ELECTRONICS, INC.
44 FARRAND STREET
BLOOMFIELD, NJ 07003
(973) 748–5089
http://www.nteinc.com

NTE1558
Integrated Circuit
Switchless Rec/PlayBack Amp for VCR

Features:

- Contians all recording/playback amplifiers required for VTR audio signal system.
- Capable of setting each mode of recording, playback an muting by changing only the control pin voltage
- Very small pop noise occurring at the time of mode selection
- Easy to adjust recording level, playback senisitivity
- Improvement in reliability due to electronic switch

Absolute Maximum Ratings: (T_A = +25°C unless otherwise specified)

Maximum Supply Voltage, V_{CCmax} 15V
Power Dissipation, P_D 700mV
Operating Temperature Range, T_{opr} . . . . . –10° to +75°C
Storage Temperature Range, T_{stg} . . . . . –55° to +125°C

Electrical Characteristics: (T_A = +25°C, V_{CC} = 9V, f = 1kHz unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Current Dissipation (Playback)	I_{CCP}		5	8.5	13	mA
Current Dissipation (Recording)	I_{CCR}		6	10	15	mA
Overall Gain for Playback	$V_{G(1)}$	PB In to Line Out, V_O = 0dBm(P)	75	80	85	dB
Overall Gain for Recording	$V_{G(2)}$	MIC In to Line Out, V_O = 0dBm(R)	64	68	72	dB
Line Amp. Max. Output Voltage	V_{omL}	THD = 3%(P/R)	1.9	2.3	–	V
Recording Amp. Max. Output Voltage	V_{omR}	THD = 3%	1.9	2.3	–	V
Mic. Amp. Closed Loop Gain	V_{GCM}	V_O = 0dBm(R)	35.5	37.5	39.5	dB
Recording Amp. Closed Loop Gain	V_{GCR}	V_O = 0dBm(R)	11.5	13	14.5	dB
Equalizier Amp. Open Loop Gain	V_{GOE}	V_O = 0dBm(P)	70	90	–	dB
Recording Amp. Open Loop Gain	V_{GOR}	V_O = 0dBm(R)	38	42	–	dB
Equalizer Amp. Input Impedance	Z_{INE}	(P)	40	55	–	kΩ
Mic. Amp. Input Impedance	Z_{INM}	(R)	40	55	–	kΩ
Equalizier Amp. Noise Voltage Referred to Input	V_{NINE}	R_g = 2.2kΩ DIN AUDIO F–(P)	–	1	18	μV
Mic. Amp. Noise Voltage Referred to Input	V_{NINM}	R_g = 2.2kΩ DIN AUDIO F–(R)	–	1	2	μV

Electrical Characteristics (Cont'd): (T_A = +25°C, V_{CC} = 9V, f = 1kHz unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Leak Output for Playback Muting	$V_{O(PM)}$	PB in to Line Out, V_{IN} = −40dBm(PM)	–	−40	−30	dBm
Leak Output for Recording Muting	$V_{O(RM)}$	PB in to Line Out, V_{IN} = −40dBm(RM)	–	−46	−36	dBm
Output Voltage II for ALC Operation	V_{OAII}	Mic In to Line Out, V_{IN} = −60dBm(R)	0.46	0.58	0.73	V
Output Voltage I for ALC Operation	V_{OAI}	Mic In to Line Out, V_{IN} = −30dBm(R)	0.60	0.80	1.10	V
Line Output Distortion for ALC Operation	THD_A	V_{IN} = −30dBm, BW = 500 to 5kHz(R)	–	0.4	1.0	%
Recording Amp. Distortion	THD_R	V_O = 9dB (R)	–	0.2	0.6	%
Line Amp. Outisde Noise	V_{NOL}	DIN Audio F. (M)	–	−68	−58	dBV

Note *. (P), (R), (PM), and (RM) represent the playback mode, recording mode, and muting mode respectively.

Pin Connection Diagram