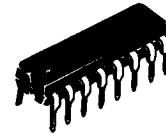


HA11122W

AMPLIFIER SYSTEM FOR STEREO CASSETTE DECK

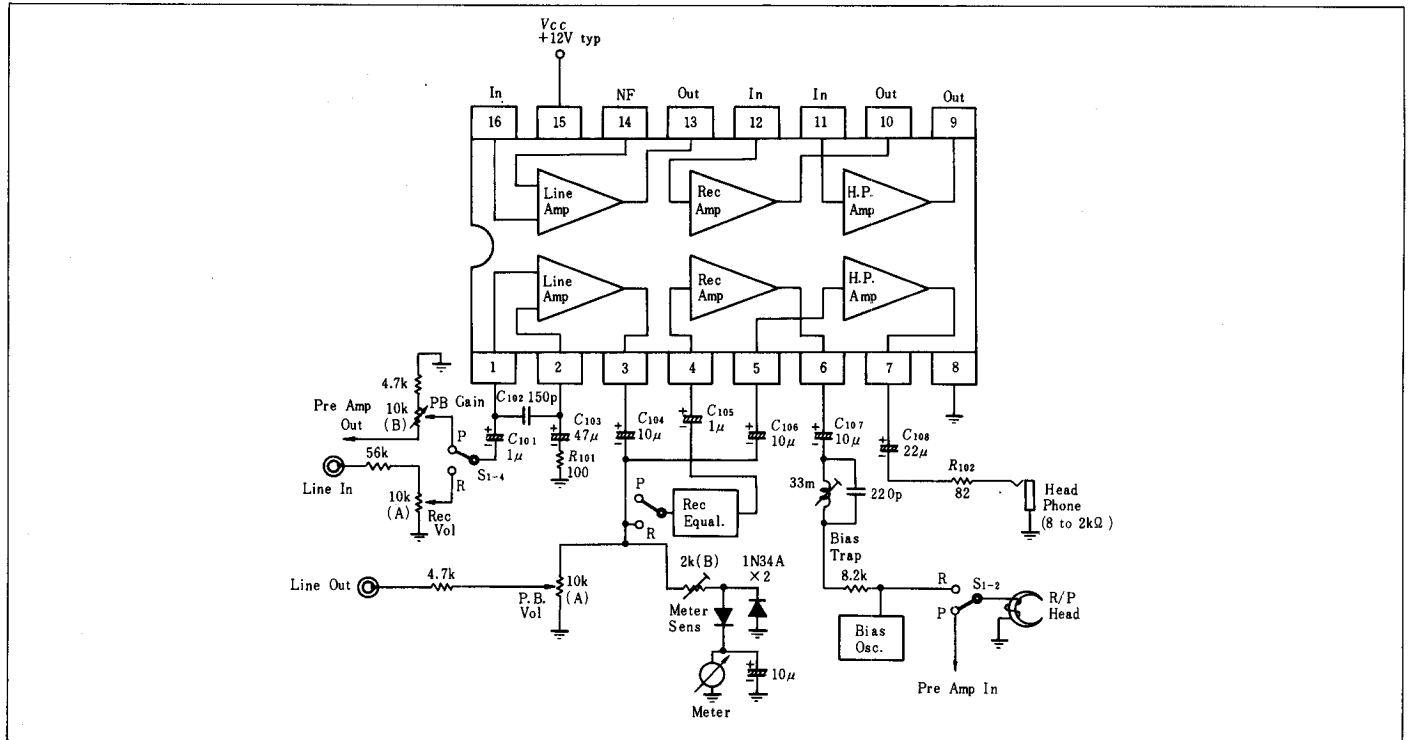
■ FEATURES

- 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



■ 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

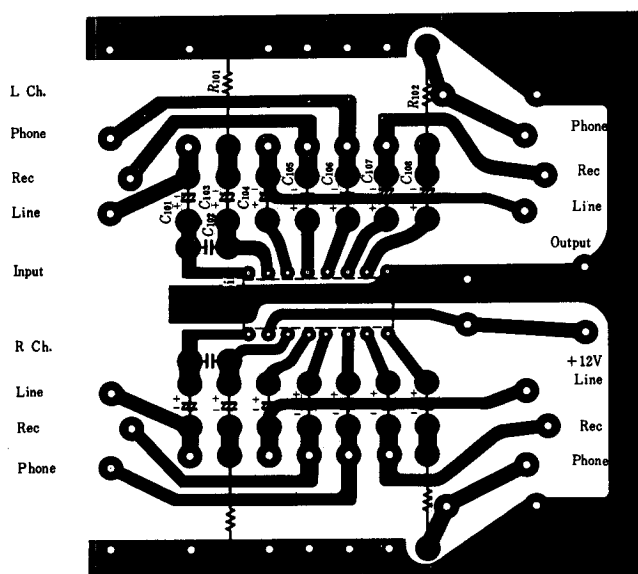
■ ELECTRICAL CHARACTERISTICS ($V_{CC}=12V$, $f=1kHz$, $T_a=25^\circ C$)

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 $R=100\Omega$ 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 $R_g=10k\Omega$, CCIR Filter	—	—	0.35	mV
	Input Resistance	R_{in}	—	400	—	k Ω
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	—	k Ω
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	—	k Ω

Notes : 1. Test Conditions of Load Resistance

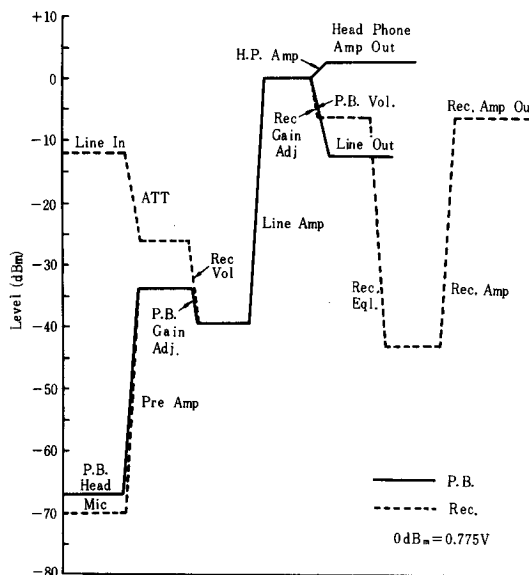
Line Amp ; 1k Ω , Rec Amp ; 8.2k Ω , Head Phone Amp ; 82 Ω 2. Voltage gain difference between channel-to-channel of each amplifier is less than $\pm 1.5dB$

■ PC-BOARD LAYOUT PATTERN

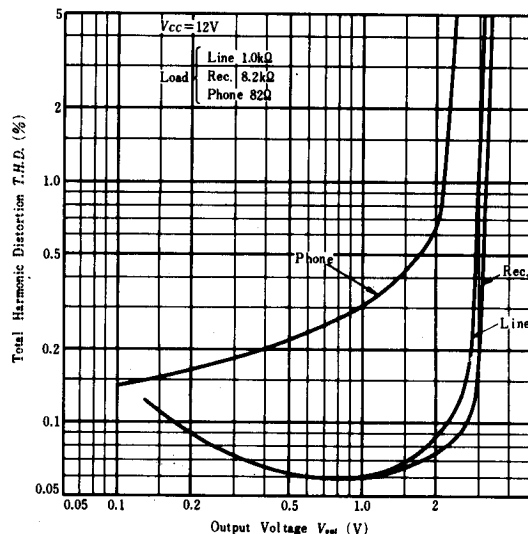


(Top View)

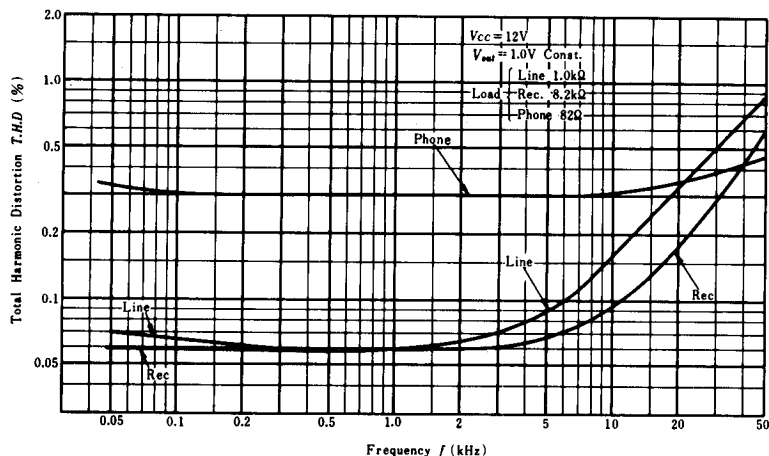
LEVEL DIAGRAM



TOTAL HARMONIC DISTORTION VS. OUTPUT VOLTAGE



TOTAL HARMONIC DISTORTION VS. FREQUENCY



VOLTAGE GAIN VS. FREQUENCY

