## MitchElectronics Ltd.

### LIGHT SENSE

Electronic Kit | Data Sheet

PRODUCT IMAGE	SCAN FOR INSTRUCTIONS PAGE	SCAN FOR RESOURCE PAGE

MANUFACTURER	MitchElectronics
COUNTRY OF ORIGIN	United Kingdom
ROHS / REACH COMPLIANT	Yes
PRODUCT DESCRIPTION	The Micro Audio Amp is a miniature audio amplifier based on the LM358 operational amplifier and uses a secondary push-pull amplifier for driving external speakers. Audio signals can be fed into the AUDIOIN pin, and the potentiometer provides a variable gain control. While the output of this kit is directly connected to a small speaker for testing purposes, it can easily be modified with an external connector for use with larger speakers (such as RCA connectors). This kit can also be connected to other MitchElectronics audio projects, such as the 555 Astable and the 555 Synth Punk, for amplification purposes.

#### **PRODUCT SPECIFICATION:**

- Component Count: 18
- Battery Powered: Yes PP3 9V
- Operating Voltage: 5V to 16V
- Operating Frequency: N/A
- Dimensions (PCB): 48mm x 34mm
- Mounting Holes: Yes 4 x M4 (40mm x 26mm)
- Prebuilt: No Kit form
- Batteries Not Included

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### PARTS INCLUDED:

- 1 x 8 DIP Socket
- 1 x LM358
- 1 x 100Ω Resistor
- 6 x 1KΩ Resistor
- 1 x 10KΩ Resistor
- 1 x 100KΩ Potentiometer
- 2 x 100µF Capacitor
- 2 x 1N4148 Diode

- 1 x 2N3904 BJT
- 1 x 2N3906 BJT
- 1 x Speaker
- 2 x Red Wire
- 2 x Black Wire
- 1 x Green Wire
- 1 x Blue Wire

#### APPLICATIONS

The design of this kit has been chosen to demonstrate multiple circuit configurations, including inverting amplifiers with a virtual ground, AC coupling, and push-pull transistor amplifiers with cross-over bias. As such, the Micro Audio amp is an excellent kit for use in educational environments such as classrooms and remote practicals.

The Micro Audio Amp can also be used as an AC amplifier, enabling for the amplification of weak AC signals. One such example would be IR sensors that need to ignore constant IR emissions (such as those from the sun), and only react to sudden changes in IR emissions (such as remote controls).

#### KIT INSTRUCTIONS

https://mitchelectronics.co.uk/resources/micro-audio-amp-kit-instructions/

#### ELECTRONICS CONSTRUCTION MANUAL

https://www.mitchelectronics.co.uk/documents/electronicsConstructionManual.pdf

#### NOTES

Note that product specifics such as output frequency depend on the tolerance of the components. The numbers provided here are an approximation only. Also take note that the estimated delivery is not guaranteed (unless special delivery is chosen) and free delivery has a maximum waiting time of two weeks. Any product that is returned which is built using lead solder is ineligible for a refund.

All parts sold by MitchElectronics are compliant with RoHS and REACH directives which ensure that they can be used in commercial environments as well as complying with environmental laws.