

Universal Programmable IR Remote Controller for Home Automation

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Objective

• To implement a universal programmable Remote Controller

• To use touchscreen as the user interface

- To implement a Remote Controller with Temperature Measurement
- To implement a Remote Controller with "Searching" feature for different brands
- of controllers
- **Design Solution**
- The Remote Controller consists of:
- •Arduino Mega 2560 REV3
- •IR Receiver for IR signal reception
- •*IR Transmitter for IR signal transmission*



- •TFT LCD Touchscreen Module for user interface
- Temperature and Humidity Sensor for temperature measurement

Results/Application



• "Learning" Function : Receive and Store IR signal by using IR receiver (even air conditioner)

• "Send Signal" Function: Transmit received IR signal in

order to control electric appliances

• "Sensor" Function: Transmit received IR signal based on

the particular room temperature

• "Searching" Function: Control different TV models by

using IR code database

• "Delete Device" Function: Delete any received IR signals



IR Remote Controlle:

Learning

Sensor

Send Signal

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