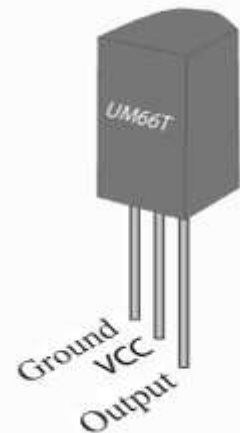


About project

This is a simple **melody generator** circuit which you can make by using an IC UM66. UM66 has an inbuilt beat and tone generator. This IC, with its three legs, looks like a transistor. This IC has many versions for playing different songs/beats. It has a built in ROM programmed for playing music.

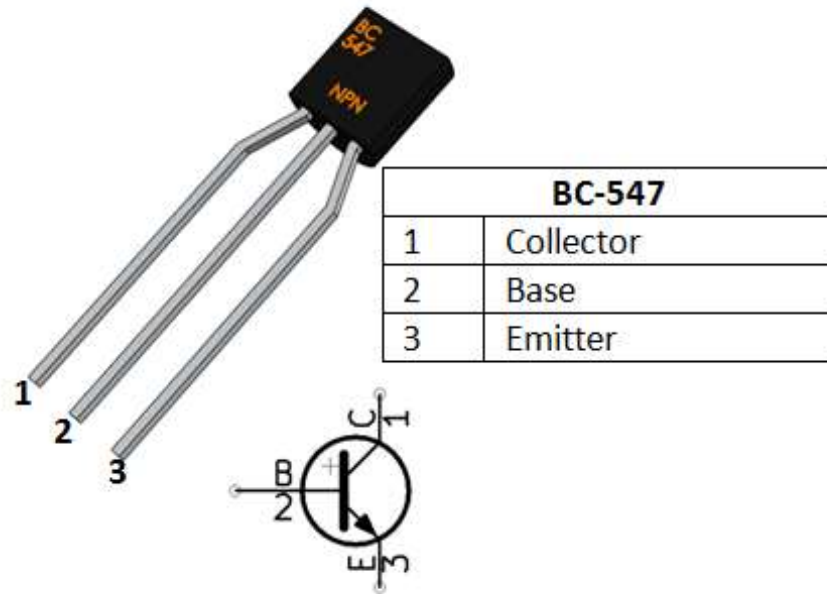
UM66 IC

- UM66 is a melody generating IC commonly used in calling bell, phone, toys, musical bell in doors, home security alarm systems, burglar alarms etc.
- It is a three pin IC looks like a transistor. Its first pin is ground, second is VCC and the third is the melody output.
- Supply voltage that can be given to the IC is in the range of 1.5V- 4.5V. These are CMOS ICs and have very small power consumption.



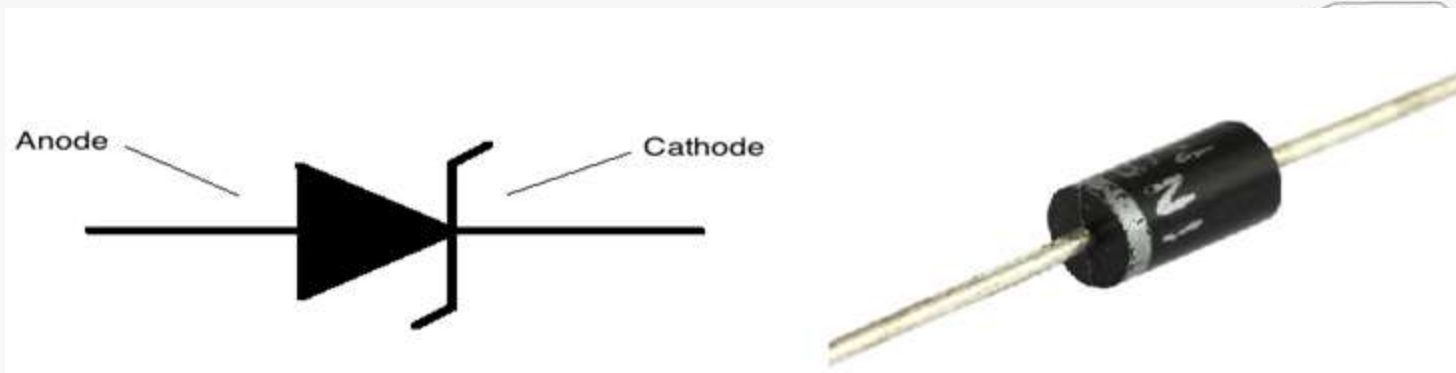
BC547 Transistor

BC547 is a NPN transistor hence the collector and emitter will be left open (Reverse biased) when the base pin is held at ground and will be closed (Forward biased) when a signal is provided to base pin.



Zener Diode

A **Zener diode** is a type of diode that allows current to flow in the conventional manner - from its anode to its cathode i.e. when the anode is positive with respect to the cathode. When the voltage across the terminals is reversed and the potential reaches the *Zener voltage* (or "knee"), the junction will breakdown and current will flow in the reverse direction.



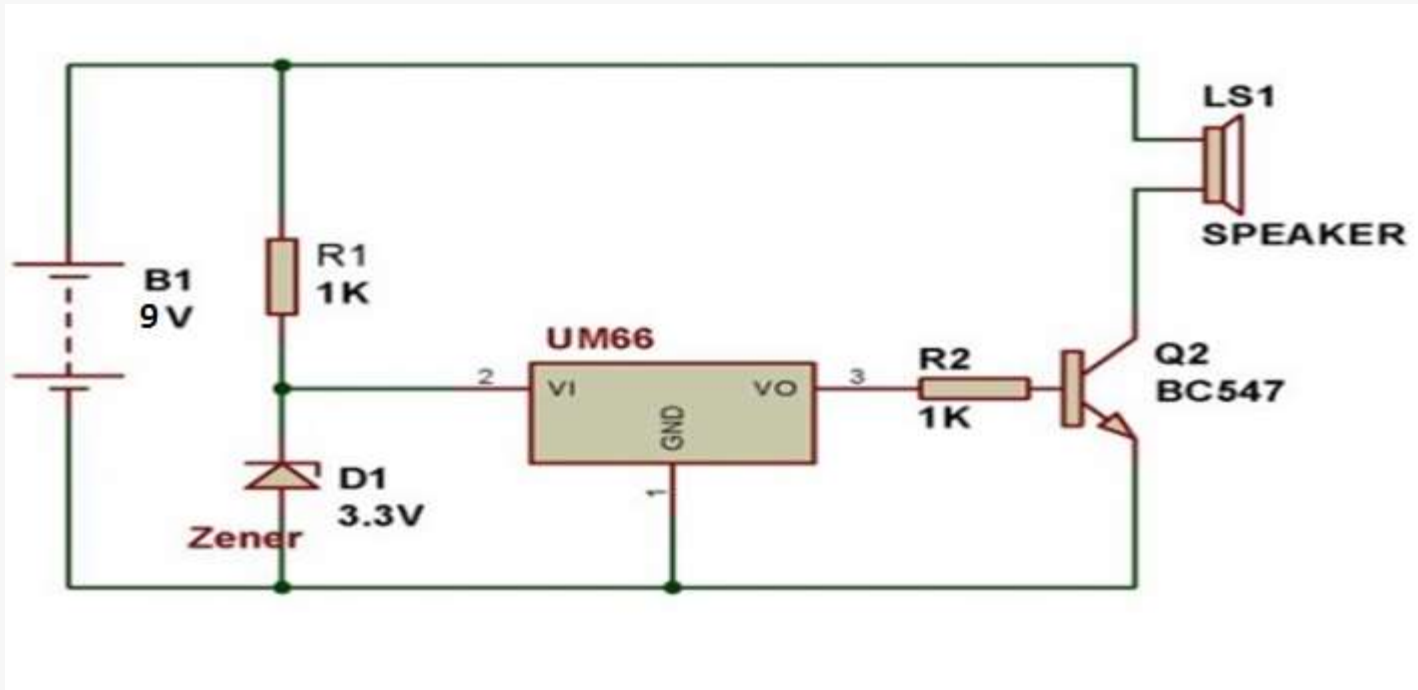
Working of project

- The melody will be available at pin 3 of UM66 and here it is amplified by using Q1 to drive the speaker. Resistor R2 limits the base current of Q1 within the safe values. R1 & R3 works as voltage divider and provides 4.5V at pin 2 of UM66.
- Speaker can be driven with external NPN transistor.
- Melody begins from the first note if power is reset.

Components Required

- One UM66/BT66 IC
- One BC547 Transistor
- Zener Diode
- Two 1K Resistors
- One 220 Ohm Resistor
- One Speaker
- One Breadboard
- One 9 Volt Battery
- One Battery Cap
- Connecting Wires

Connection Diagram





Project Link : https://youtu.be/cdzS-K_aipc