

# Home Control System User Manual

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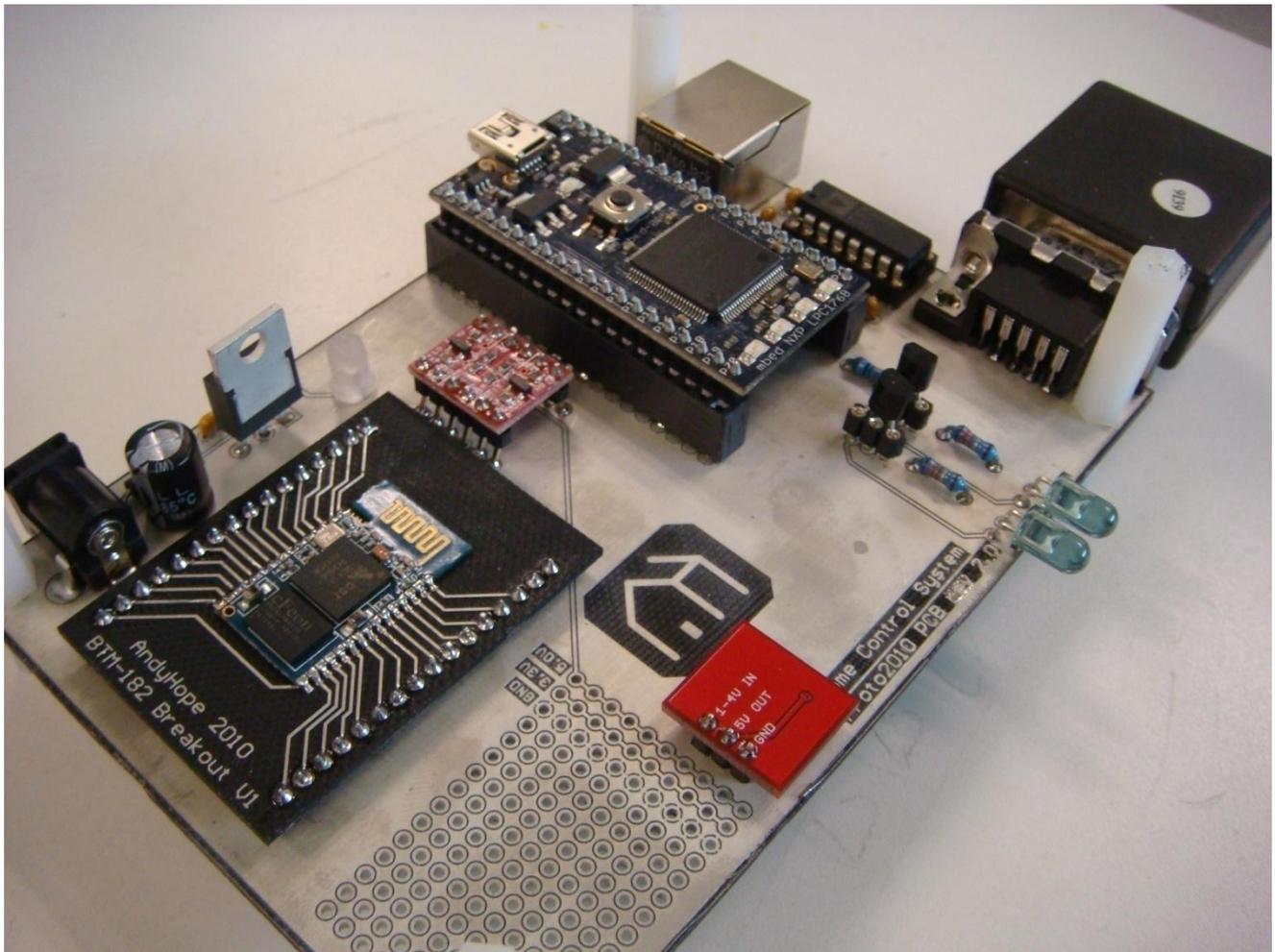
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# 1 INTRODUCTION

Congratulations on purchasing your Home Control System! The Home Control system allows complete control over your household electronics remotely, through your Android smart phone or PC web browser. The Home Control System is the ultimate module for your home automation needs.

This manual contains step-by-step instructions on how to connect your Home Control System for the first time. Please read this manual before setting up and using your Home Control System.



# 1 REQUIREMENTS

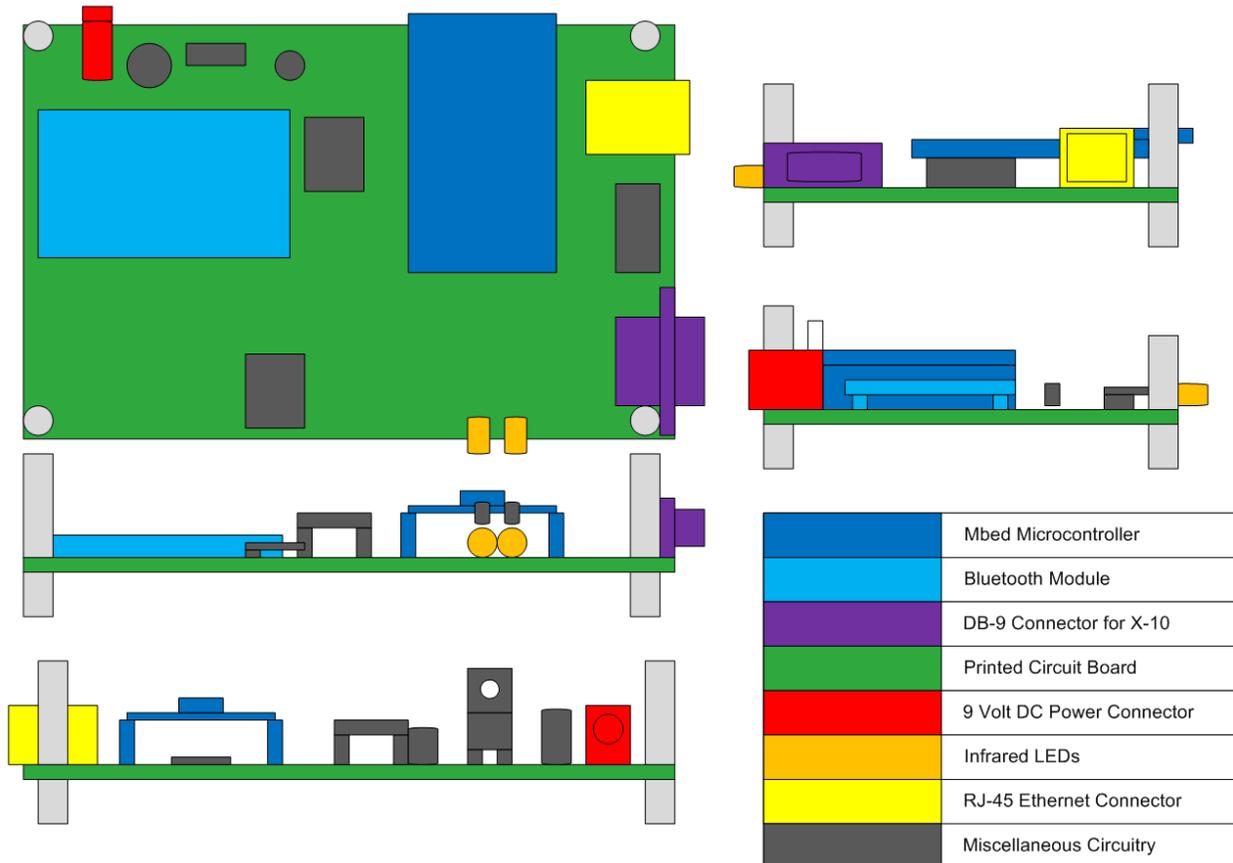
- An Android smart phone or computer with internet access.
- A wired or wireless router.
- Angry IP Scanner

Note: this program may be downloaded for free from <http://www.angryip.org/>.

- Home electronics.

# 2 GETTING STARTED

This section provides essential information on how to connect your Home Control System.



## 2.1 Setting Up Your Home Control System

### 2.1.1 Powering The Home Control System

Insert the AC adapter into an outlet and insert the AC adapter plug into the power connector on the Home Control System board. The blue power LED will now turn on to indicate the device is successfully powered.

**Warning:** Do not connect a power adapter that is not rated for the requirements of the Home Control System.

### 2.1.2 Connecting The Home Control System To The Internet

Connect one end of a Category 5 or Category 6 Ethernet cable to the Ethernet connector on the Home Control System board. Connect the other end of the cable to a network router. Press the reset button to ensure the Home Control System server retrieves an IP address.

### 2.1.3 Obtaining Your Home Control System's Unique IP Address

Download and install Angry IP Scanner from <http://www.angryip.org/>. Run the program to determine the unique IP address of your Home Control System.

*Note:* The Home Control System must be powered and connected to the Internet to retrieve an IP address.

## 2.2 Downloading And Installing The Android Application

This section describes the process for downloading and installing the Home Control System's Android application.

**Step 1:** Download and install "Apps Installer" from the Android Market.

*Tip:* Apps Installer is a program that can install any .apk file on the user's micro SD card.

**Step 2:** Connect your Android smart phone to a computer through a USB cable.

**Step 3:** Drag-and-drop the "HomeControl.apk" file to the micro SD card in your Android smart phone.

**Step 4:** Run Apps Installer, and choose "HomeControl" to install the application onto your Android smart phone.

Once the installation has completed, you can run the Home Control System Android application.



## 2.3 Positioning Your Home Control System

This section details useful tips when for positioning you Home Control System. In order to successfully control televisions, cable boxes, and DVD players, the Home Control System must be positioned in a direct line of sight with these devices.

Locate the infrared LEDs on the Home Control System. Ensure these are pointed directly at your television, cable box, DVD player, etc.

Note: The Home Control System must be positioned within two meters of these devices at all times.

## 2.4 Configuring Your X-10 Device Settings

This section describes how to configure each X-10 module to be used with the Home Control System.



**Step 1:** Locate the X-10 wireless transceiver. Note the house letter assigned to the device.

Note: Currently, only house letters A and B are supported on the Home Control System.

**Step 2:** Plug the X-10 wireless transceiver into an outlet. You may also connect any two prong appliance to the X-10 wireless transceiver.

**Step 3:** Locate a secondary X-10 module. Ensure the house letter is the same as the X-10 wireless transceiver.

**Step 4:** Change the unit number to 2 or 3.

**Step 5:** Plug this module into an outlet and connect the desired two prong appliance to the secondary module.

Note: Dimming features are only available on the X-10 modules marked “Lamp Module.”

**Warning:** Only lamps should be connected to the “Lamp Module.” This feature may damage other home electronics. Do not connect lamps using CFL bulbs to the X-10 modules

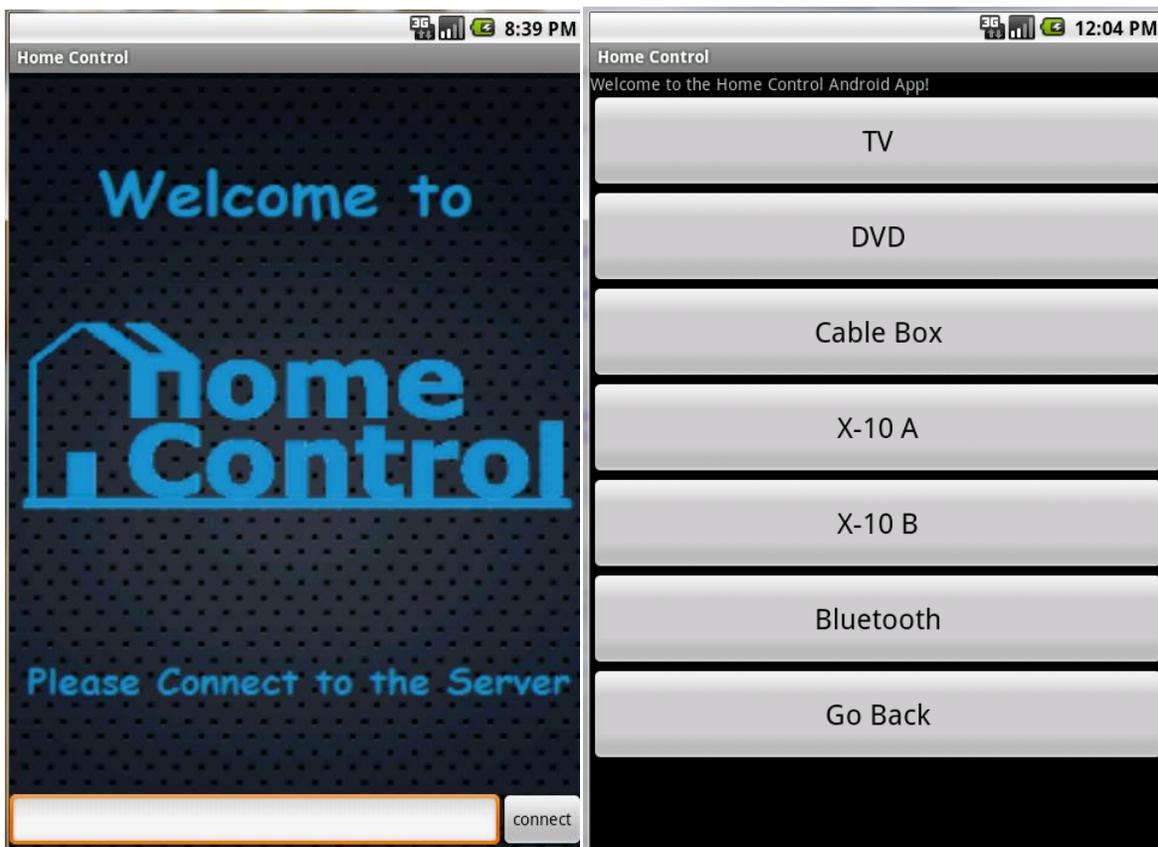


## 3 USING YOUR HOME CONTROL SYSTEM

This section illustrates how to operate your Home Control System.

### 3.1 The Android Application User Interface

This section is designed to familiarize you with the Home Control System's Android Application. The Android application user interface is the primary interface for controlling your home electronics. After downloading and installation, the application may be run the same way as other android applications.



#### 3.1.1 Connecting To The Home Control System From Your Android Smart Phone

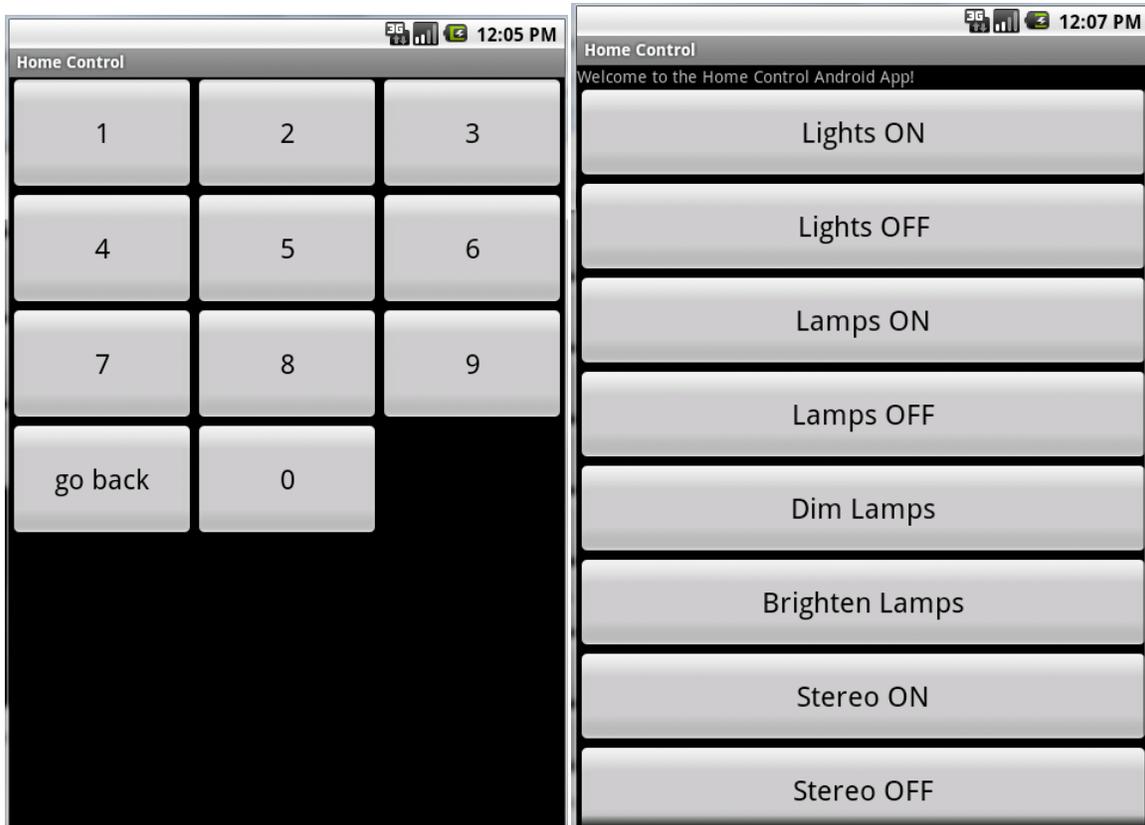
- Step 1:** Open the Home Control System Android application. This is titled "Home Control."
- Step 2:** Enter the unique IP address of your Home Control System into the text box seen in the image above.
- Step 3:** Press the connect button.

Your Android smart phone will now connect to your Home Control System web server.



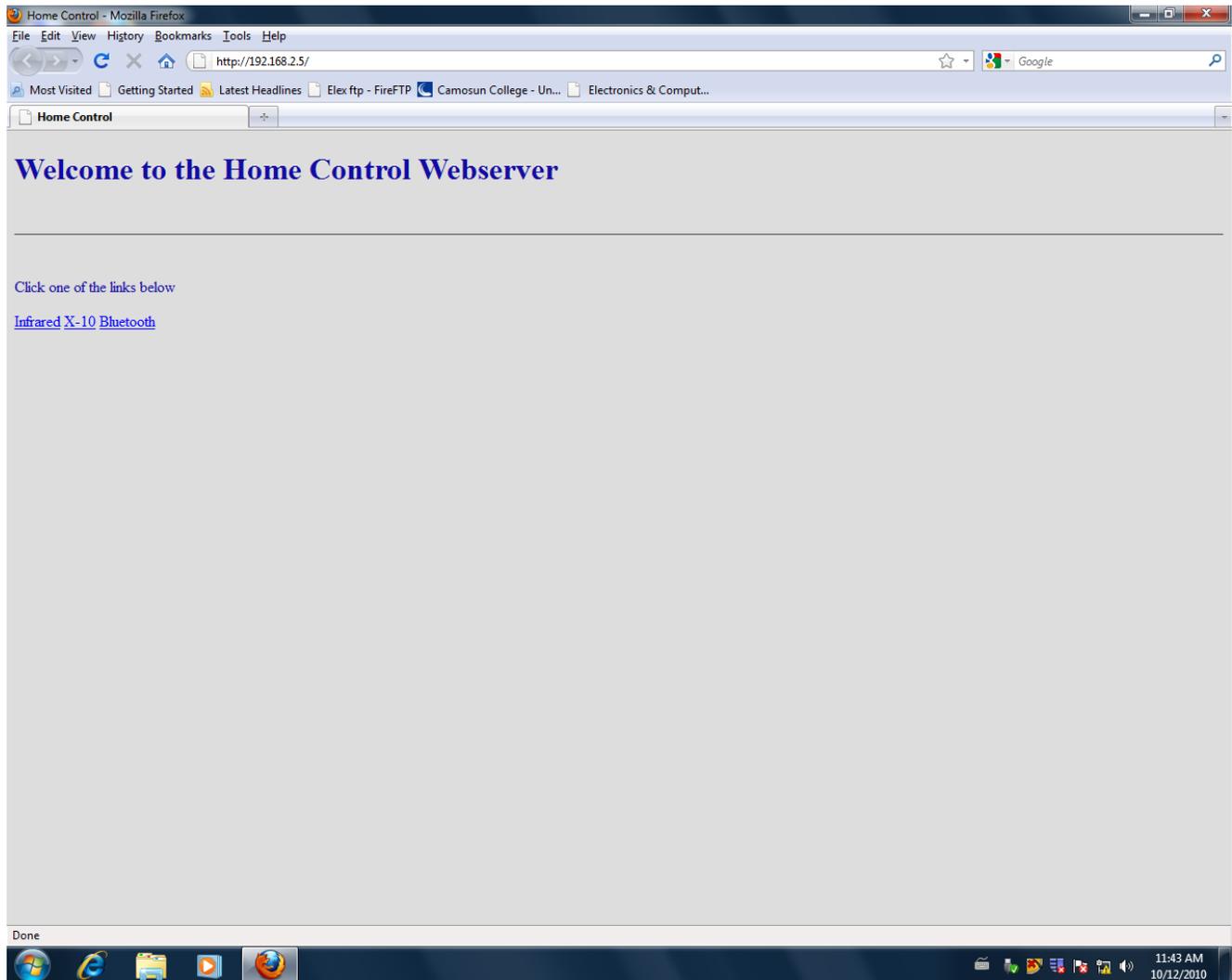
### 3.1.2 Controlling Home Electronics From you Android Smart Phone

Controlling your home electronics is as easy and intuitive as using a typical remote control. From the main menu, select the device you wish to control. Your Home Control System application will then enter the sub-menu for that device. Select the action you wish to perform.



## 3.2 The Web Site User Interface

This section is designed to familiarize you with the Home Control System's web site. The web site user interface provides a secondary interface to control your home electronics. The web site is accessed by entering the unique IP address of your Home Control System into any web browser.



### 3.2.1 Connecting To The Home Control System From Your Web Browser

This section describes how to connect to the Home Control System with your computer's web browser. Currently, Microsoft Internet Explorer, Mozilla Firefox, and Google Chrome web browsers are supported.

**Step 1:** Open your web browser.

**Step 2:** Type the unique IP address of your Home Control System into your web browser's URL box.

*Tip:* The URL box is usually the top most box on your web browser.

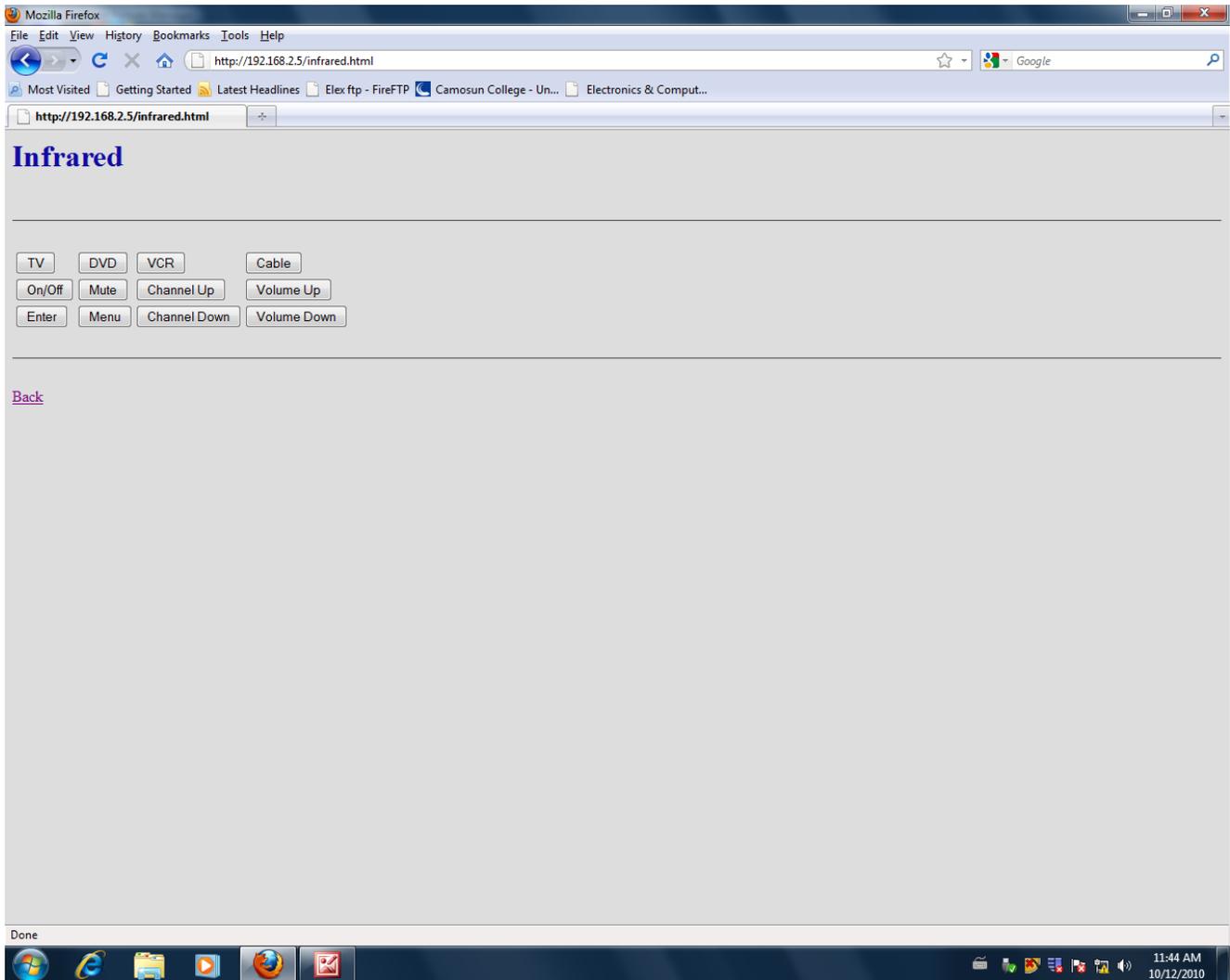


**Step 3:** Press enter.

Your web browser will connect to your Home Control System.

### 3.2.2 Controlling Home Electronics From your Web Browser

Controlling your home electronics is as easy and intuitive as using a typical remote control. From the main menu, select the device you wish to control. Your Home Control System application will then enter the sub-menu for that device. Select the action you wish to perform.



### 3.3 Controlling Your Home Electronics

Controlling your home electronics is as easy and intuitive as using a standard universal remote control. Simply select the device you wish to control then select the action you wish to perform.

**Example:** Turning on your television

**Step 1:** Connect to the Home Control System with either your Android smart phone or web browser.

**Step 2:** Select the television button.

**Step 3:** Select the On/Off button.

Your television will now turn on.

**Example:** Turning on a lamp

**Step 1:** Connect to the Home Control System with either your Android smart phone or web browser.

**Step 2:** Select the X-10 button.

**Step 3:** Select the lamp you wish to control.

**Step 4:** Select the On button.

Your lamp will now turn on.



## 4 TROUBLESHOOTING

This section will describe basic troubleshooting step for a variety of cases.

### 4.1.1 Case 1:

**Symptom:** Your Home Control System power LED will not turn on.

**Solution:** Ensure your Home Control System is connected to a power supply.

### 4.1.2 Case 2:

**Symptom:** Your Home Control System is unable to obtain an IP address.

**Solution:** Ensure your Home control System is connected to a router

### 4.1.3 Case 3:

**Symptom:** Your Home Control System will not receive commands from the Android application or web site interfaces.

**Solution:** Press the reset button located on the top of the Home Control System microcontroller.

### 4.1.4 Case 4:

**Symptom:** Your Home Control System will control lamps and stereos but not televisions and cable boxes.

**Solution:** Ensure your Home Control System is within 2 meters of your television, DVD player, etc.



# 5 TECHNICAL SPECIFICATIONS

This section details some of the technical specifications of the Home Control System. Consult these details when determining the applicable peripherals and power supplies.

Power Requirements	6V to 9V DC at 260mA
Processor Architecture	ARM Cortex-M3 Core
Processor Clock Speed	96MHz
Processor Memory	512kB of flash memory and 64kB of RAM
SD Card Type	Micro SD
SD Card Size	128MB to 4GB
X-10 Module Type	Transceiver Module, Lamp Module, Appliance Module
Maximum Number X-10 Modules	256
Supported Web Browsers	Microsoft Internet Explorer, Mozilla Firefox, Google Chrome
Supported Android Operating Systems	Android v2.1 or higher



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