**SPEED CONTROL OF INDUCTION MOTOR USING INFARED REMOTE CONTROL**

**ABSTRACT**

The project is meant to manage the speed of an induction motor like fans, by employing a customary TV remote. In home automation application, convenience of remotely dominant the speed of the fan is achieved. A customary TV remote sends coded infrared information to the instrument panel, that is then received by an IR device (at the receiver end) interfaced to a microcontroller of 8051 family. On every occasion a button is ironed it sends a particular coded information in infrared vary. This coded information is dead by the microcontroller to deliver delayed firing pulses to the thyristor through optical isolation. the ability to the load connected nonparallel with the thyristor is controlled supported the received signal. conjointly the firing angle is showed on a 7-segment display. A lamp load shall be provided in situ of a motor whose varied intensity demonstrates the varied power to the motor for speed management. A lamp is provided in situ of AN induction motor for demonstration purpose.

Further the project are often increased by adding a lot of outputs from the microcontroller feeding relay drivers to modify ON/OFF the domestic masses along with the speed management of fan.

**BLOCK DIAGRAM**

 Bridge

 Rectifire

Step down

Transformer

Input 230 Volt

 Voltage

 Regulator

**Speed control as per the delay angle seen by Varying lamp Intensity**

Opto Isolator For Driving The Triac

**8051**

IR Receiver

**TSOP 1738**

Program either in C or in assembly Language

**SOFTWARE REQUIREMENTS:**

Keil compiler

Languages: Embedded C or Assembly

**HARDWARE REQUIREMENTS:**

OP-Amp, TRIAC, Opto-isolator, Resistors, Capacitors, Diodes, LED, Transformer, Voltage Regulator, 8051 series Microcontroller, TSOP (IR sensor), 7 Segment Display, TV remote.