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**Product Detail Documentation**

**for**

**Home Surveillance System**

**April 12, 2021**

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# 1 Introduction

## 1.1 Purpose

Home security has become an important aspect of living in a safe and stable environment. Home security systems have provided a level of protection over and above that of the usual person guarding his home. It aims to protect our property and those inside it from burglary, home intrusion, fire, and other environmental disasters such as burst pipes. The provision of these home security systems has resulted in more minor crimes. It has helped the local authorities to decrease the crime rates or help capture the suspected criminals. Indeed, technology plays as the key element of these home security systems. There are three main features that home security system provide :

- Secure the house
  - Home owner can arm or disarm the house, using control panel or web interface, with the motion sensors, door sensors, window sensors, fire or CO sensors, etc. If an intruder is detected, the system will alarm and notified the monitoring company.
  - Owners can control the security system via the simple control panel interfaces or detail web interface, locally or remotely.
- Observe the house
  - Homeowner can view the videos recorded by cameras around the house offline as well as online.
  - Home owner can set up the cameras' passwords to forbid monitoring company from viewing several cameras or other authorized web users.
  - They can control the house's monitoring functions via web interface locally or remotely using Web browser-supported remote devices.
- Configure the system
  - Through control panel or web interface, they can update their personal information and system's password.
  - The web interface allows the homeowner to build and identify protection zones to support a variety of use scenarios.
  - This feature can be performed locally or remotely

## 1.2 Intended Audience and Reading Suggestions

This Product details documentation is for users using "Home Surveillance System" to protect their home.

## 1.3 How does a security system work

Home security systems work on the simple concept of securing entry points into a home with sensors that communicate with a control panel installed.

The sensors are typically placed in doors that lead to and from a house as well as easily accessible windows, particularly anything that is open, especially those at ground level. Open spaces inside of homes can be secured with motion sensors.

- **Control Panel**

The control panel arms and disarms the security systems, communicates with each installed component, sounds the alarm when a security zone is breached, and communicates with an alarm monitoring company.

- **Door and Window Sensors**

Door and window sensors are comprised of two parts installed adjacent to each other. One part of the device is installed on the door or window and the other on the door frame or window sill. When a door or window is closed, the two parts of the sensor are joined together, creating a security circuit.

When the security system is armed at the control panel, these sensors communicate with it by reporting that the point of entry is secure. If a door or window suddenly get opened i.e the security circuit is broken and the control panel interprets that this as a breach. A high-decibel alarm is sounded and the alarm monitoring company is automatically notified.

- **Motion Sensors**

These component protect a given space by creating an invisible zone that cannot be breached without sounding an alarm. These are typically used to protect rooms containing valuables.

- **Surveillance Cameras**

Surveillance cameras can be accessed remotely on computers, smartphones, and tablets. They are often used when householders are out of town, to watch for deliveries and other service personnel like caregivers and landscapers, and to monitor the arrival of children after school. They can also be used to record any security breaches, which could result in having footage of a home invasion, including a look at the burglars and perhaps even the vehicle they drove.

- **High-decibel Alarm**

It alert the people inside the house that a problem has occurred. This alarm is loud enough for neighbours to hear.

- **Smart Lock**

These locks can be locked and unlocked remotely. The best smart locks can hook up with your wireless home security system so that your doors can lock when your system is armed, ensuring that your home is truly secure when you leave the house.

- **Flood sensor**

The only way to prevent floods is to catch leaks as soon as they happen, so put some flood sensors, sometimes called water leak detectors, near your dishwasher, washing machine, and any other areas where floods can occur.

- **Temperature sensor**

While temperature sensors may be built into smoke alarms, they can be sold as separate devices that alert you of rapidly rising temperatures in your home, which could indicate fires.

- **Yard Sign and Window Stickers**

These items might seem like nothing more than marketing tools for alarm companies, but they play important roles in home security. When you place a security company's sticker in a front window and plant their sign in your front yard, you are telling burglars that your home is professionally protected and not a good choice for them to attempt burglary.

## 2 Getting started

### 2.1 Installation

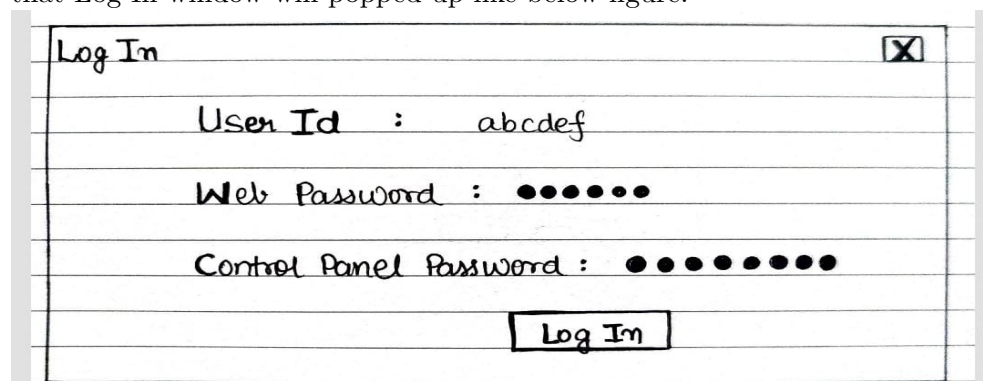
Before installed Home security system, you should install the JDK 5 or JDK 6.  
Link for downloading JDK : <http://java.sun.com/javase/downloads/index.jsp>

### 2.2 Turn on the system

You can turn on the system using control panel by clicking on the "on" button and then you can confirm the message that inform "System has started".

### 2.3 Logging into the system

After turning on the system, you can login the Home security system through web. After that Log-In window will popped up like below figure.



The diagram shows a rectangular window titled "Log In" with a close button (X) in the top right corner. Inside the window, there are three rows of input fields. The first row is labeled "User Id :" followed by the text "abcdef". The second row is labeled "Web Password :" followed by seven dots. The third row is labeled "Control Panel Password :" followed by ten dots. At the bottom center of the window is a button labeled "Log In".

To enter the Home security system, you should pass the log-in procedure. It requires user id, web password and control panel password.

Enter the your id and passwords and click the "Log In" button and then you can enter the system to use.

### 2.4 Basic display for Home security

After logging, two windows will appear on the screen.

One is control panel window which provide interface for user to control the system. The control panel will have small display on upper-left which show current status of Home security system. When the system is started, the system is in stay mode so this state of

system is represented in display on lower left. It also has two LEDs, one for represent armed status or not, another for powered status or not. The LED for power turned on because the system was started and in the right side of control panel, there are 12 buttons to input some commands from you.

Other window shows floor plan that represent current floor plan for house. In the top of the window, there is menu bar. You can use whole provided services through this menu bar. The floor plan for house lie on the top-left side of the window just below the menu bar. You can see current floor plan for house and turn on/off the sensors and cameras by click. The list box on right side is for showing security zones. At least one security zone must be exist. You can also add, modify, and remove the security zone through below buttons. In addition, you can arm the security zone by clicking "Activate" button. The current state of system is represented at bottom of the window.

## **2.5 Turn off the system**

You can turn off the system from the control panel by clicking on the "off" button and then informing message display on the screen that shows "waiting for password". After entering the control panel password, system will get turned off and user will be logged out. You can also turn off the system from web interface. To do this, first click the "turn off" from "security" menu. After clicking it, you can see the window for requiring your confirmation. If you click the yes button, the system will be turned off, and user will be logged out.



## **3 Securing the house**

### **3.1 Change to Away Mode**

There are two ways to change Stay Mode to Away Mode. The one is through control panel and another is through web interface. Let's assumed that right now it is stay mode.

#### **3.1.1 Change to Away mode through Control Panel**

The one way to change Stay Mode to Away Mode is using control panel. First, click the "away" button from a control panel window. After that it will ask for password, you have to enter the password if you want to change the stay mode to away mode.

If you enter the correct password, it will change your mode and you can also see the LED for armed turned on because the system is in away mode.

But, if some windows are opened i.e system is not ready and hence, you cannot change to away mode.

#### **3.1.2 Change to away mode through Web**

The other way to change Stay Mode to Away Mode is using web. First, click the "away" button from a security menu. And then if the all windows are closed, you can confirm that the system is changed to away mode and sensors in current security zone are armed. But, if some windows are opened i.e system is not ready and hence, you cannot change to away mode.

### **3.2 Change to Stay Mode**

There are two ways to change Away Mode to Stay Mode. The one is through control panel and another is through web interface. Let's assumed that right now it is away mode.

#### **3.2.1 Change to stay mode through Control Panel**

The one way to change Away Mode to Stay Mode is using control panel. First, click the "stay" button from a control panel window. After that it will ask for password, you have to enter the password if you want to change the away Mode to stay Mode.

If you enter the correct password, it will change your mode and you can also see the LED for armed turned off because the system is in away mode.

### **3.2.2 Change to stay mode through Web**

The other way to change Away Mode to Stay Mode is using web. First, click the "stay" button from a security menu. And then you can confirm that the system is changed to stay mode and sensors in current security zone are disarmed.

## **3.3 Enter to panic mode**

If there is an emergency situation, such as heart attack, or any medical emergency, you can use Panic Mode to require rescue. There are two ways to enter panic mode. The one is through control panel and another is through web interface.

### **3.3.1 Enter to panic mode through Control Panel**

The one way to enter panic mode is using control panel. First, click the "panic" button from a control panel window and then the informing message appeared that system is requesting for emergency. And you can also hear the sound that informing emergency.

### **3.3.2 Enter to panic mode through Web**

The other way to enter panic mode is using web. First, click the "panic" button from a security menu and then the informing message appeared that system is requesting for emergency. And you can also hear the sound that informing emergency.

## **3.4 Exit from panic mode**

There are two ways to enter panic mode. The one is through control panel and another is through web interface.

### **3.4.1 Exit from panic mode through Control Panel**

The one way to exit from panic mode is using control panel. First, click the "stay" button from a control panel window in a panic mode. After that it will ask for password, you have to enter the password if you want to exit from the panic mode.

If you enter the correct password, you will exit from panic mode and alarm sound is stopped.

### **3.4.2 Exit from panic mode through Web**

The other way to exit from panic mode is using web. First, click the "stay" button from a security menu and then the informing message appeared that system exited from emergency and the alarm sound is stopped.

### **3.5 Detects accident or intruder**

When the system is in away mode, that means system is in monitoring state, you can get the alarming message when an accident happens or an intruder invades the house. System will be put into the alarming state. User can only turn off the alarm by putting the system back to "Stay Mode". The final alarm will last for 5 seconds and system will be put back to "Away Mode" with a message for the last alarming event.

## **4 Observing the house**

### **4.1 View in one camera**

You can view in your house or outside through one camera that installed in house. You can use this function through the web interface only. First, selects a camera for viewing in floor plan. There are three cameras, click on one camera and then the new window is appeared to view the scene, if the camera is not protected by password. If the camera is protected by password, you cannot view immediately. To view through this camera, click on the display for camera. And then, the window for requiring the password of camera is appeared. Enter the password for camera and if the password is valid, you can see the scene through the camera.

#### **4.1.1 Zoom the camera**

When it is possible to view through the camera, you can zoom in or zoom out the camera by using slider control for zoom.

#### **4.1.2 Pan the camera**

When it is possible to view through the camera, you can pan left or pan right the camera by using slider control for pan.

### **4.2 View in thumbnail view**

You can view in your house or outside through all cameras that installed in house simultaneously. You can use this function through the web interface only. First, selects "view thumbnail" menu item from surveillance menu. And then, the window for thumbnail view is appeared and you can see all the scene from cameras that is nor protected by password.

#### **4.2.1 Select one camera**

In the window for thumbnail view, you can selects one camera that is not protected by password then display is enlarged.If the camera is protected by password, the window for requiring the password is appeared. You have to enter the password for enlarging the display and viewing. If the password for camera is valid, you can view with enlarged display.

### **4.2.2 Change the password**

In window for thumbnail view, you can change the password for camera. Click on the Change Password Button. If the camera is not viewing, it means that the button for changing password is disabled. Before start to change, change the display to viewing. After clicks, you can see the window for requiring new password. Enter the new password then password will get changed.

### **4.2.3 Set password**

If the camera is in not protected state, you can set the password for camera to make the camera protected by password. To do this, click on the set password button. And then, you can see the window for requiring new password. Enter the new password then password is set. When the window for thumbnail view is opened again, you can confirm the camera that has the password is indicated to protected.

### **4.2.4 Remove password**

If the camera is in protected state, you can remove the password for camera to make the camera not protected by password. To do this, click on the remove password button. And then, you can see the window for requiring current password for camera. Enter the password and if the password for camera is valid, the password is removed. When the window for thumbnail view is opened again, you can confirm the camera that dose not have the password is now shown unprotected.

## 5 Configuring the system

### 5.1 Account configuration

You can change the password for the web interface and the password for the control panel through the web interface only. To do this, click on the "account configuration" menu item from configure menu. The "account configuration" is only available when the system is idle. And then, the window for changing accounts appears. Enter the new password for the web interface and the new password for the control panel. And then, click on the change button then the new password is stored.

### 5.2 Floor plan configuration

You can manage the security zone through a web interface only. You can add, modify, and remove the security zone. You can also select one security zone to activate. To do this, click on the "floor plan configuration" menu item from configure menu. The "floor plan configuration" is only available when the system is idle. And then the below buttons are activated.

#### 5.2.1 Add Security Zone

You can add security zone include sensors. For this, click on the add zone button. And then, you can select sensors to include in the new security zone. After selecting, click on the commit button. And then, you can see the window for requiring your confirmation. After clicking the "yes" button, you can confirm the new security zone is added to the security zone list.

You can cancel this whole process and go out by clicking the round button on the right side of the buttons.

#### 5.2.2 Modify Security Zone

You can modify the existing security zone. For this, you have to first click on the modify zone button. And then, you can confirm the current state of that security zone. That is, you can see what sensors are included in the selected security zone. If you click the included sensor, the sensor is excluded in the security zone. If you click the excluded sensor, the sensor is included in the security zone. After the configuration, click the commit button. And then, the window for confirming the change appears; if you click the yes button, then the security zone is modified; otherwise, there is no change.

You can cancel this whole process and go out by clicking the round button on the right side of the buttons.

### **5.2.3 Remove Security Zone**

You can remove the existing security zone. To do this, click on the "remove zone" button. And then, the window for confirming the removal appears. If you click the "yes" button, then the security zone will get removed. Otherwise, there is no change. After clicking the yes button, you can confirm the informing message for successful removal.

You can cancel this whole process and go out by clicking the round button on the right side of the buttons.

### **5.2.4 Activate Security Zone**

You can choose whatever security zone you want to activate. Let's assumed that the current security zone is "security zone 0". Set the system in stay mode and go into the "floor plan configuration" menu, and selects another security zone; click on the "security zone 1" on the right side security zone list. And click on the activate button. After clicking the activated button, you can confirm the current security zone is changed to security zone 1.

You can cancel this whole process and go out by clicking the round button on the right side of the buttons.

### **5.2.5 Make Temporal Security Zone**

You can make a temporal Security Zone without adding a new security zone. For this, we need to arm the system, and after that, you can arm or disarm the sensors by clicking the icon in the floor plan.