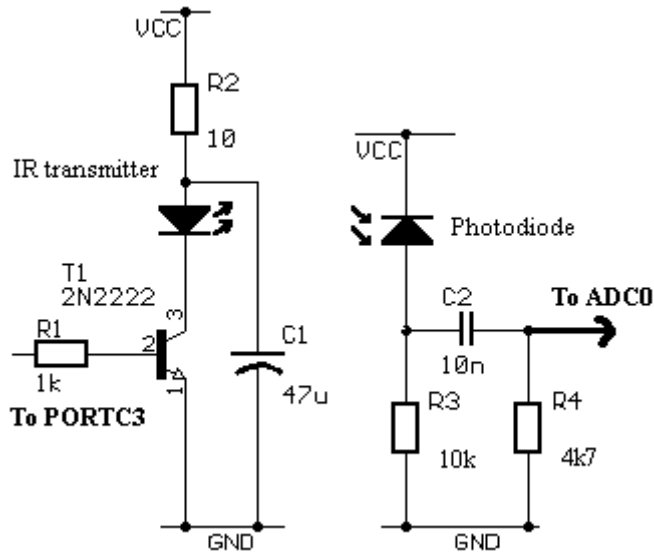


This article describes a analog IR sensor which gives output voltage



Circuit is simple. This circuit uses differentiator to eliminate constant voltage component corresponding to ambient light. To be able to use this sensor it requires that transmitter be OFF normally and must be switched ON only when we want to sense. A transistor does the job of switch to make IR transmitter ON and OFF.

Hardware requirements:

ATmega16/32 with 8MHz crystal. Uart baud rate setting 19200 on hyperterminal. And proper ADCREF and AVCC connections.

Procedure to sense from programmers' point of view:

- 1) Turn ON IR transmitter (PORTC3 =1)
- 2) Wait for 7uS (allow IR transmitter to glow completely)
- 3) Start ADC conversion.
- 4) Read ADC value.
- 5) Turn OFF IR LED (PORTC3=0)

This sensor value is then printed on hyperterminal screen through COM port using serial communication. I have set baudrate to 19200. you can change it if you find it necessary

Download program folder sensor.zip from <http://www.swapniljariwala.co.nr/upload.php>

Sensor.zip contains

- 1) main.c main C program
- 2) uart.h uart functions
- 3) makefile configuration file