ELECTRONICS, INC.
44 FARRAND STREET
BLOOMFIELD, NJ 07003
(973) 748–5089

# NTE1634
# Integrated Circuit
# Dual Preamp w/ALC

**Description:**
The NTE1634 is a monolithic integrated circuit in a 14–Lead DIP type package consisting of a dual equalizer amplifier with automatic level control (ALC) and is suitable for stereo radio cassette applications.

**Features:**
- Dual Equalizer Amplifier with Built–In ALC Circuit.
- Recording Amp Available Because of High Gain Characteristic (Variable Monitor Possible).
- Good Channel Separation (Sep = 50dB Typ)
- Capable of Direct Meter Driving and ALS Transistor.
- Good ALC Response Balance Between Channels.
- Wider Operating Supply Voltage Range (4V to 13V)

**Absolute Maximum Ratings:** ($T_A$ = +25°C unles otherwise specified)
Supply Voltage, $V_{CC}$ . . . . . 14V
Power Dissipation, PD . . . . . 600mW
Operating Temperature Range, $T_{opr}$ . . . . . –20° to +70°C
Storage Temperature Range, $T_{stg}$ . . . . . –40° to +125°C
ALC TR Maximum Current . . . . . 3.5mA

**Electrical Characteristic:** ($T_A$ = +25°C, $V_{CC}$ = 5V, $R_L$ = 10kΩ: Playback, $R_L$ = 680Ω: Recording unless otherwise specified)

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| Circuit Current | $I_{CC}$ | $V_i$ = 0 | – | 4.5 | 10 | mA |
| Voltage Gain (Open Loop) | $A_{VO}$ | | – | 85 | – | dB |
| Voltage Gain (Closed Loop) | $A_{V1}$ | Play | – | 40 | – | dB |
| | $A_{V2}$ | Record | – | 58 | – | dB |
| Output Voltage | $V_O$ | THD = 1%, Play | 0.9 | 1.2 | – | V |
| Total Harmonic Distortion | THD | $V_O$ = 0.5V, Play | – | 0.1 | 1.0 | % |
| Input Resistance | $R_i$ | | 21 | 30 | – | kΩ |
| Equivalent Input Noise Voltage | $V_{NI}$ | BW(–3dB)=20Hz to 20kHz | – | 1.0 | 2.0 | μV |
| Cross Talk | CT | $R_g$ = 2.2KΩ | 40 | 50 | – | dB |
| ALC Range | | $V_i$ = –60dBm, Record | 35 | 45 | – | dB |
| ALC Balance | | $V_i$ = –20dBm, Record | – | 0 | 2.0 | dB |
| ALC Distortion | | $V_i$ = –20dBm, Record | – | 0.5 | 2.0 | % |

**Pin Connection Diagram**