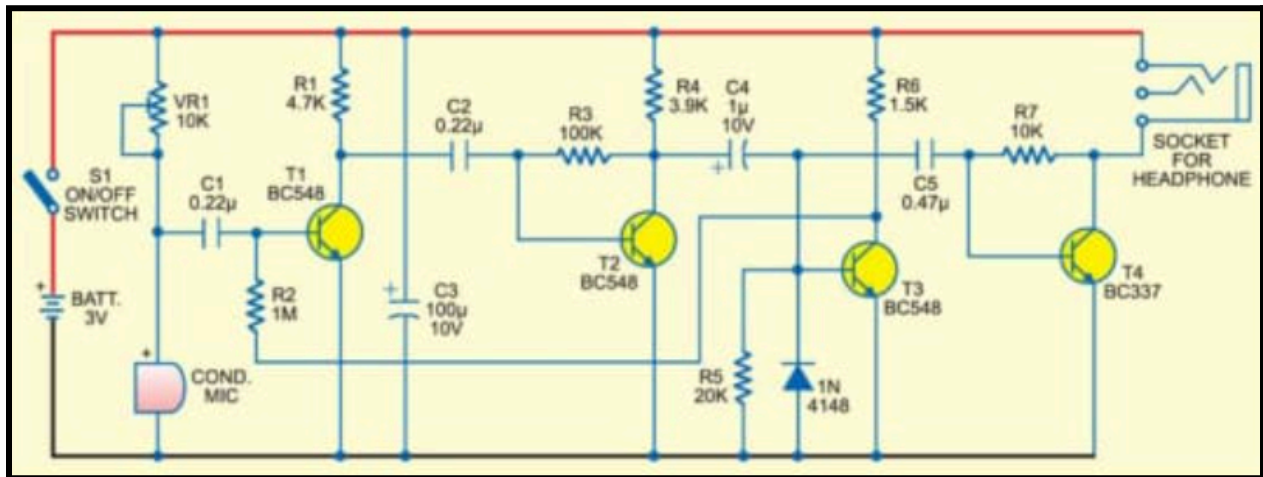


Spy Device(2024)



This **Spy Device** is a compact, versatile audio amplifier tailored to pick up faint or remote sounds and deliver a clear, amplified output. Designed with advanced features, it serves multiple applications, including as a spy device or a hearing aid for individuals with partial hearing impairment. Its functionality ensures safe and comfortable listening by maintaining constant output levels—amplifying weak sounds and attenuating loud ones. The design integrates Bipolar Junction Transistors (BJT) for both amplification and attenuation.

Key Features and Technical Specifications:

1. Microphone Integration

The device seamlessly integrates a condenser microphone to capture environmental audio signals. The microphone specifications are:

- **Operating Voltage:** 2V (recommended) to 10V
- **Current Consumption:** Maximum 1mA
- **Frequency Response:** 20Hz to 16,000Hz
- **Impedance:** Less than 2.2kΩ

2. This ensures optimal audio pickup across the human hearing range while operating efficiently.

3. **Audio Output and Connectivity**

A **3.5mm audio female jack** is provided for output, allowing users to connect standard earphones or headphones. This enhances usability by supporting commonly available audio accessories.

4. **Volume Control**

A **potentiometer** is integrated into the circuit board, enabling the user to adjust the output volume according to personal preference and listening comfort.

5. **Safe Output Levels**

The output is designed to meet the following limits:

- Maximum voltage: 300mVrms
- Maximum current: 1.3mA

6. These parameters ensure safe and distortion-free audio for connected earphones.