

## LIFI BASED VOICE/AUDIO COMMUNICATION

### **AIM:**

Design and development of LIFI based Voice/Audio communication.

### **PURPOSE:**

LIFI technology allows us to communicate data through lights, streetlights and any light sources. No radio waves involved in it. It doesn't need any routers or gate ways. Communication occurs through light waves with certain frequency. Now this technology is in under developed stage and in future it will replace WIFI in some cases. In this project we want to develop LIFI based Voice/Audio communication.

### **DESCRIPTION:**

Here there are two LIFI modules. One is transmitter and other one is receiver. LIFI transmitter module consists of Light (LED arrays) and audio-in port which can convert audio signals to light signals. We can connect audio-in port to laptop or mobile and start playing songs or any other audio files. LIFI receiver consists of solar panel which can convert light signals into audio signals. Audio output will be played through amplifier and speaker.

### **WORKING:**

Both the sections need input power which is 12V DC. Light Source (LED arrays) and Solar panel placed oppositely to communicate audio signals properly. These light signals easily penetrate through Water Also.

## TECHNICAL SPECIFICATIONS:

### HARDWARE:

LIFI Module	:	UART based LIFI module
Audio Amplifier	:	LM386
Speaker	:	7-14 ohms
Solar Panel	:	6V DC
Power Source	:	12v 1 amp DC Adaptors

### SOFTWARE:

Arduino IDE  
Proteus based circuit diagram

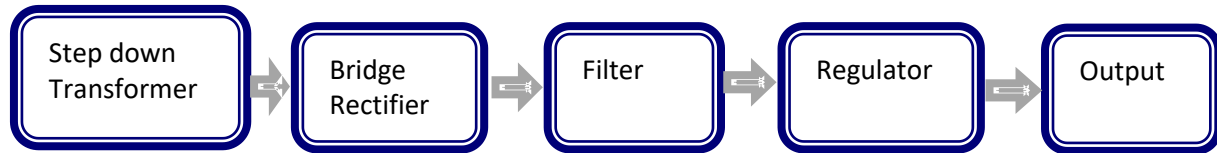
### APPLICATIONS:

- LIFI Audio Transmission
- Smart LIFI Applications
- Wireless communication

**PROJECTS FACTORY**  
Academic Projects



## POWER SUPPLY BLOCKDIAGRAM:



## INTERFACES COVERED:

- We have covered LIFI module interfacing
- Audio Amplifier
- Solar Panel Signal Amplification



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