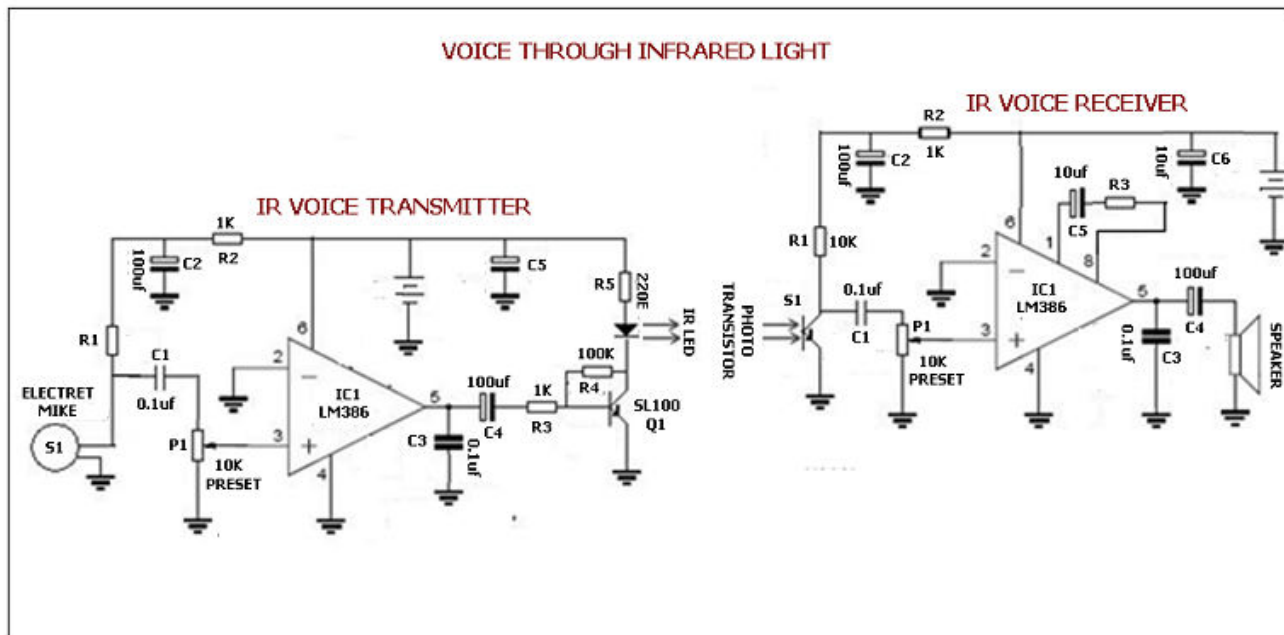


Voice Through Infra-Red Rays



Voice thru IR1 the voice transmitter circuit:

This is the innovated signal communication system used in fibre optic communication.

This circuit utilizes the signal transmission through laser light rays or Infrared light rays.

The circuit uses a MIKE for converting voice signals to electrical signals, which is amplified by an amplifier and finally fed to a infrared light driving circuit. The amplified electrical signals switch ON and OFF the infrared LED to its voltage proportion. The light intensity is also varied with the intensity of electrical signals. Now these signals can be transmitted using fibre optic cables to different locations.

It needs a receiver circuit to retrieve this signal back. This circuit utilizes an audio amplifier LM386 and Q1 a NPN Transistor to drive the Infrared LED. The output of the amplifier is connected to the base of the NPN Transistor for driving the IR light source. This circuit is operated with a 9volt battery.

Voice thru IR2 the receiver circuit:

This Circuit has a light detector S1 (Photo Transistor) at its Input which receives the transmitted light and converts it to the equivalent electrical signals. This electrical signals are amplified by an audio amplifier IC LM 386 and fed to a loud speaker for retrieving the sound signals. This circuit operates with a 9v battery. In real time operation, these fibre optic circuits with further advanced arrangements, we can transfer number of signals through a single fibre optic cable and save large quantity of electrical wires in a large length. We can also minimize the signals loses that occur in the wired communication.

1. Components used for transmitter circuit: R1 = resistor, R2 = 1k resistor, R3 = 1k Resistor, R4 = 100k resistor, R5 = 220E resistor, C1 = 0.01uf capacitor, C2 = 100uf capacitor, C3 = 0.1uf capacitor, C4=100uf, C6=10uf, LD1 = L E D, P1= 10k preset, IC 1 = LM 386 (with base), Battery = 9volt, Battery snapper, IR LED (Photo transistor).

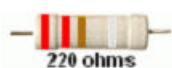
2. Components used for receiver circuit: R1 = 10k resistor, R2 = 1k resistor, R3 = Resistor, R4 = 100k resistor, C1 = 0.01uf capacitor, C2 = 10uf capacitor, C3 = 0.1uf capacitor, C4=100uf, C5=10uf, C6=10uf, P1=10k Preset, IC 1 = LM 386 (with base), Battery = 9volt, Battery snapper, Speaker.



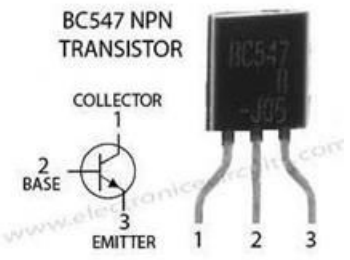
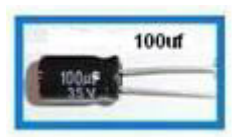
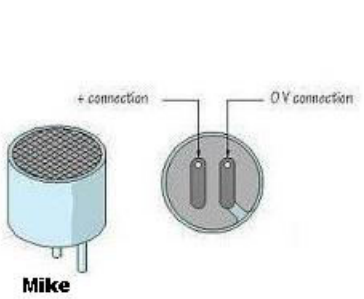
Brown Black Red



Brown Black Yellow



Red Red Brown



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