

## Infrared Emitter Module

### Description

[The Infrared Emitter](#) is used to transmit infrared signals through an infrared LED, while there is an infrared receiver to get the signals on the other side . An infrared LED is like any other LED, with its color centered around 940nm. We can use the emitter not only to transmit data or commands, but also to emulate remotes to control your home appliance using an Arduino. The Infrared Emitter can transmit signals reliable up to 10 meters. Beyond 10 meters, [the receiver](#) may not get the signals.



## Hardware Installation

Connect the Transmitter module to PWM pin 3 on the receiving arduino.

## Programming

The demo below is the IRsendDemo.pde example provided by the IRremote library.

Download [IRremote.zip](#) and unpack into arduino/hardware/libraries in your arduino installation.

```
/*
 * IRremote: IRsendDemo - demonstrates sending IR codes
 with IRsend
 * An IR LED must be connected to Arduino PWM pin 3.
 * Version 0.1 July, 2009
 * Copyright 2009 Ken Shirriff
 * http://arcfn.com
 */

#include <IRremote.h>
IRsend irsend;
void setup()
{
  Serial.begin(9600);
}

void loop() {
  if (Serial.read() != -1) {
    for (int i = 0; i < 3; i++) {
      irsend.sendSony(0xa90, 12); // Sony TV power code
      delay(100);
    }
    delay(3*1000);
  }
}
```