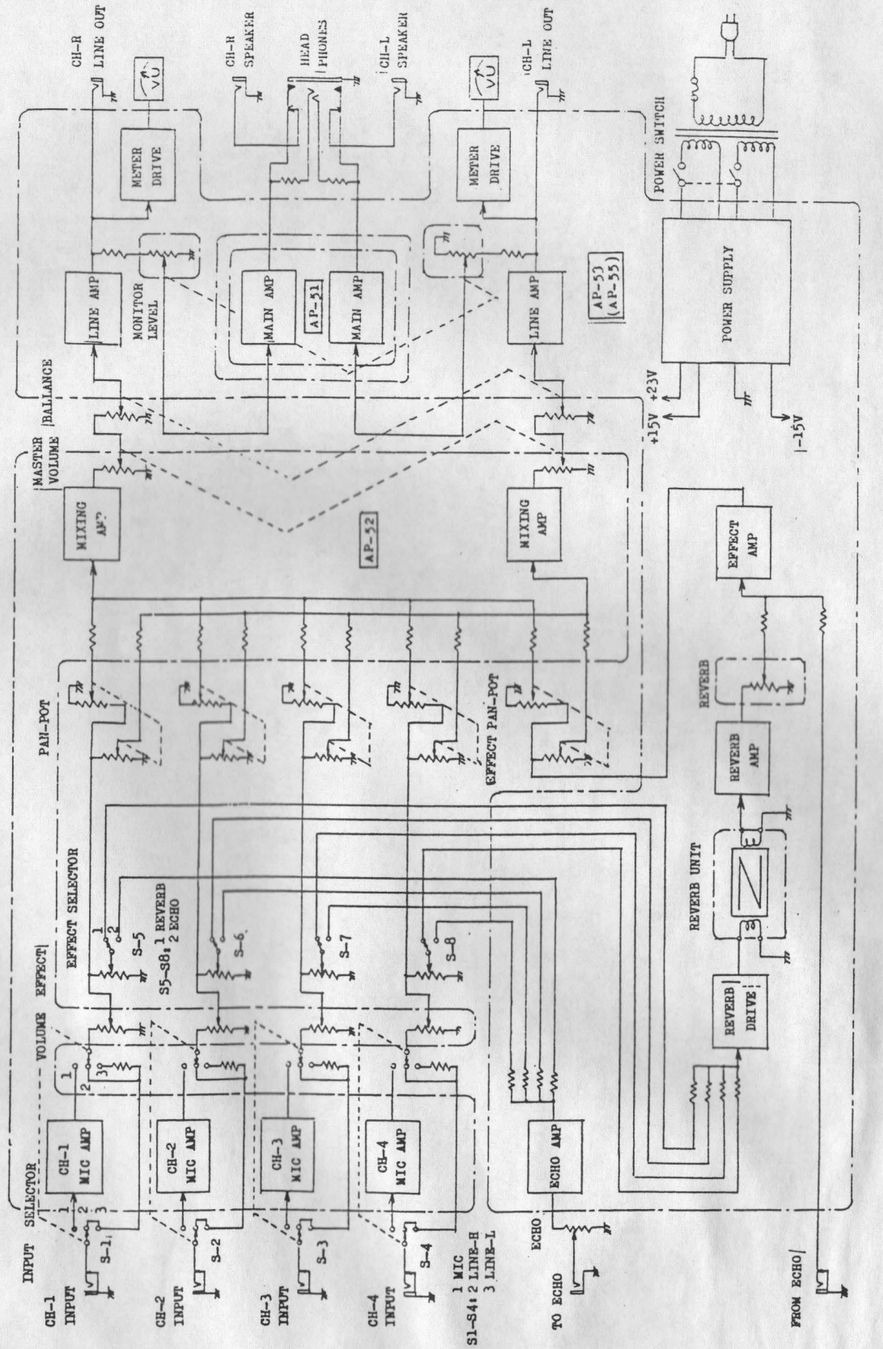
DISASSEMBLY

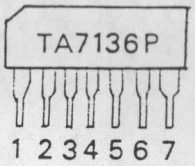


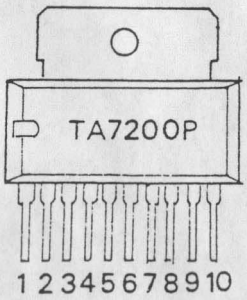
GENERAL LAYOUT

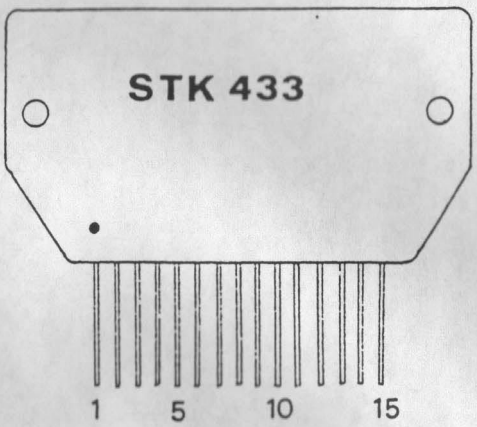


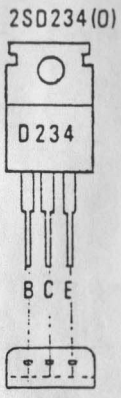
BLOCK DIAGRAM

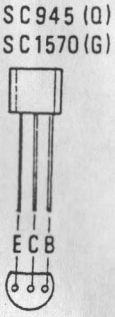



TA7136P
1 2 3 4 5 6 7

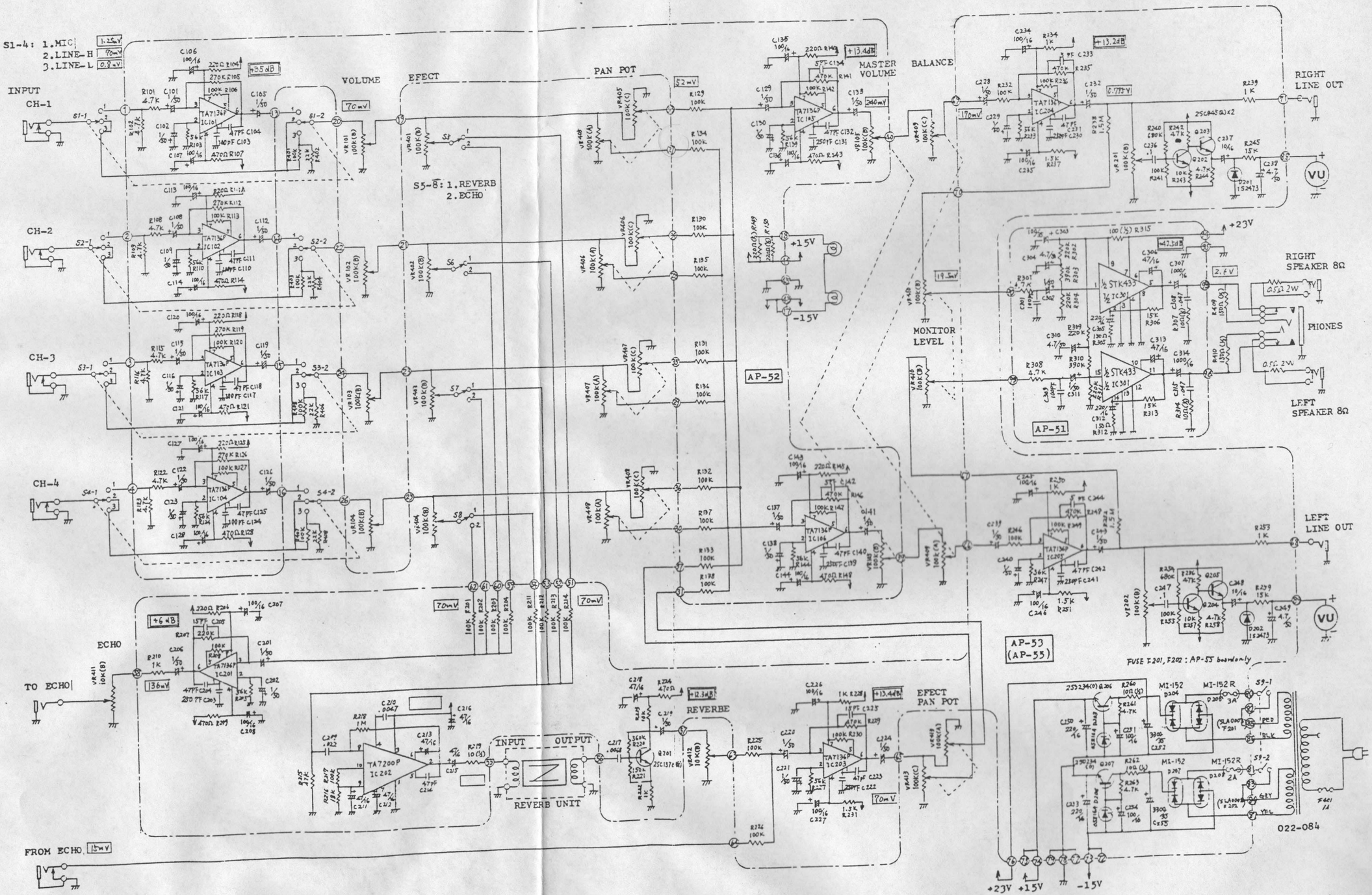

TA7200P
1 2 3 4 5 6 7 8 9 10


STK 433
1
5
10
15

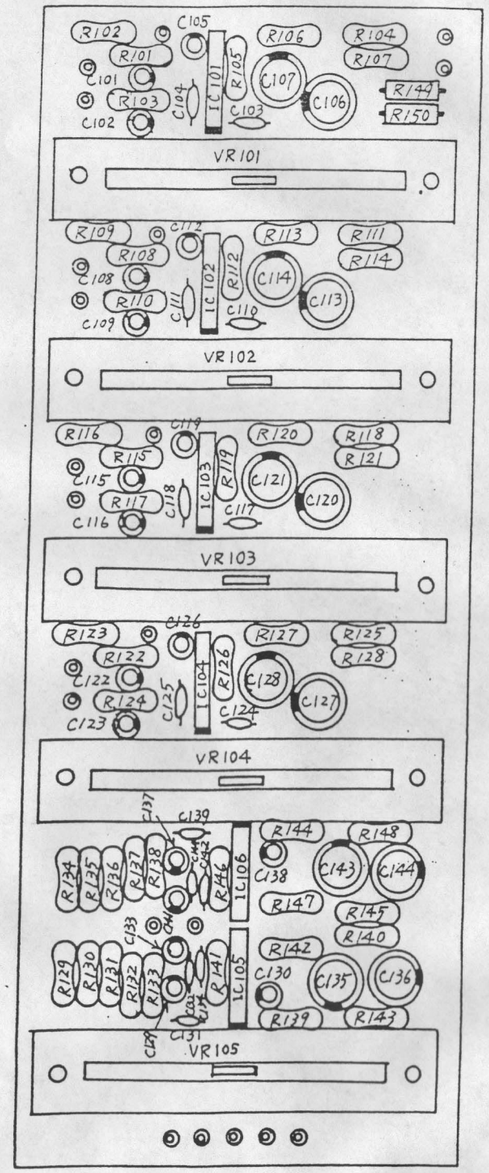

2SD234(O)
D234
B C E

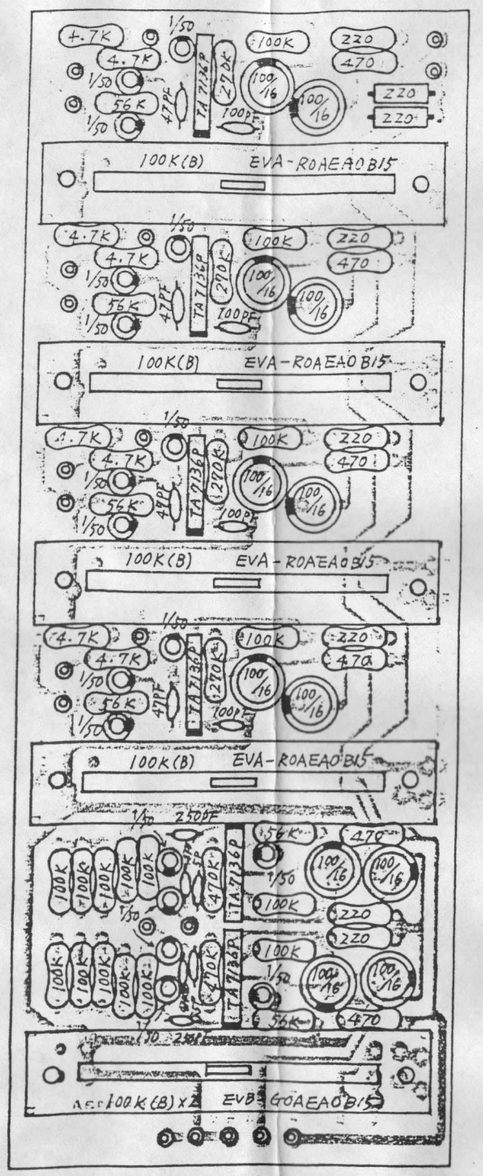

2SC945(Q)
2SC1570(G)
E C B

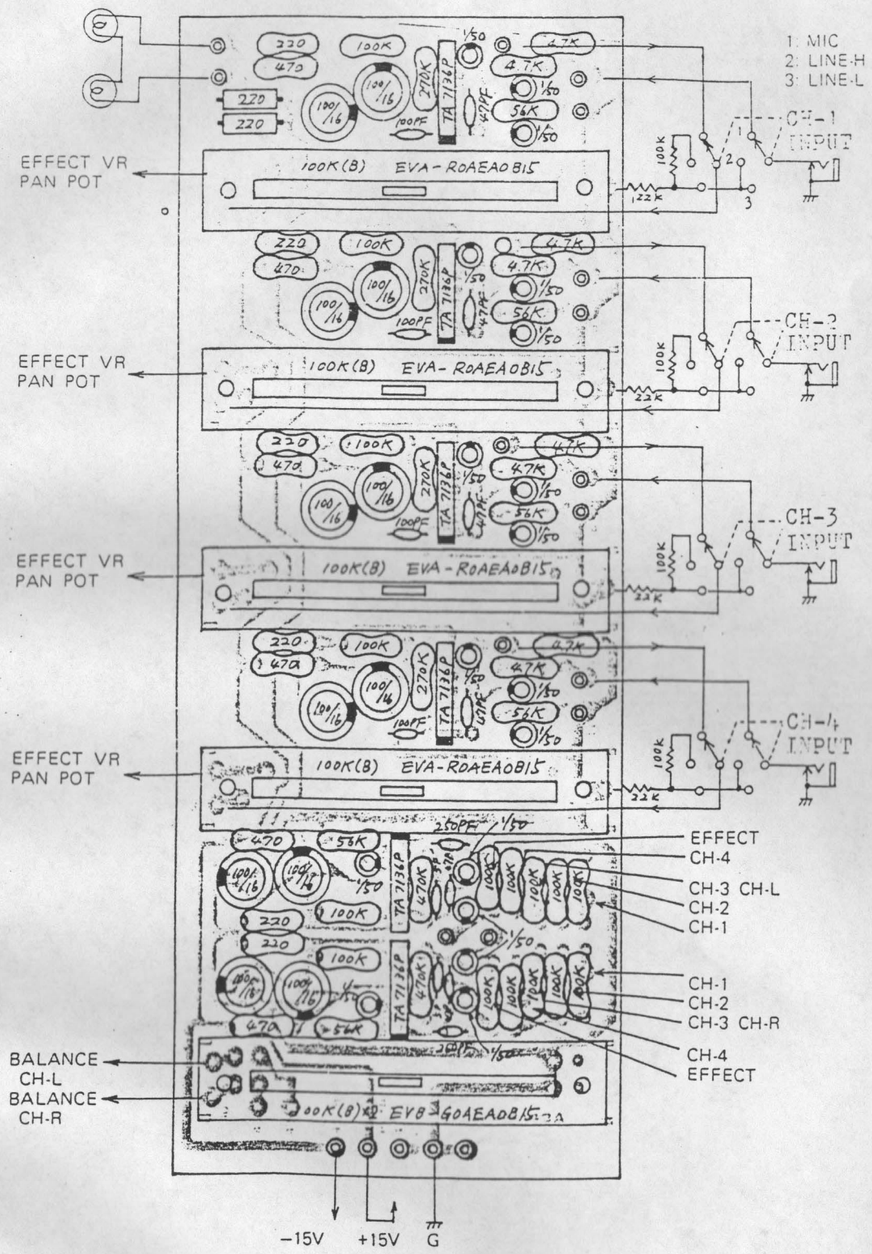
GENERAL CIRCUIT DIAGRAM



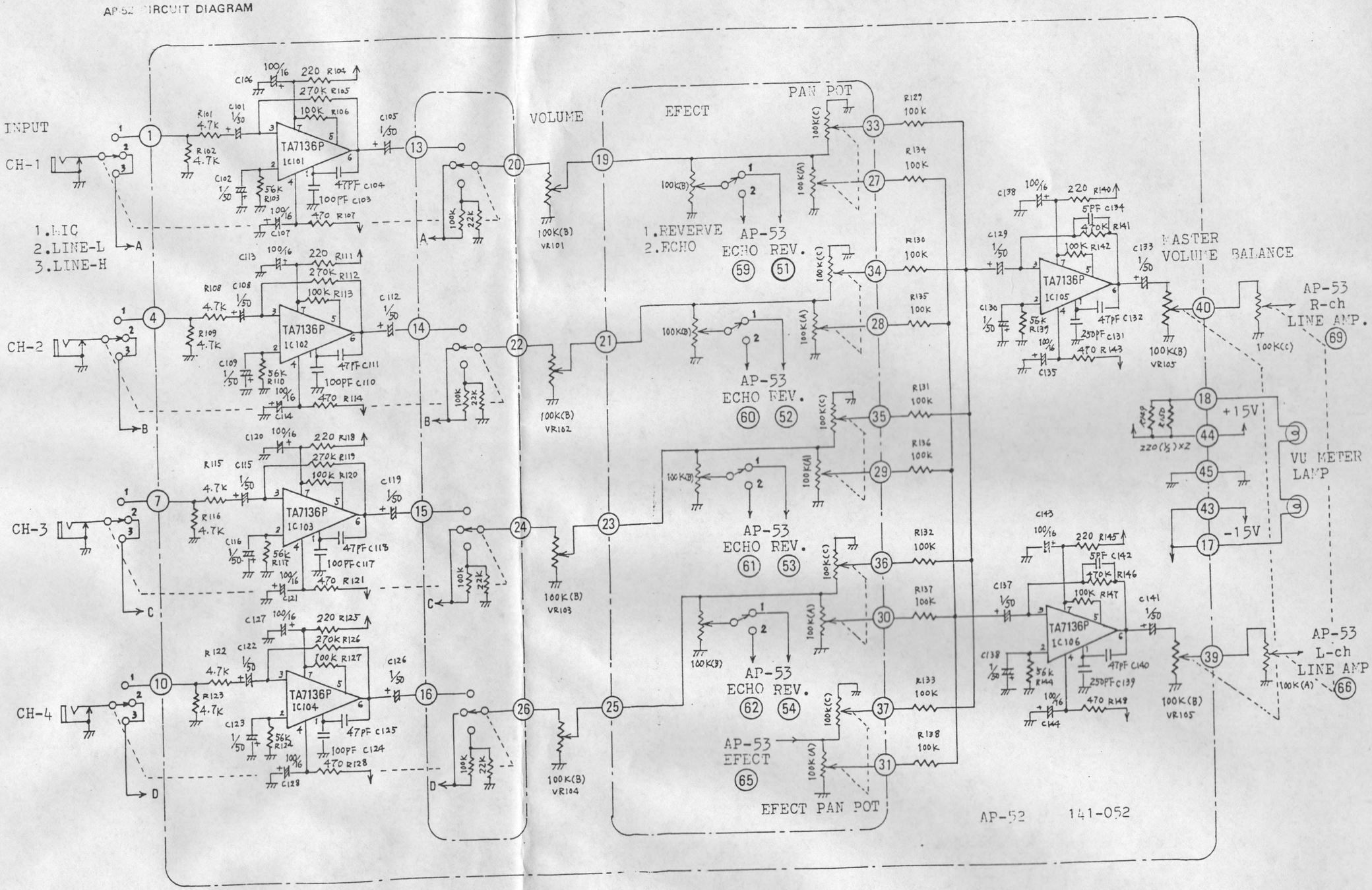
AP-52 MIC AMP. BOARD ASSEMBLY PARTS LAYOUT (141-052)



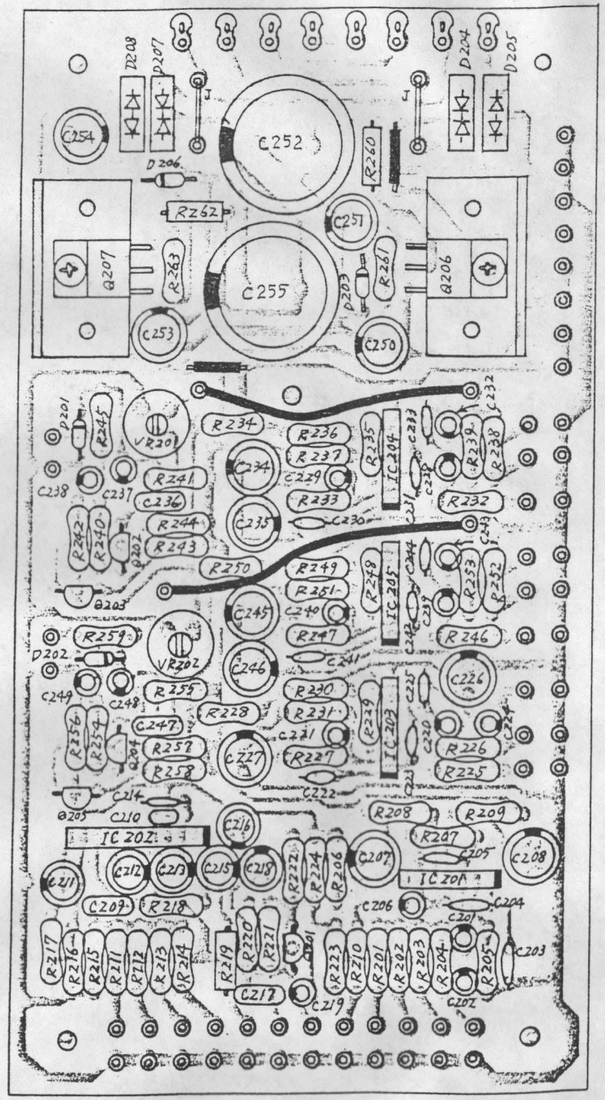




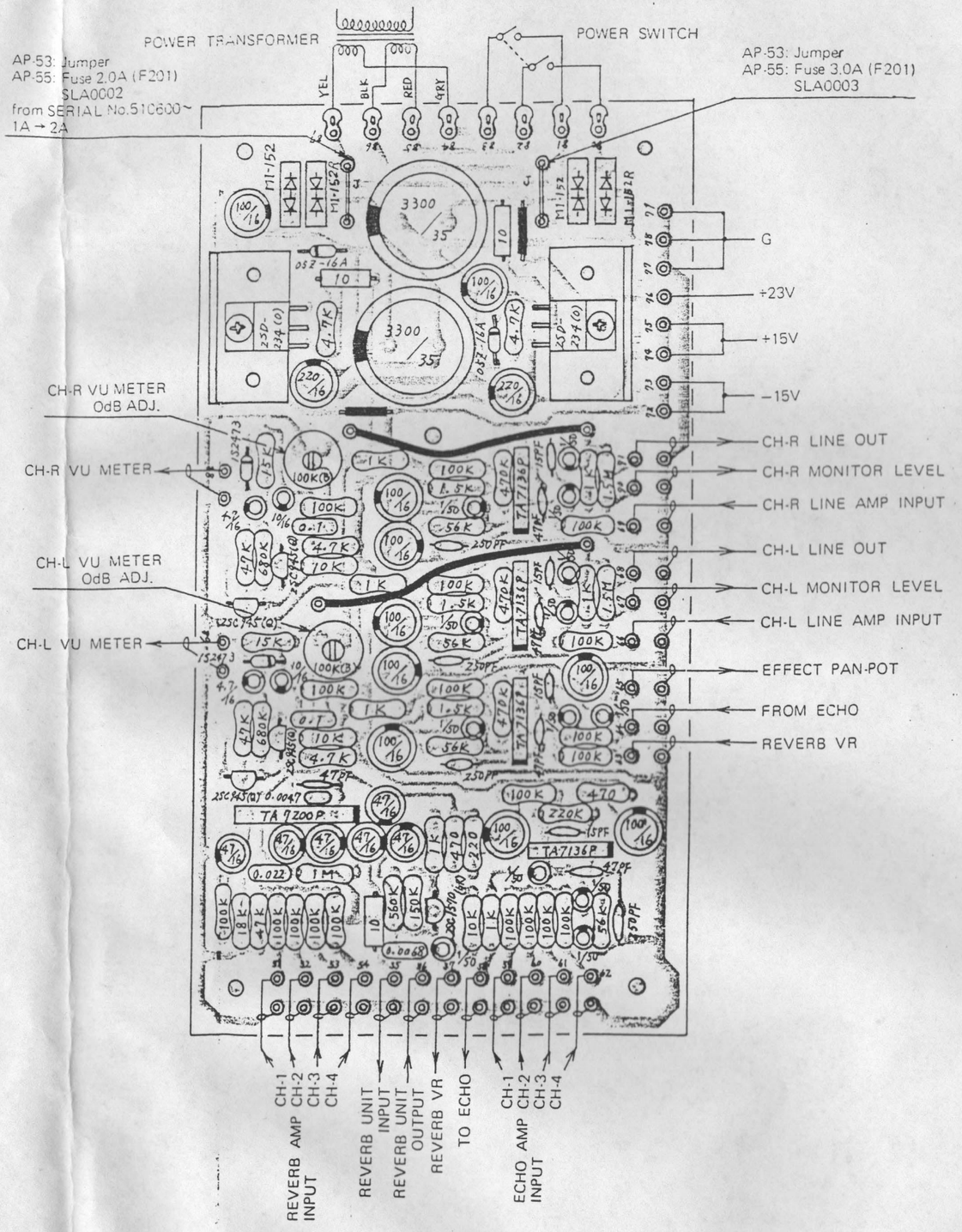
AP-52 CIRCUIT DIAGRAM



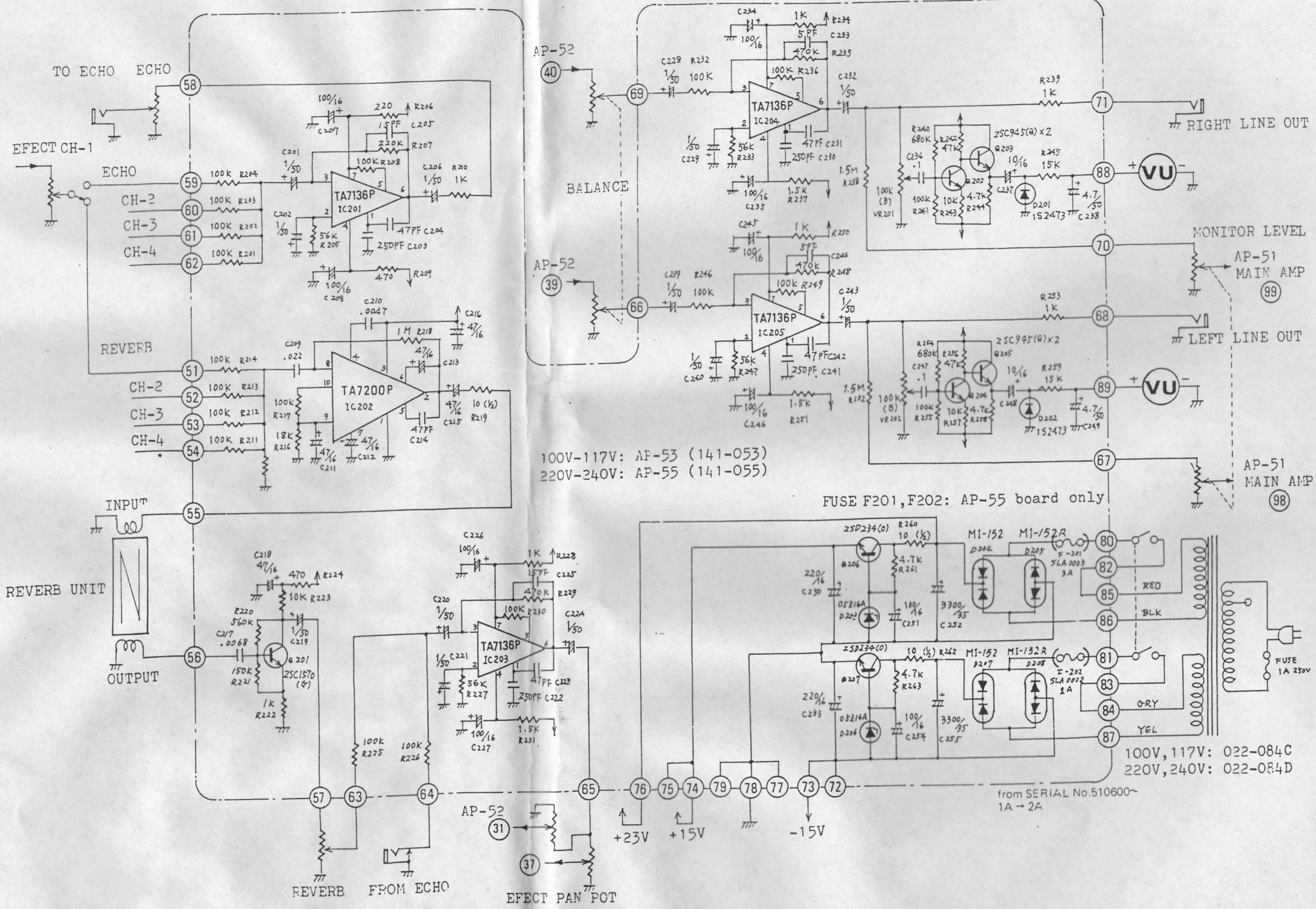
UNLESS OTHERWISE NOTES
RESISTORS ARE IN OHMS.
CAPACITORS ARE IN MICROFARADS.
(or MFDS/VOLTS)



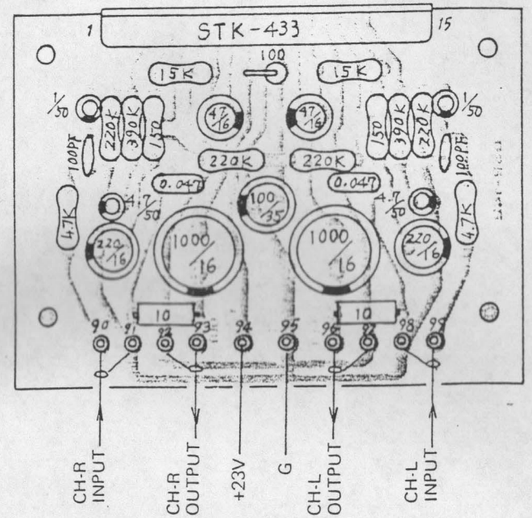
AP-53 (AP-55) LINE AMP. EFECT AMP. BOARD ASSEMBLY PARTS LAYOUT (AP-53 141-053, AP-55 141-055)

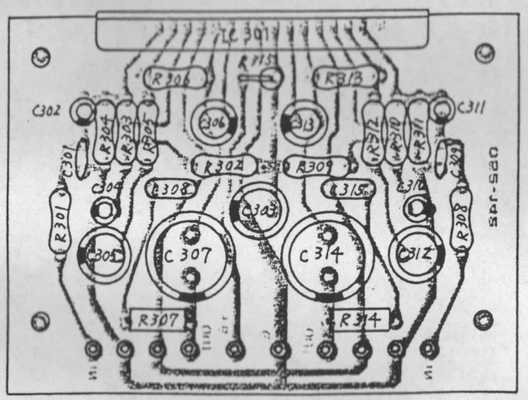


AP-53 (AP-55) CIRCUIT DIAGRAM



AP-51 MAIN AMP. BOARD ASSEMBLY PARTS LAYOUT (141-051)





ADJUSTMENT

VU meter calibration

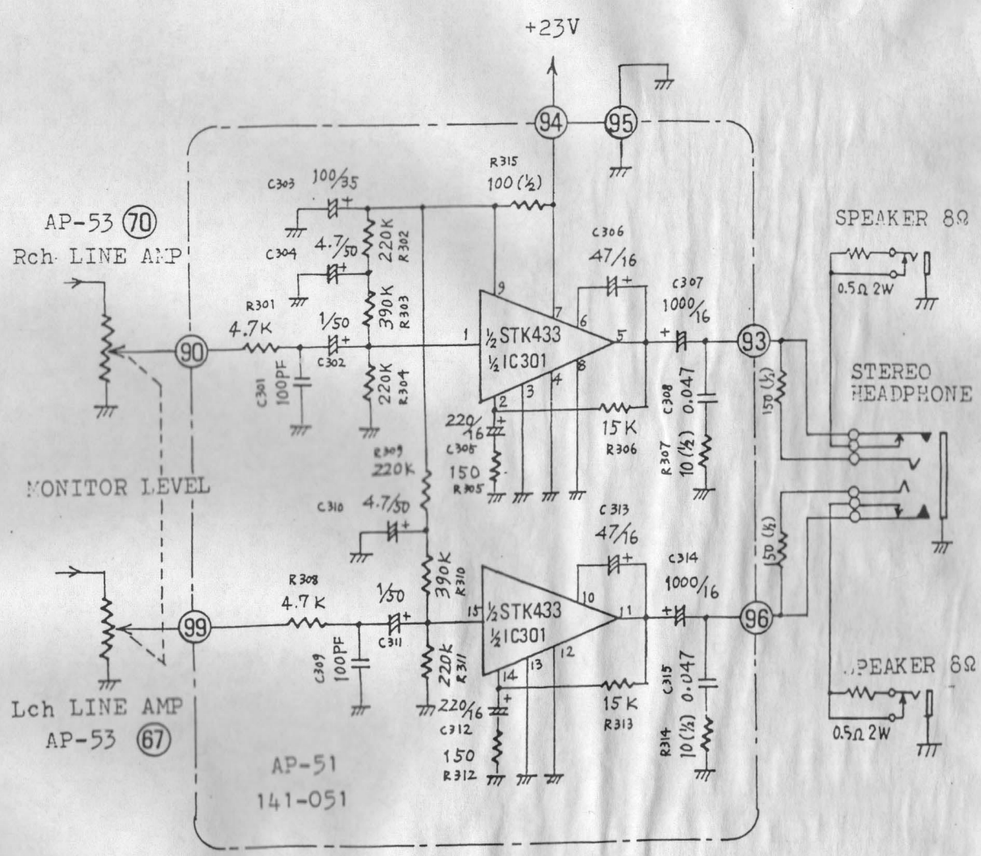
Connect the millivoltmeter to one of the line out jacks (R or L) and the audio generator to any of the input (jacks or terminals of PCB).

Set the audio generator for 1KHz sine wave and adjust controls for a reading of 0.775V; and adjust the trimmer Pot. (R or L VU meter ADJ.) for a reading of 0dB on the VU meter.

NOTE:

The waveform should remain distortion free. Follow the same steps for the other channel.

AP-51 CIRCUIT DIAGRAM



R301, R3081K-ohm→ 4.7 k ohm
from Serial No. 530800

UNLESS OTHERWISE NOTES
RESISTORS ARE IN OHMS.
CAPACITORS ARE IN MICROFARADS.
(or MFDS/VOLTS)

032-038	Capacitor	220μF	16V	Electrolytic
032-179	Capacitor	3,300μF	35V	ECET35R332SU

Resistors 1/4W are omitted.
AP-55 Board Only

008-034	Fuse 2A SLA0002			
008-035	Fuse 3A SLA0003			

Control Panel Assembly

044-052	Resistor	22KΩ	1/4W	±5%
044-060	Resistor	100KΩ	1/4W	±5%

Main Chassis Assembly

044-116	Resistor	150Ω	1/2W	±10%
044-177	Resistor	0.47Ω	2W	±10%

General Assembly

083-005	Side Board No.5 (Right)
083-006	Side Board No.6 (Left)

SYSTEM-100MODEL-103 PARTS LIST

AP-51 Board Assembly (141-051)

052-142	Printed Circuit Board No.142 (Board only)				
020-047	IC STK-433				
044-102	Resistor	10Ω	1/2W	±10%	
044-114	Resistor	100Ω	1/2W	±10%	
035-024	Capacitor	0.047μF	50V	±10%	Mylar
037-006	Capacitor	100pF	50V	±10%	Ceramic
032-071	Capacitor	1μF	50V		Electrolytic
032-074	Capacitor	4.7μF	50V		Electrolytic
032-036	Capacitor	47μF	16V		Electrolytic
032-065	Capacitor	100μF	35V		Electrolytic
032-038	Capacitor	220μF	16V		Electrolytic
032-041	Capacitor	1,000μF	16V		Electrolytic

Resistors 1/4W are omitted.

AP-52 Board Assembly (141-052)

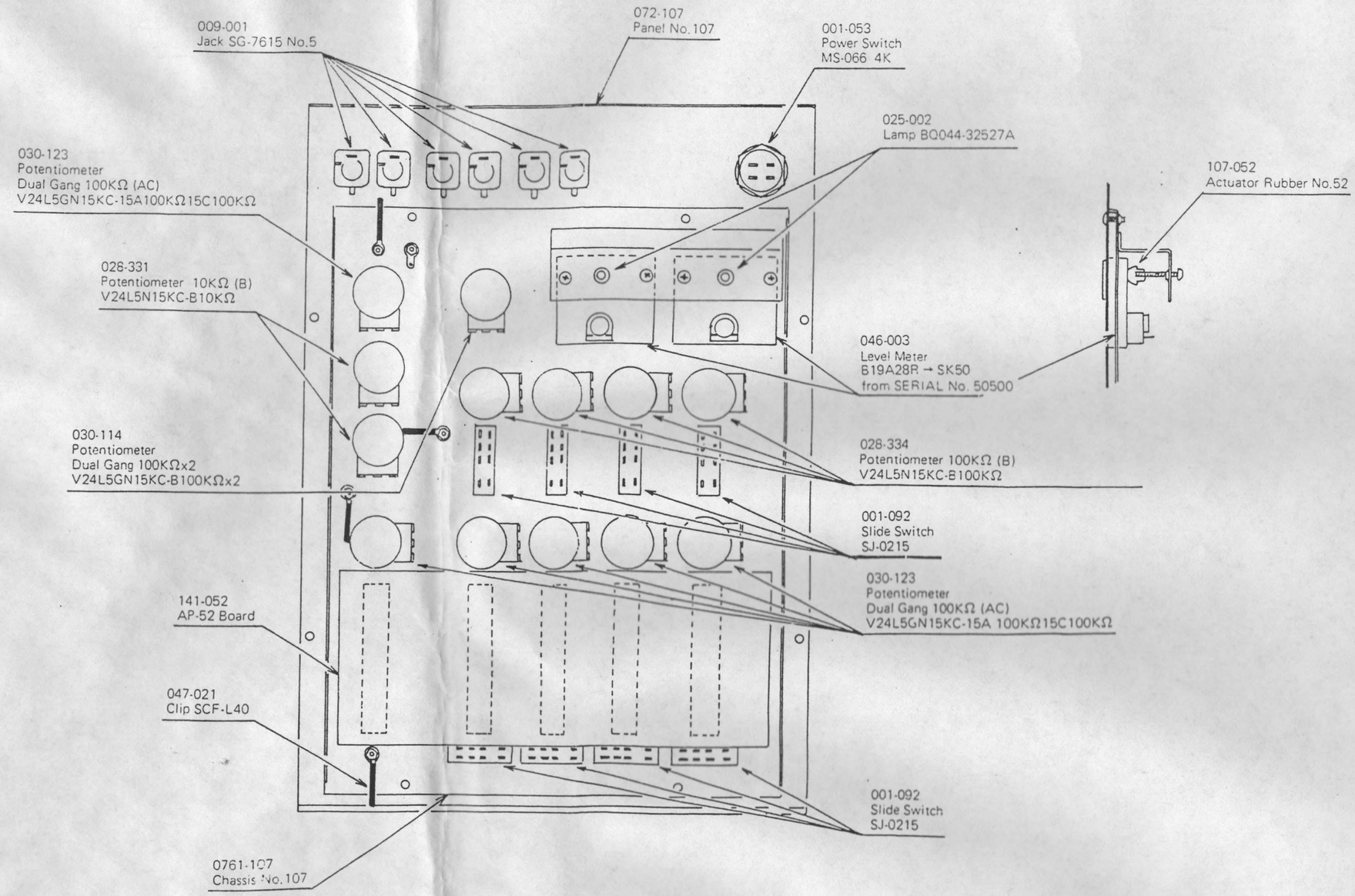
052-142A	Printed Circuit Board No.143A (Board only)				
020-027	IC TA-7136P				
030-095	Slide Potentiometer	100KΩ (B)	EVA-ROAEAOB15		
030-105	Slide Potentiometer Dual Gang	100KΩ (B)x2	EVB-GOAEAOB15		
044-118	Resistor	220Ω	1/2W	±10%	
037-014	Capacitor	5pF	50V	±10%	Ceramic
037-005	Capacitor	47pF	50V	±10%	Ceramic
037-006	Capacitor	100pF	50V	±10%	Ceramic
037-007	Capacitor	250pF	50V	±10%	Ceramic
032-071	Capacitor	1μF	50V		Electrolytic
032-037	Capacitor	100μF	16V		Electrolytic

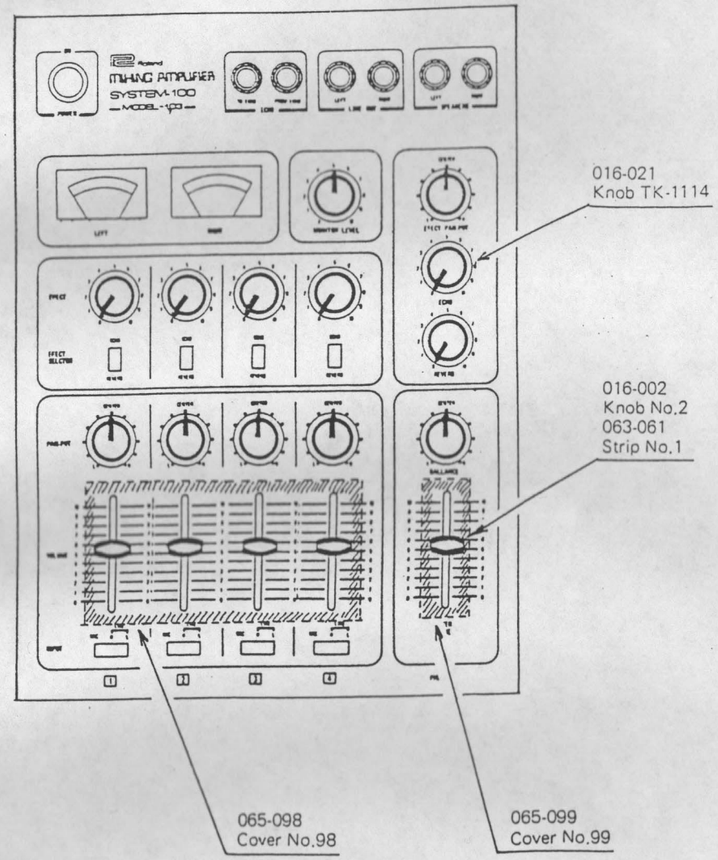
Resistors 1/4 are omitted.

AP-53 Board Assembly (141-053) 100V–120V
AP-55 Board Assembly (141-055) 220V–250V

052-144	Printed Circuit Board No.144 (Board only)				
020-027	IC TA-7136P				
020-028	IC TA-7200P				
017-013	Transistor	2SC945 (Q)			
017-065	Transistor	2SC1570 (GR)			
017-010	Transistor	2SD234 (O)			
018-062	Diode	MI-152 or ESAB01-03 C			
018-063	Diode	MI-152R or ESAB01-03 N			
018-014	Diode	1S2473			
018-026	Diode	05Z16A			
040-001	Heatsink No.1				
028-007	Trimmer Potentiometer	100KΩ (B)	EVL-R4XA00B15		
044-102	Resistor	10Ω	1/2W	±10%	
035-012	Capacitor	0.0047μF	50V	±10%	Mylar
035-014	Capacitor	0.0068μF	50V	±10%	Mylar
035-020	Capacitor	0.022μF	50V	±10%	Mylar
035-028	Capacitor	0.1μF	50V	±10%	Mylar
037-014	Capacitor	5pF	50V	±10%	Ceramic
037-002	Capacitor	15pF	50V	±10%	Ceramic
037-005	Capacitor	47pF	50V	±10%	Ceramic
037-007	Capacitor	250pF	50V	±10%	Ceramic
032-071	Capacitor	1μF	50V		Electrolytic
032-074	Capacitor	4.7μF	50V		Electrolytic
032-033	Capacitor	10μF	16V		Electrolytic
032-036	Capacitor	47μF	16V		Electrolytic
032-037	Capacitor	100μF	16V		Electrolytic

PARTS PICTURE




MIXING AMPLIFIER
SYSTEM-100
MODEL-120
016-021
Knob TK-1114
016-002
Knob No.2
063-061
Strip No.1
065-098
Cover No.98
065-099
Cover No.99

1976-12-1 SYSTEM100-103

