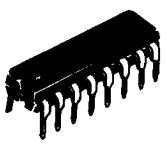
HA11122W

AMPLIFIER SYSTEM FOR STEREO CASSETTE DECK

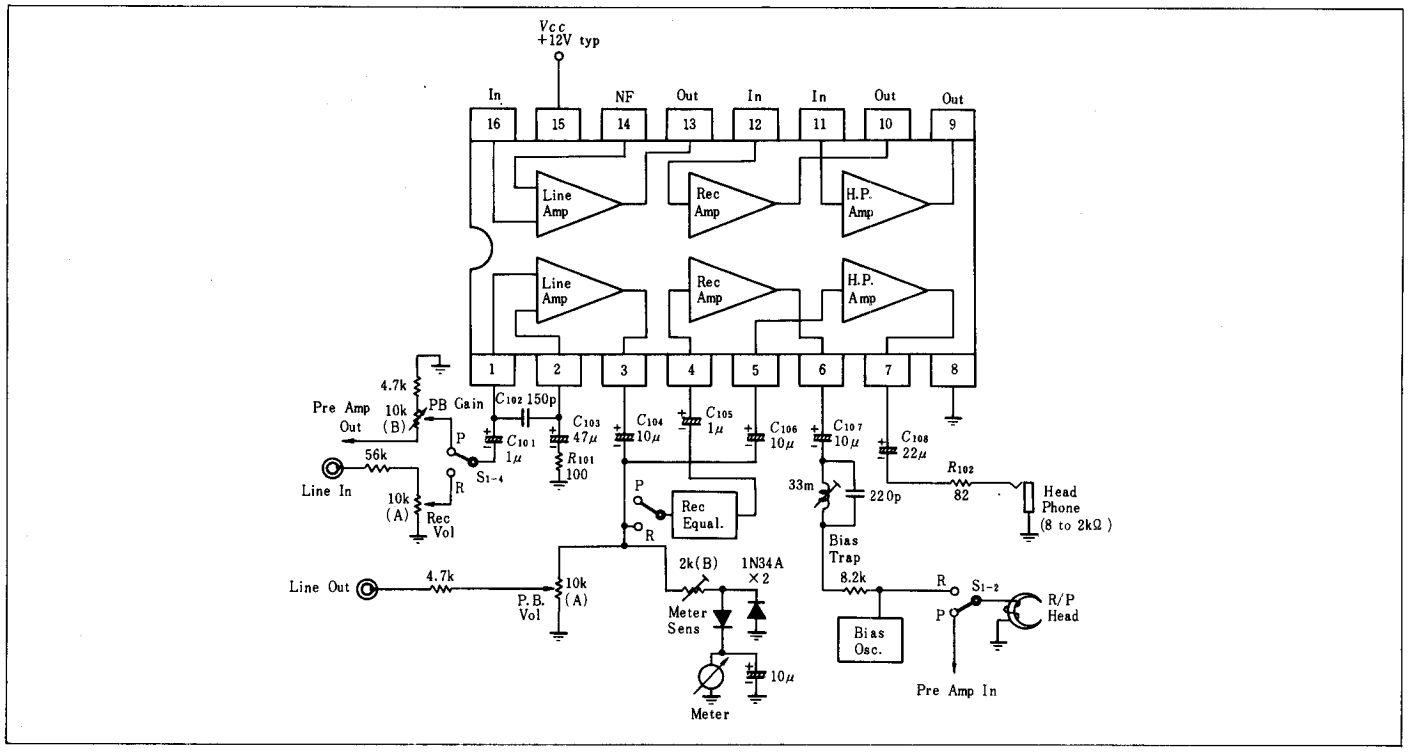
■ FEATURES

- 2-channel Total System Including Line Amp., Rec. Amp. and Head Phone Amp.
- High Signal-to-noise Ratio
- Wide Dynamic Range
- Low Distortion
- Low External Parts

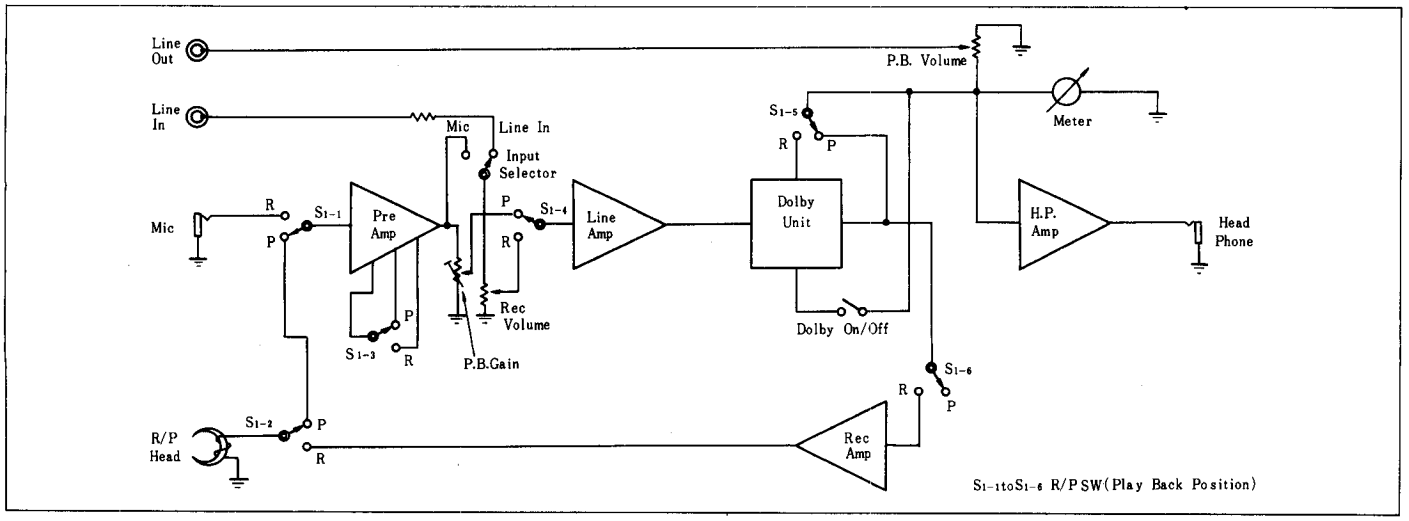


(DP-16)

■ PIN ARRANGEMENT AND EXTERNAL COMPONENTS



■ BLOCK DIAGRAM



■ ABSOLUTE MAXIMUM RATINGS

Item	Symbol	Rating	Unit
Supply Voltage*	V_{CC}	16	V
Power Dissipation	P_T	600	mW
Operating Temperature	T_{opr}	−20 to +70	°C
Storage Temperature	T_{stg}	−55 to +125	°C

* Standard Operating Voltage = 12V, Operating Voltage Range = 12 to 15V

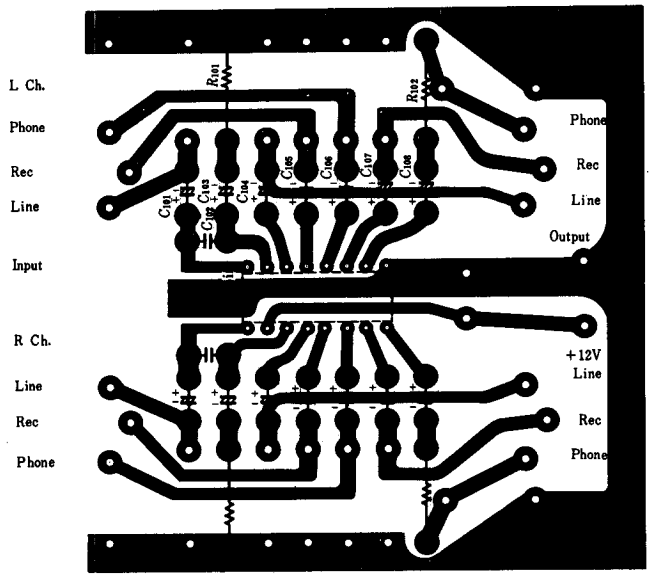
■ ELECTRICAL CHARACTERISTICS (V_{CC} = 12V, f = 1kHz, Ta = 25°C)

Item		Symbol	Test Condition	min	typ	max	Unit
Quiescent Current		I_Q		—	16	26	mA
Cross Channel		Ch		—	50	—	dB
Line Amp. Stage	Voltage Gain	G_V	R = 100Ω for Negative Feedback (pin2to14)	36	39.5	42	dB
	Output Voltage	V_{out}	$T.H.D$ = 1%	2.3	3.0	—	V
	Total Harmonic Distortion	$T.H.D$	V_{out} = 1V	—	0.06	0.5	%
	Output Noise Voltage	V_n	R_g = 10kΩ, CCIR Filter	—	—	0.35	mV
	Input Resistance	R_{in}		—	400	—	kΩ
Rec. Amp. Stage	Voltage Gain	G_V		34	37	40	dB
	Output Voltage	V_{out}	$T.H.D$ = 1%	2.2	3.0	—	V
	Total Harmonic Distortion	$T.H.D$	V_{out} = 1V	—	0.06	0.5	%
	Input Resistance	R_{in}		—	200	—	kΩ
Head Phone Amp. Stage	Voltage Gain	G_V		1.0	2.5	4.0	dB
	Output Voltage	V_{out}	$T.H.D$ = 2%	1.5	2.3	—	V
	Total Harmonic Distortion	$T.H.D$	V_{out} = 1V	—	0.3	1.0	%
	Input Resistance	R_{in}		—	14	—	kΩ

Notes : 1. Test Conditions of Load Resistance
Line Amp ; 1kΩ, Rec Amp ; 8.2kΩ, Head Phone Amp ; 82Ω

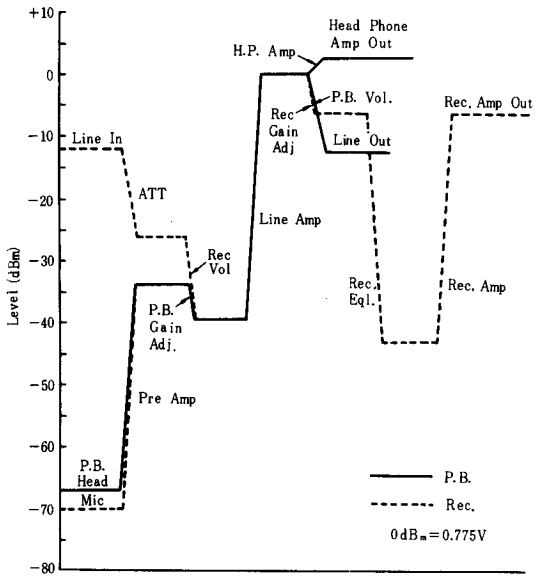
2. Voltage gain difference between channel-to-channel of each amplifier is less than ±1.5dB

■ PC-BOARD LAYOUT PATTERN

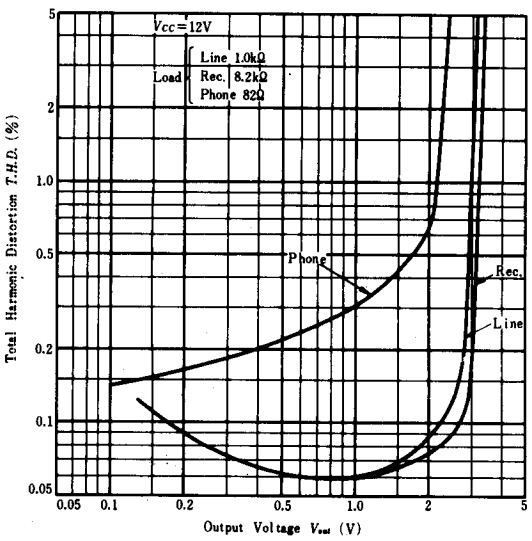


(Top View)

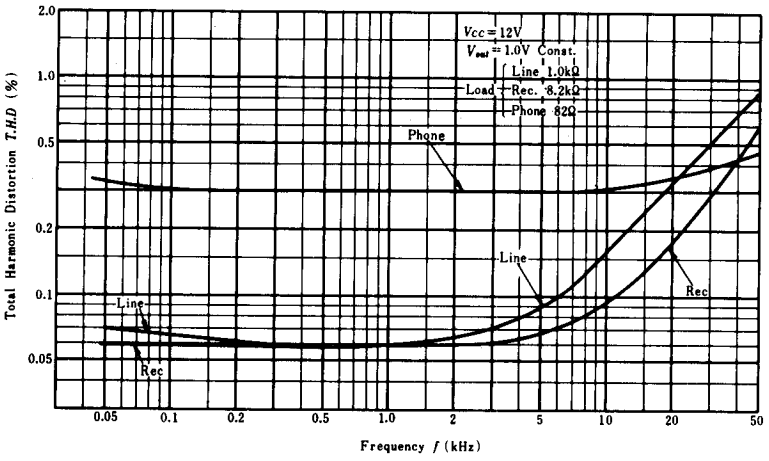
LEVEL DIAGRAM



TOTAL HARMONIC DISTORTION VS. OUTPUT VOLTAGE



TOTAL HARMONIC DISTORTION VS. FREQUENCY



VOLTAGE GAIN VS. FREQUENCY