

Audio Line Receiver using INA134

The project described here is a differential line receiver consisting of high-performance INA134 OPAMPs with on-chip precision resistors. The project is fully specified for high-performance audio applications and has excellent AC specifications, including low distortion (0.0005% at 1kHz) and high slew rate (14V/ μ s), assuring good dynamic response. In addition, wide output voltage swing and high output drive capability allow use in a wide variety of demanding applications.

The INA134 on-chip resistors are laser trimmed for accurate gain and optimum common-mode rejection. Furthermore, excellent TCR tracking of the resistors maintains gain accuracy and common-mode rejection over temperature. Operating power supply ± 4 V to ± 18 V (8V to 36V total supply).

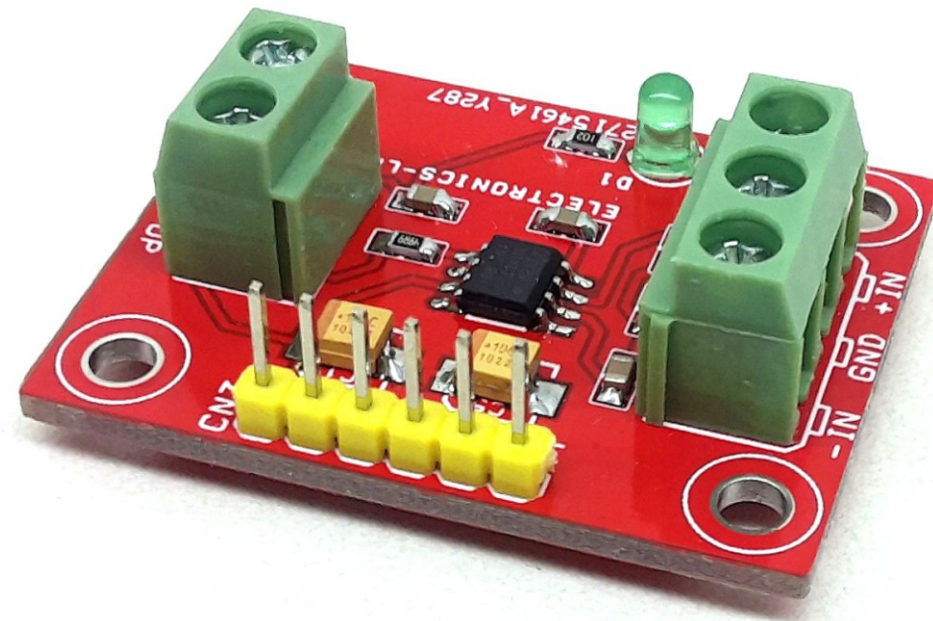
This project is used in combination with the DRV135 Audio-Balanced Line Driver as the transmitter. Together they offer a complete solution for transmitting analog audio signals without degradation over a long distance.

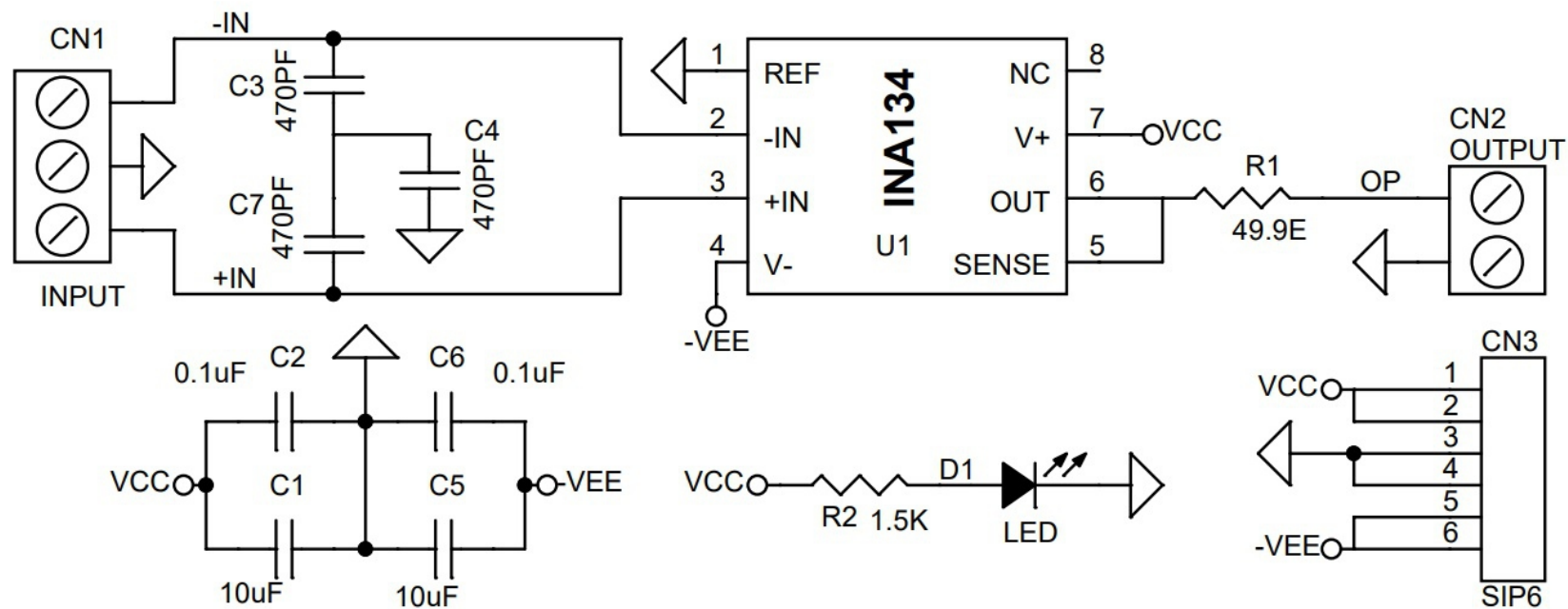
Features

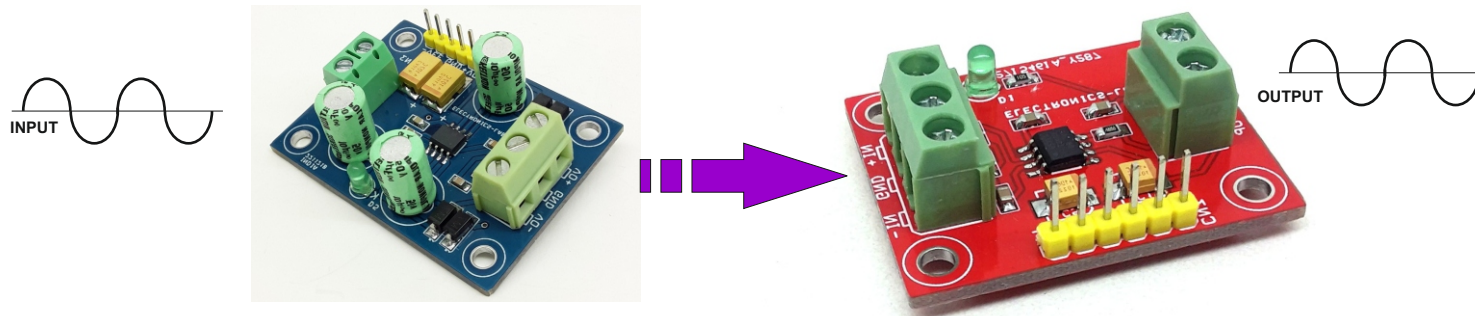
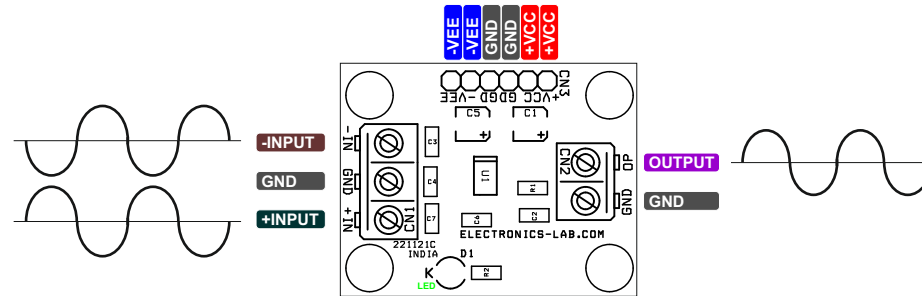
- Power Supply ± 12 V (SUPPLY RANGE: ± 4 V to ± 18 V)
- LOW DISTORTION: 0.0005% at $f = 1$ kHz
- HIGH SLEW RATE: 14V/ μ s
- FAST SETTLING TIME: 3 μ s to 0.01%
- LOW QUIESCENT CURRENT: 2.9mA max
- HIGH CMRR: 90dB
- FIXED GAIN = 0dB (1V/V)
- PCB Dimensions 39.37 x 360.48 mm

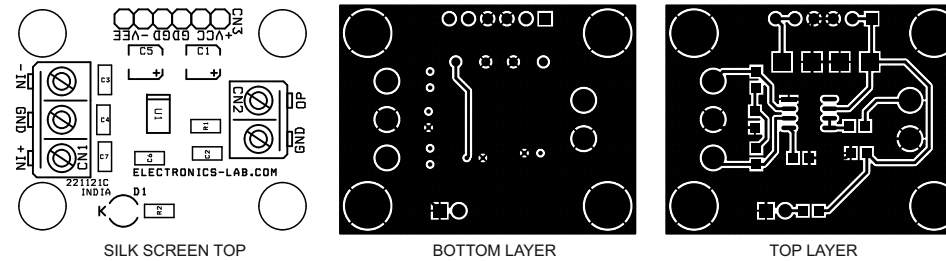
Applications

- Audio Differential Line Drivers
- Audio Mix Consoles
- Distribution Amplifier
- Digital Effects Processors
- Hi-Fi Equipment's









PCB DIMENSIONS 39.37MM X 30.48MM

BOM						
NO.	QNTY.	REF.	DESC.	MANUFACTURER	SUPPLIER	SUPPLIER PART NO
1	1	CN1	3 PIN SCREW TERMINAL PITCH 5.08MM	PHOENIX	DIGIKEY	277-1248-ND
2	1	CN2	3 PIN SCREW TERMINAL PITCH 5.08MM	PHOENIX	DIGIKEY	277-1248-ND
3	1	CN3	6 PIN MALE HEADER PITCH 2.54MM	WURTH	DIGIKEY	732-5319-ND
4	2	C1,C5	10uF/20V SMD TANTLUM SIZE 1210/1411	KYOCERA	DIGIKEY	478-12567-1-ND
5	2	C2,C6	0.1uF/50V SMD SIZE 0805	MURATA/YAGEO	DIGIKEY	
6	3	C3,C4,C7	470PF/50V SMD SIZE 0805	MURATA/YAGEO	DIGIKEY	
7	1	D1	LED 3MM THT	AMERICAN OPTO	DIGIKEY	2460-L314GT-ND
8	1	R1	49.9E 1% SMD SIZE 0805	MURATA/YAGEO	DIGIKEY	
9	1	R2	1.5K 5% SMD SIZE 0805	MURATA/YAGEO	DIGIKEY	
10	1	U1	INA134 SOIC8	TI	DIGIKEY	INA134UA-ND
CAPACITOR C1, C5 CAN BE REPLACE WITH 10uF/25V ELECTROLYTIC CAPACITOR						