REMOTE CONTROL OF HOME ELECTRONIC DEVICES THROUGH TELEPHONE

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Overview

As today's society becomes more and more automated, consumers are looking for better ways to access home appliances away from home. In this spirit, we have decided to develop a prototype of a home automation system (Remote Control of Home Electronic Devices through Telephone). As internet is very popular nowadays, the project was extended to include internet. Users can access their home devices through internet at any time and anywhere.

Aims & Objectives

The objective of this project was to design a system that could control specific appliances from a remote location. After the user dials their home telephone number, instructions will prompt the user to press keys to do corresponding remote control actions. Users can also control their home devices through internet.
Incoming phone is detected by the Ringing detector and acknowledges the processor. Instruction messages are played and prompt the user to key in.

1. The key in number is decoded by the DTMF decoder.
2. The processor receives the decoded data and controls the relays to switch on/off the devices.

**Telephone Block:**

1. A control signal is transmitted from the user web browser to the web server.
2. The web server sends the control signal to the process via a RS-232 interface.
3. The processor receives the control signal and controls the relays to switch on/off the devices.
4. The processor send a message to the server over the serial cable and the server will send a message up to the client web page where the user can view the status of the system.

**Internet Block:**
The ultimate goal of this project is to develop a remote telephone control home devices system. The basic goal of the project has been achieved. In order to include more functions in the system, we have extended our system with internet control function.

There are more improvements could be made to the product for it to be more attractive to the home user. These improvements can include with radio frequency communication. These include:

1. Replacing the cable connection between the computer and the microcontroller with a RF link to increase portability.

2. Replacing the wire connections between the microcontroller and the appliances by RF links.