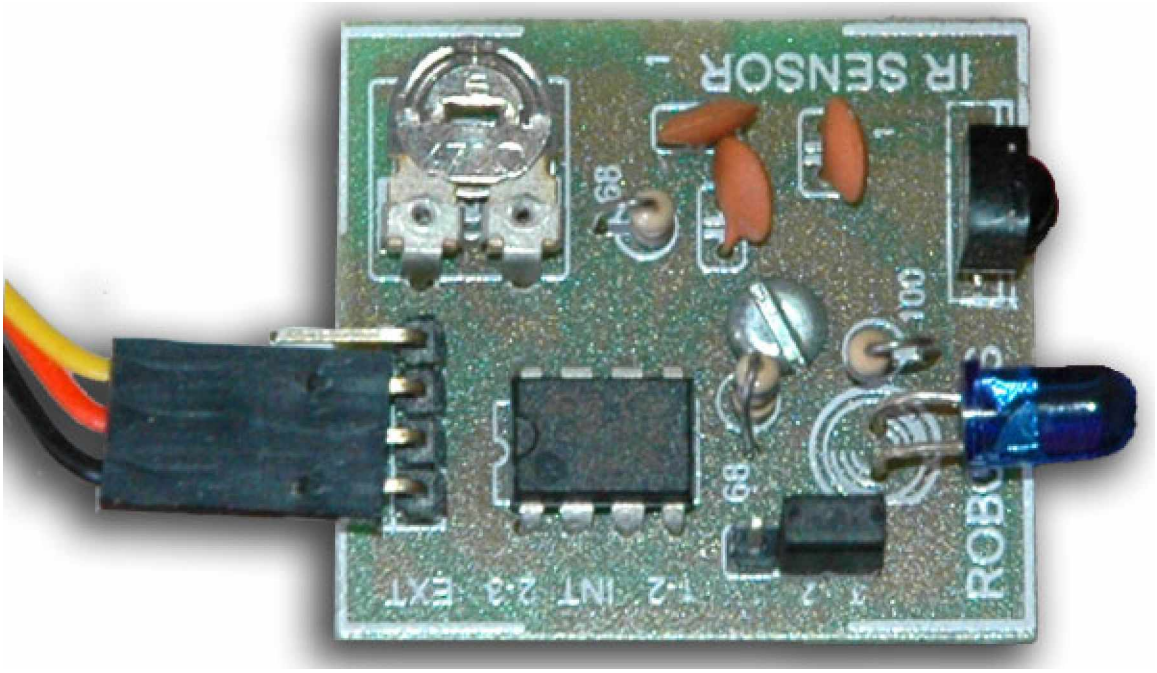
Multipurpose IR Sensor / Transreceiver



User Manual

Robokits India
http://www.robokits.org
info@robokits.org

Thank you for purchasing Multipurpose IR Sensor/Transreceiver. This unit has been carefully engineered and tested to provide superior performance. This document covers the features and operation of Multipurpose IR Sensor/Transreceiver.

This is an easy-to-use board using the popular TSOP1738 modulated IR sensor. The board includes everything you need to receive or transmit 38KHz modulated IR light.

Features

- Small Size : 33*30mm
- Modulated 38KHz receiver
- 555 timer for generating output frequency
- Range setting potentiometer
- Up to 20cm range for white object
- Can differentiate between dark and light colours
- IR led can be controlled externally though jumper setting (Through microcontroller, PC or any other circuit)
- 3 wire interface for simple obstacle and line sensor
- 4 wire interface for IR Transreceiver

Applications

- Obstacle detector sensor
- line follower sensor
- Wall follower sensor
- RC5 receiver
- RC5 transmitter
- UART transmitter (Max baudrate 9600)
- UART receiver (Max baudrate 9600)

Output 4 wire interface description

- Black wire:
  - Ø GND
- Brown Wire:
  - Ø VCC (Provide +5V)
- Red Wire:
  - Ø Output terminal
  - Ø (TTL compatible output, Logic 0: when sensor receives IR modulated light, Logic 1: Normally or reflected light intensity is very less)
- Orange wire:
  - Ø Input pin for transmitter
  - Ø Applicable whenever the ext/int selection jumper is put between 2-3 pins.
  - Ø Just provide any digital signal to this pin the sensor will automatically modulate the same in 38KHz IR light signal and transmit.
  - Ø If your signal logic at this pin is logic 1 then the transmitter will transmit nothing. So it is a inverted logic protocol but works fine with UART signals since the level +10V is logic 0 and 10V is logic 1.
  - Ø You can send any digital signals like UART and RC5 etc. You can also create and decode your own protocol of wireless transmission.

Service and Support
Service and support for this product are available from Robokits India. The Robokits Web site (http://www.robokits.org) maintains current contact information for all Robokits products.

Limitations and Warrantees
The Multipurpose IR Sensor/Transreceiver is intended for personal experimental and amusement use and in no case should be used where the health or safety of persons may depend on its proper operation. Robokits provides no warrantee of suitability or performance for any purpose for the product. Use of the product software and or hardware is with the understanding that any outcome whatsoever is at the users own risk. Robokits sole guarantee is that the software and hardware perform in compliance with this document at the time it was shipped to the best of our ability given reasonable care in manufacture and testing. All products are tested for their best performance before shipping, and no warranty or guarantee is provided on any of them. Of course the support is available on all of them for no cost.

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