

# Service Manual Roland System 100 Mixer 103

It should be available for free.

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## 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

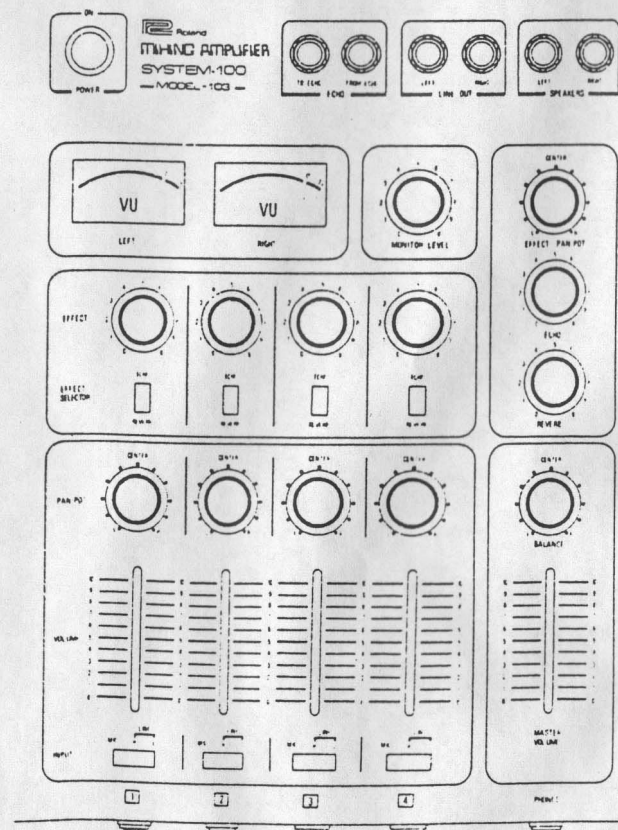
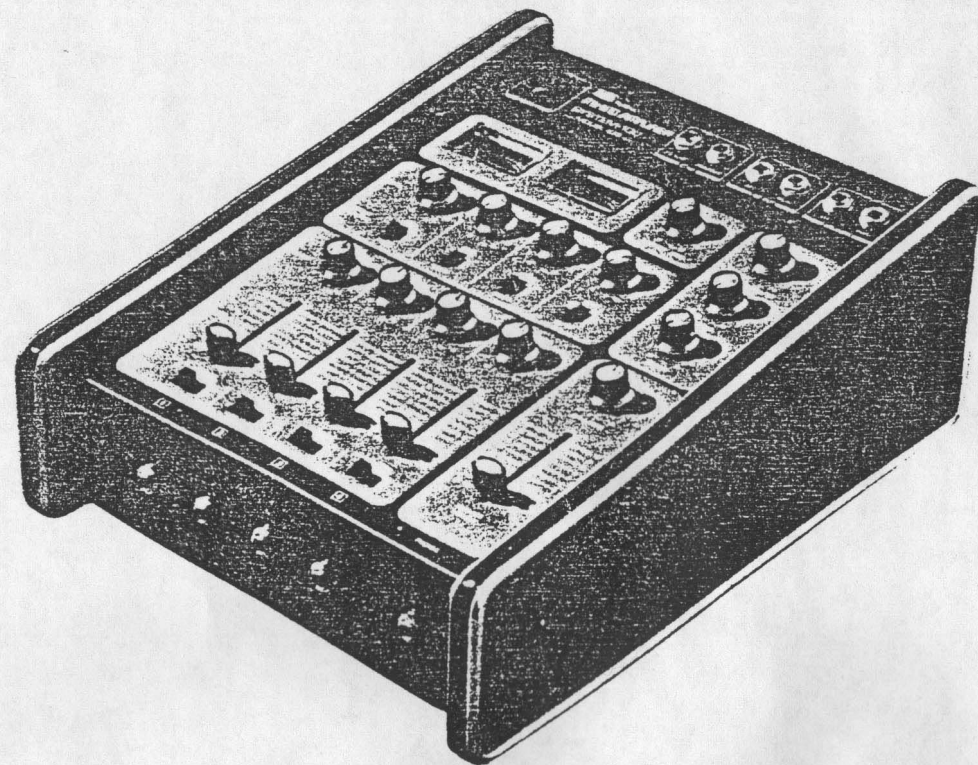
Overall Size:	280m/m wide, 355m/m deep, 145m/m high.
Net Weight:	6.5Kg

## POWER REQUIREMENT

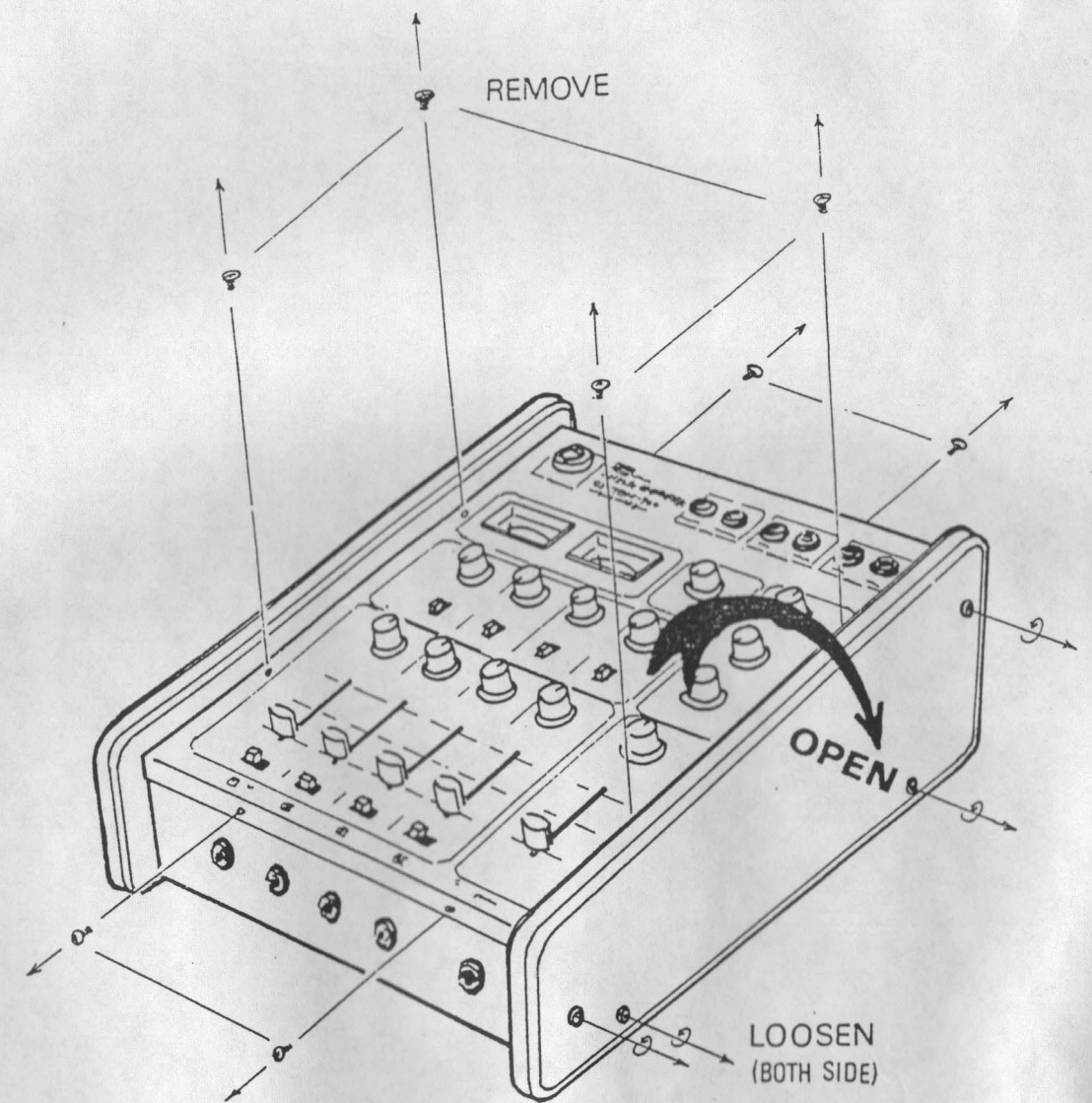
100 - 120V 50 - 60Hz	25 W max.
220 - 250V 50 - 60Hz	



## PANEL DIAGRAM

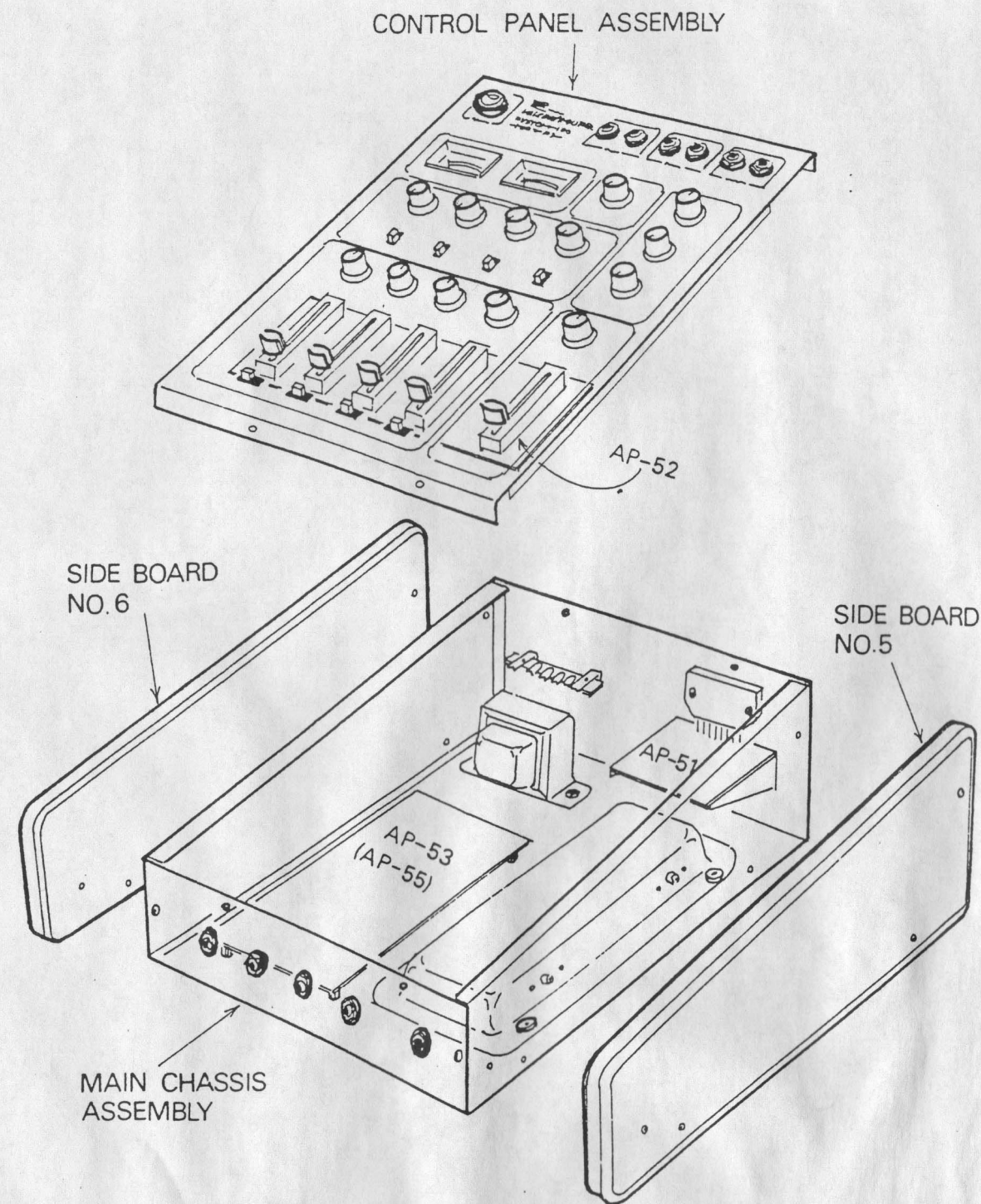


## DISASSEMBLY

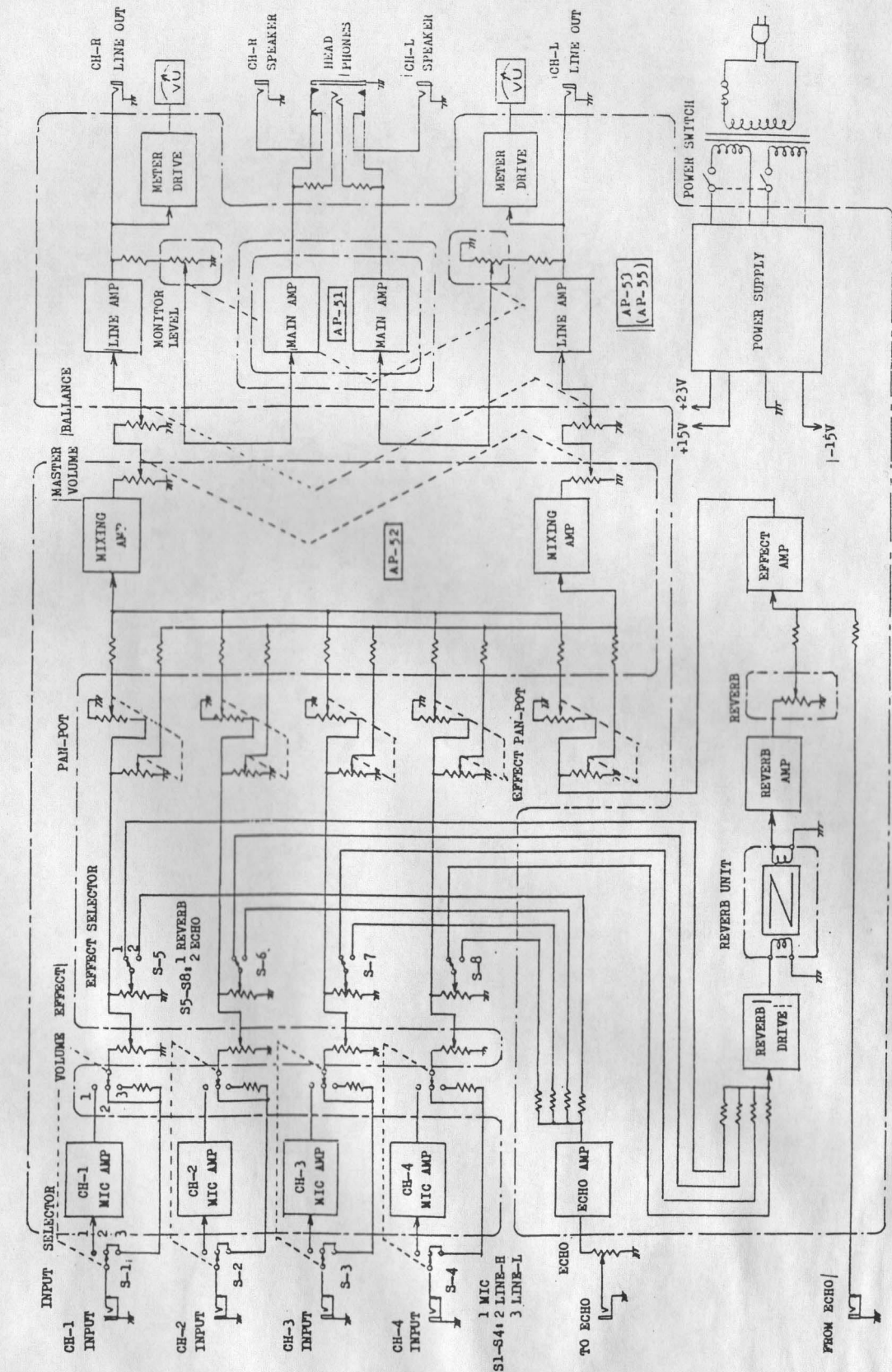




# GENERAL LAYOUT

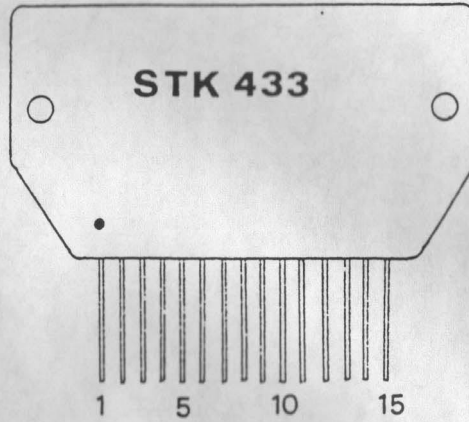
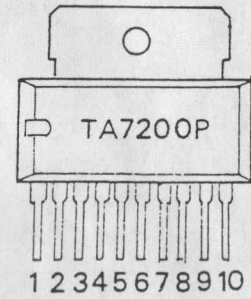
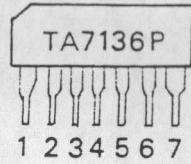


# BLOCK DIAGRAM

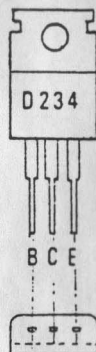




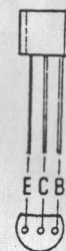
# SEMICONDUCTOR ELECTRODES



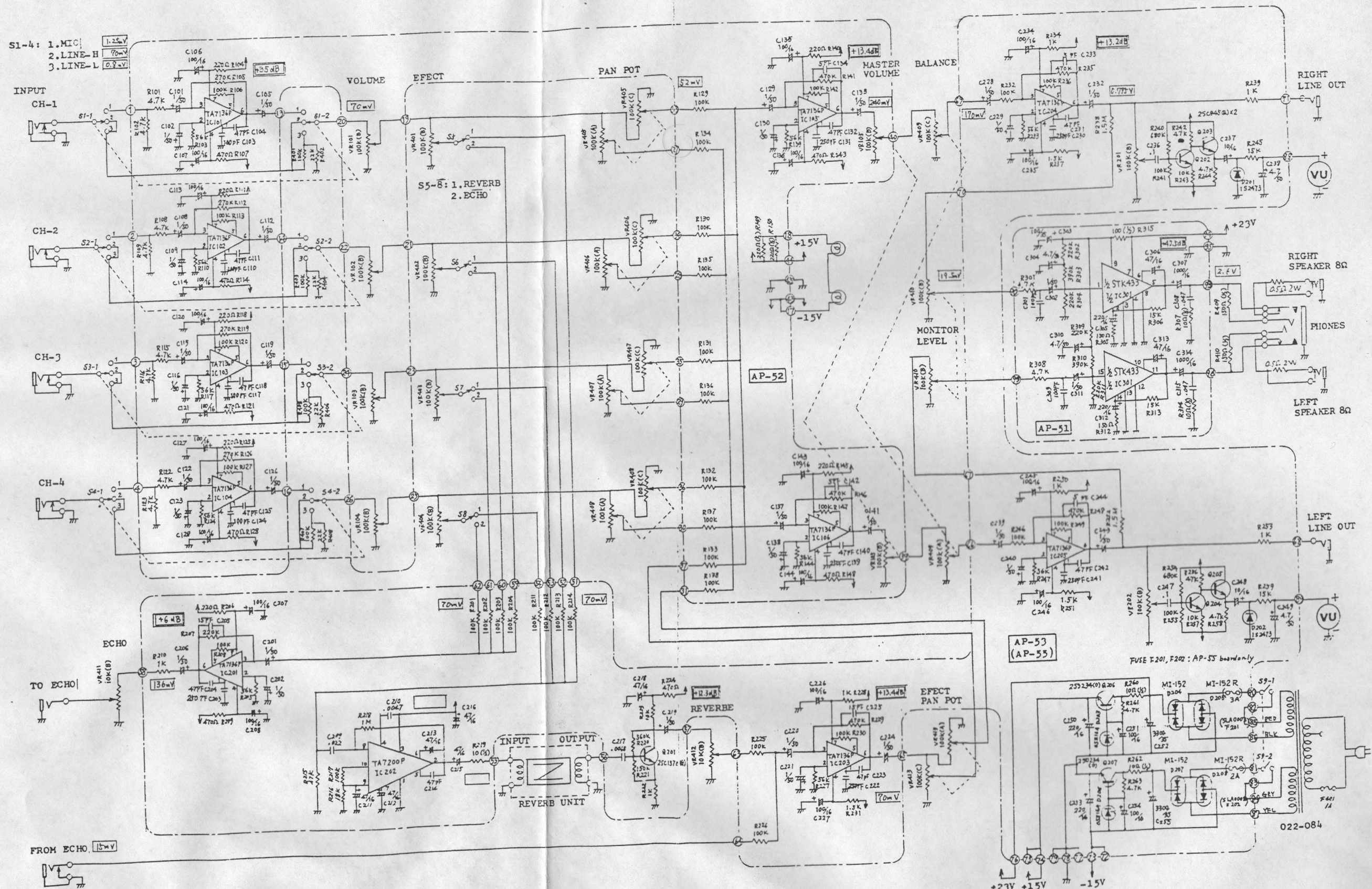
2SD234 (D)



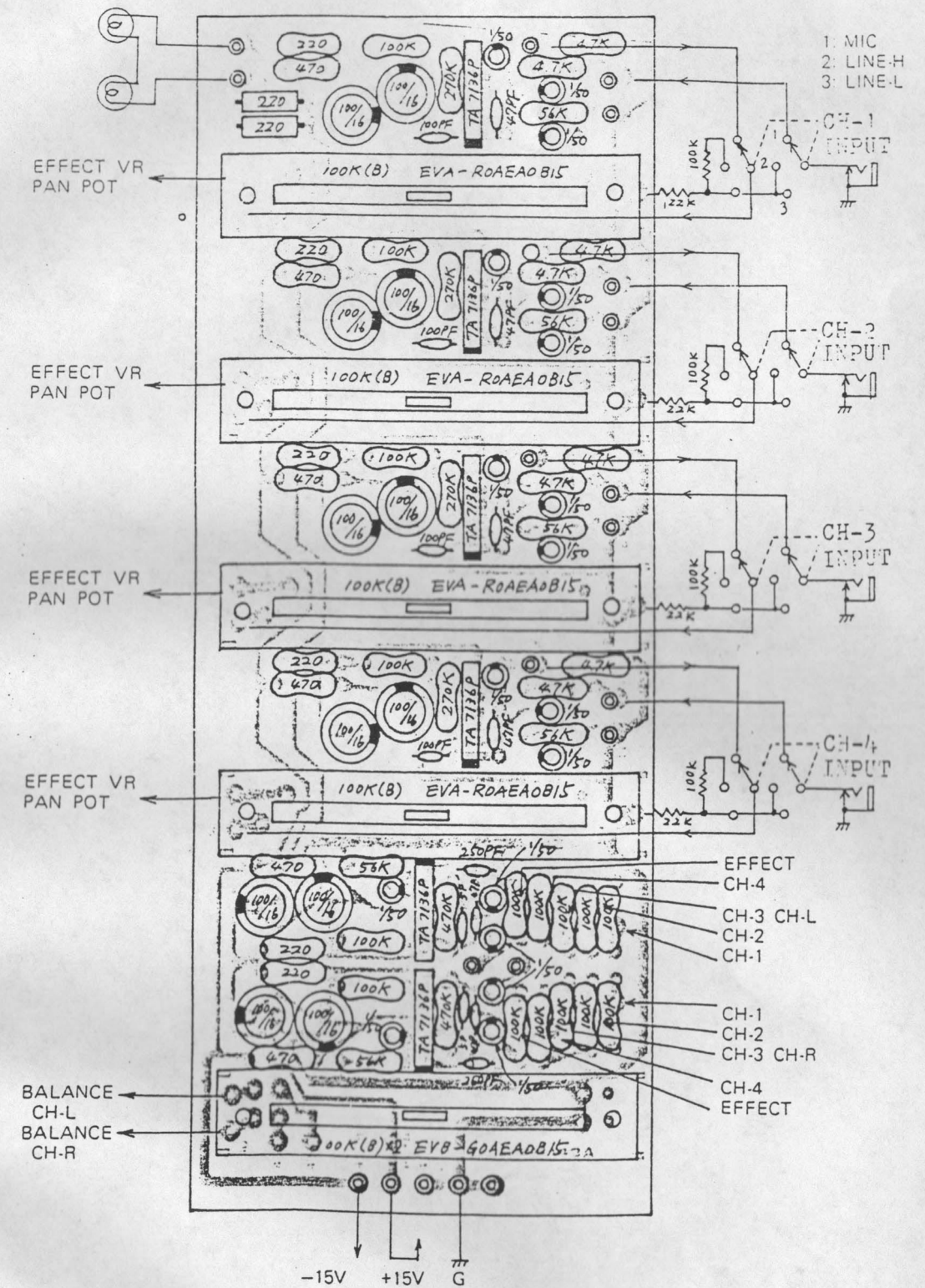
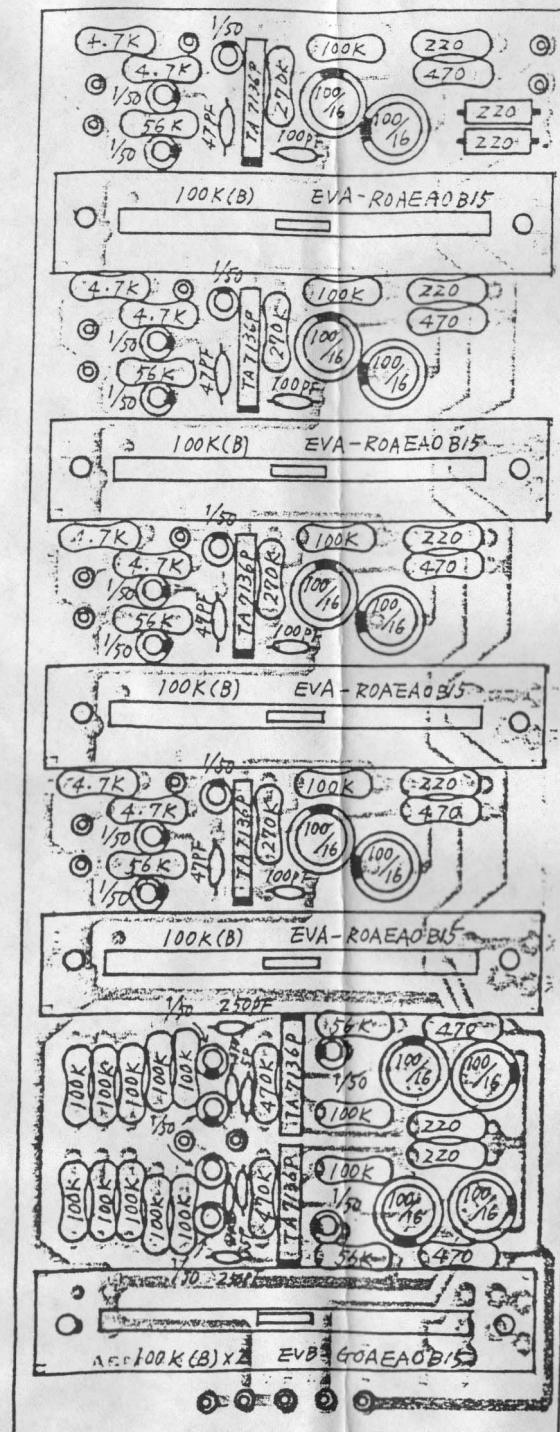
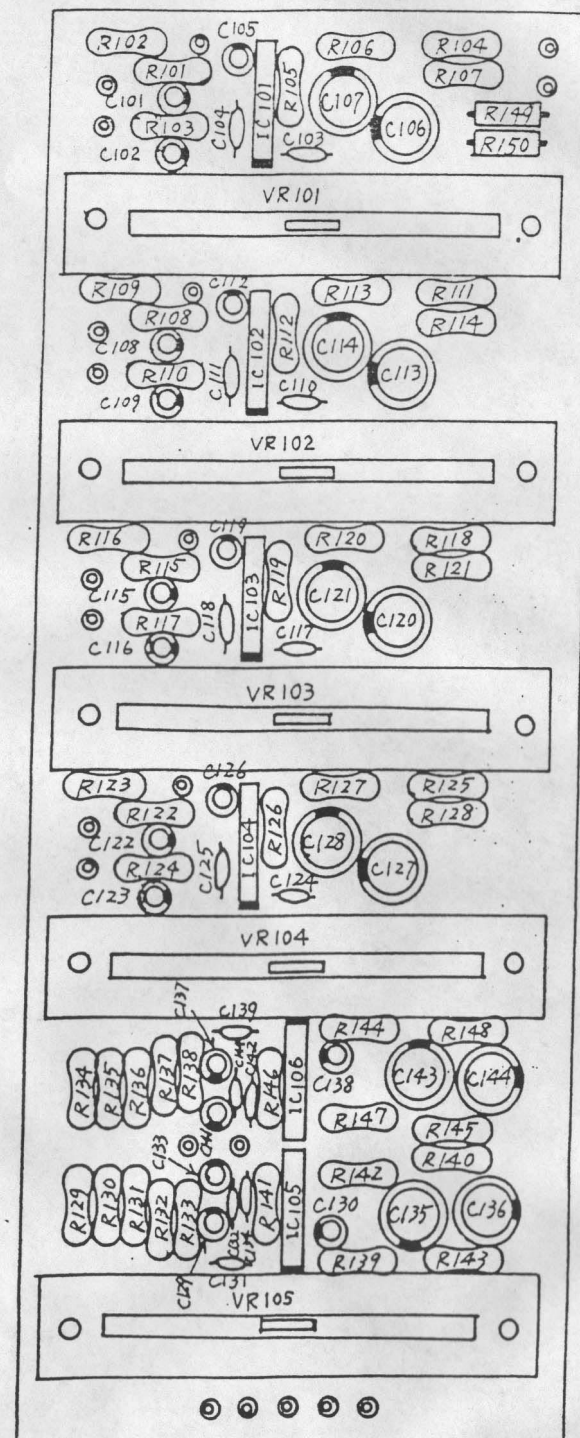
2SC945 (Q)  
2SC1570 (G)







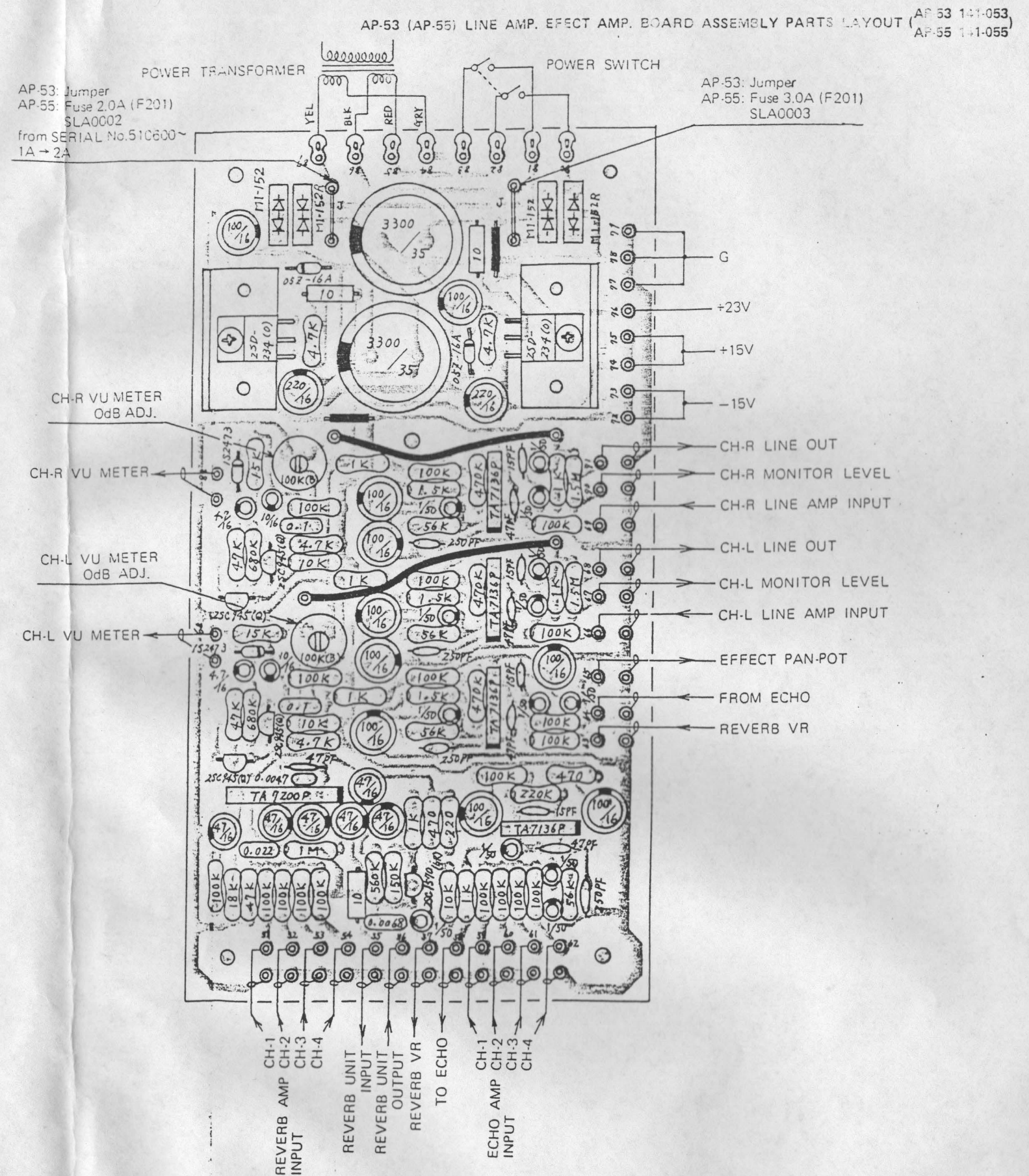
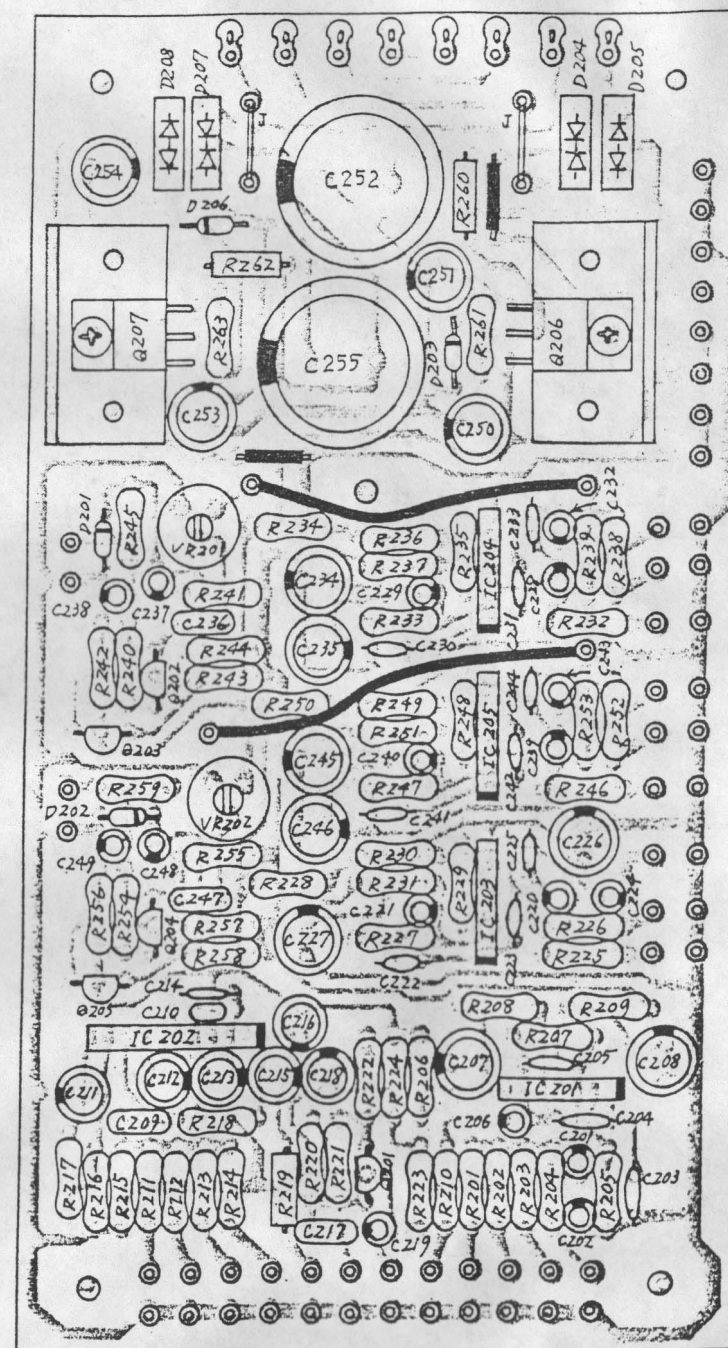






















## ADJUSTMENT

## VU meter calibration

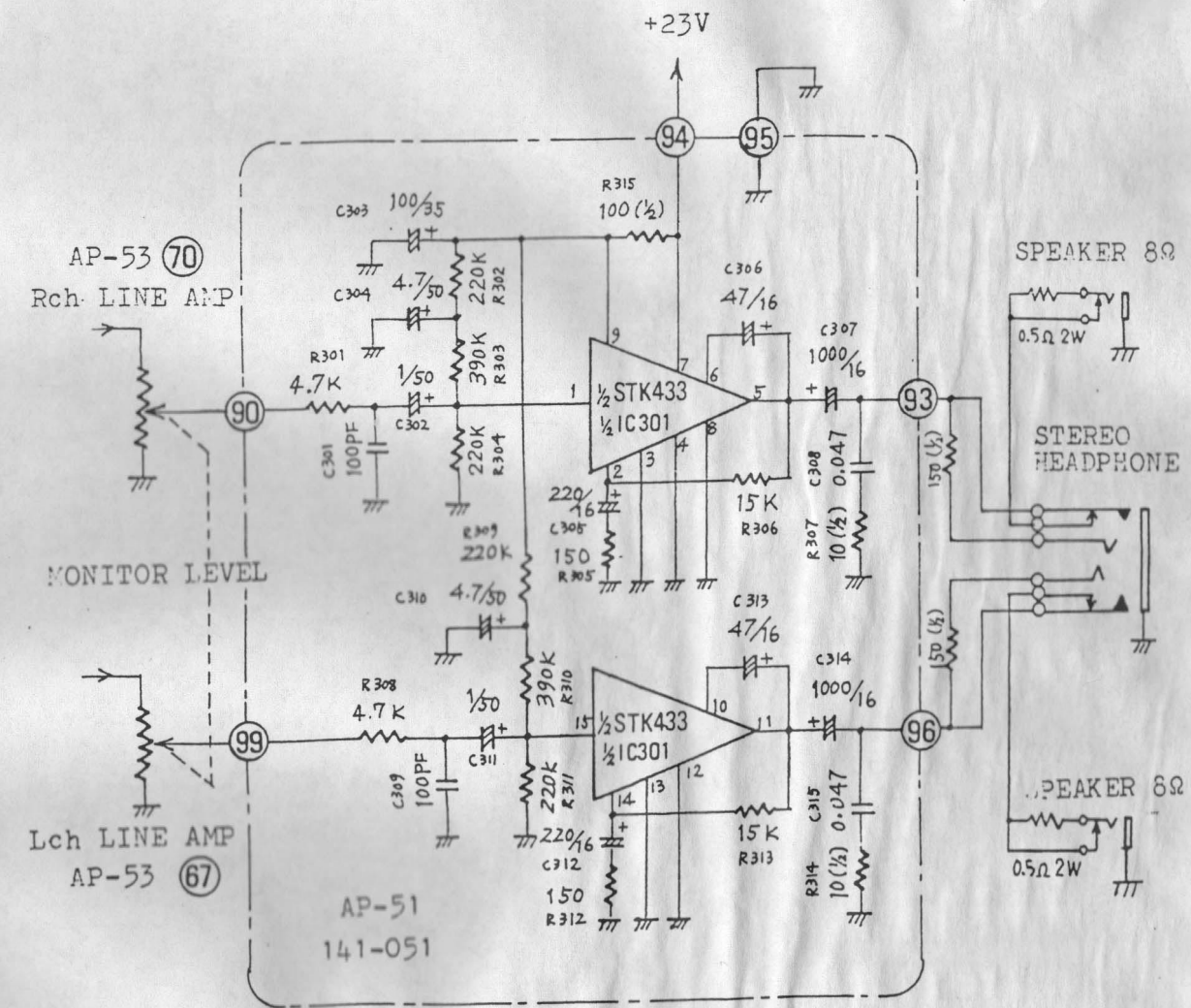
Connect the millivoltmeter to one of the line out jacks (R or L) and the audio generator to any of the input (jacks or terminals of PCB).

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





## SYSTEM-100MODEL-103 PARTS LIST

032-038	Capacitor	220 $\mu$ F	16V	Electrolytic
032-179	Capacitor	3,300 $\mu$ F	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	22K $\Omega$	1/4W	$\pm 5\%$
044-060	Resistor	100K $\Omega$	1/4W	$\pm 5\%$
Main Chassis Assembly				
044-116	Resistor	150 $\Omega$	1/2W	$\pm 10\%$
044-177	Resistor	0.47 $\Omega$	2W	$\pm 10\%$
General Assembly				
083-005	Side Board No.5 (Right)			
083-006	Side Board No.6 (Left)			

## AP-51 Board Assembly (141-051)

052-142	Printed Circuit Board No.142	(Board only)			
020-047	IC STK-433				
044-102	Resistor	10 $\Omega$	1/2W	$\pm 10\%$	
044-114	Resistor	100 $\Omega$	1/2W	$\pm 10\%$	
035-024	Capacitor	0.047 $\mu$ F	50V	$\pm 10\%$	Mylar
037-006	Capacitor	100pF	50V	$\pm 10\%$	Ceramic
032-071	Capacitor	1 $\mu$ F	50V		Electrolytic
032-074	Capacitor	4.7 $\mu$ F	50V		Electrolytic
032-036	Capacitor	47 $\mu$ F	16V		Electrolytic
032-065	Capacitor	100 $\mu$ F	35V		Electrolytic
032-038	Capacitor	220 $\mu$ F	16V		Electrolytic
032-041	Capacitor	1,000 $\mu$ F	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	100K $\Omega$ (B)	EVA-ROAEAOB15		
030-105	Slide Potentiometer Dual Gang	100K $\Omega$ (B)x2	EVB-GOAEAOB15		
044-118	Resistor	220 $\Omega$	1/2W	$\pm 10\%$	
037-014	Capacitor	5pF	50V	$\pm 10\%$	Ceramic
037-005	Capacitor	47pF	50V	$\pm 10\%$	Ceramic
037-006	Capacitor	100pF	50V	$\pm 10\%$	Ceramic
037-007	Capacitor	250pF	50V	$\pm 10\%$	Ceramic
032-071	Capacitor	1 $\mu$ F	50V		Electrolytic
032-037	Capacitor	100 $\mu$ F	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			
043-001	Heatsink No.1				
028-007	Trimmer Potentiometer	100K $\Omega$ (B)	EVL-R4XA00B15		
044-102	Resistor	10 $\Omega$	1/2W	$\pm 10\%$	
035-012	Capacitor	0.0047 $\mu$ F	50V	$\pm 10\%$	Mylar
035-014	Capacitor	0.0068 $\mu$ F	50V	$\pm 10\%$	Mylar
035-020	Capacitor	0.022 $\mu$ F	50V	$\pm 10\%$	Mylar
035-028	Capacitor	0.1 $\mu$ F	50V	$\pm 10\%$	Mylar
037-014	Capacitor	5pF	50V	$\pm 10\%$	Ceramic
037-002	Capacitor	15pF	50V	$\pm 10\%$	Ceramic
037-005	Capacitor	47pF	50V	$\pm 10\%$	Ceramic
037-007	Capacitor	250pF	50V	$\pm 10\%$	Ceramic
032-071	Capacitor	1 $\mu$ F	50V		Electrolytic
032-074	Capacitor	4.7 $\mu$ F	50V		Electrolytic
032-033	Capacitor	10 $\mu$ F	16V		Electrolytic
032-036	Capacitor	47 $\mu$ F	16V		Electrolytic
032-037	Capacitor	100 $\mu$ F	16V		Electrolytic



## PARTS PICTURE

