Panasonic

User's Guide

Text entity: en_us_201005

Model No.

Getting started with the HomeHawk!

What is the HomeHawk? 6
Overview 6
What kinds of devices are available? 7
Panasonic Home Monitoring Camera device lineup 7
Access point (KX-HNB700, KX-HNB705) 9
Front door camera (KX-HNC700, KX-HNC705) 10
Outdoor camera (KX-HNC710, KX-HNC715) ...11
HD Camera (KX-HNC800, KX-HNC805, KX-HN1003) 12
Shelf camera (KX-HNC810, KX-HNC815) 13
Floor camera (KX-HNC850, KX-HNC855) 14
Window camera (KX-HNC500, KX-HNC505) ...15
Usage examples 16
Introduction 16
I want to view live camera images while I'm out 16
I want to know if someone approaches my home while I'm out 16
I want to automatically sound a voice alert to protect my packages 17
I want to view color images at night 17
I want to know when my baby wakes up 17
I want to know when a room gets too hot or cold 17
I want the lights to turn on automatically when I come home 18
I want the lights to turn on automatically when I'm away on vacation 18
I want to record images 24/7 18
I only want to receive notifications when motion is detected for people 19
Downloading the [HomeHawk] app 20
Downloading the [HomeHawk] app (overview) 20
Setting up devices 21
App basics 21
App basics (overview) 21
Using the home screen 22
Displaying the settings menu 26
Selecting devices 26
Accessing from multiple mobile devices 26
Exiting and logging out 27
Confirming system status 27
Confirming system status (overview) 27
Status notifications 27
Device LED indicators 28
System expansion 33
System expansion (overview) 33
Registering devices 33
Mobile device features 34
Mobile device features (overview) 34
Amazon Alexa features 35
Amazon Alexa features (overview) 35
Linking with your Amazon Echo Show 36
Using Amazon Alexa to control devices 37
Google Home features 38
Google Home features (overview) 38
Linking with your Google Home 38
Using Google Home to control devices 39
System settings and maintenance 40
Country/region settings 40
Event logs 40
Deregistering devices 41
Support information 43
Accessing the User's Guide 43
Accessing customer support 43
Viewing the Camera Installation / Removal Guide 43
Viewing system information 43
Viewing privacy information 43
Appendix 44
Copyright information 44
Open source software information 44
Software information 44
Notice for AVC patent portfolio license 44

Using a shelf, floor, and window camera

Shelf camera setup 45
Shelf camera setup (overview) 45
Shelf camera initial setup 45
Registering other mobile devices to the shelf camera 47
Shelf camera features 49
Shelf camera features (overview) 49
Viewing the camera image/recording list screen 49
Viewing the live camera image screen 50
Recording camera images (manual recording) 53
Taking snapshots 53
Talking to the camera 54
Viewing the recording list screen 54
Playing back recordings 56
Erasing recordings 57
Protecting recordings 58
Detection area 59
Motion sensitivity 59
Detection test 59
Temperature sensor 60
Temperature units 60
Sound sensitivity 60
Camera SD cards 60

Shelf camera mode settings 62
Shelf camera mode settings (overview) 62
Preset modes 62
Checking the selected mode 63
Accessing the mode screen 63
Selecting modes 63
Turning modes off 63
Creating new modes 63
Editing modes 64
Deleting modes 64
Automatic Mode Switching 64
Configuring geo-fencing 65
Floor camera setup 67
Floor camera setup (overview) 67
Floor camera initial setup 67
Registering other mobile devices to the floor camera 69
Floor camera features 70
Floor camera features (overview) 71
Viewing the camera image/recording list screen 71
Viewing the live camera image screen 72
Recording camera images (manual recording) 75
Taking snapshots 75
Talking to the camera 76
Viewing the recording list screen 76
Playing back recordings 78
Erasing recordings 79
Protecting recordings 80
Adjusting the lighting 81
Battery status 81
Detection area 82
Motion sensitivity 82
Detection test 82
Temperature sensor 83
Temperature units 83
Sound sensitivity 83
Camera SD cards 83
Floor camera mode settings 85
Floor camera mode settings (overview) 85
Preset modes 85
Checking the selected mode 86
Accessing the mode screen 86
Selecting modes 86
Turning modes off 86
Creating new modes 86
Editing modes 87
Deleting modes 87
Automatic Mode Switching 87
Configuring geo-fencing 88
Window camera setup 90
Window camera setup (overview) 90
Window camera initial setup 90
Registering other mobile devices to the window camera 92
Window camera features 94
Window camera features (overview) 94
Viewing the camera image/recording list screen 94
Viewing the live camera image screen 95
Recording camera images (manual recording) 97
Taking snapshots 98
Viewing the recording list screen 98
Playing back recordings 100
Erasing recordings 102
Protecting recordings 102
Detection area 103
Motion sensitivity 104
Camera SD cards 104
Window camera mode settings 106
Window camera mode settings (overview) 106
Preset modes 106
Checking the selected mode 107
Accessing the mode screen 107
Selecting modes 107
Turning modes off 107
Creating new modes 107
Editing modes 108
Deleting created modes 108
General features 109
Status 109
Sound settings (shelf cameras and floor cameras only) 109
Recording settings 110
Using night vision (shelf cameras and floor cameras only) 111
Video settings 112
Changing the name of cameras 113
Status LED 113
Maintenance reminder (window cameras only) 114
Updating firmware 114
Resetting camera settings 114
Bit rate settings for Amazon Echo Show and Google Home 114
Time adjustment 115
Displaying device information 115
Notification settings 115
Login settings 116
Network features 116
Home wireless network SSID features 117

Using a front door camera and outdoor camera

Front door camera and outdoor camera setup 119
Front door camera and outdoor camera setup (overview) 119
Initial setup 119
Registering other mobile devices to the access point 120
Front door camera and outdoor camera features 123
Front door camera and outdoor camera features (overview) 123
Main features 123
Viewing the camera image/recording list screen 123
Viewing the live camera image screen 125
Recording camera images (manual recording) 127
Taking snapshots 127
Talking to the camera 128
Viewing the recording list screen 128
Playing back recordings 130
Erasing recordings 130
Protecting recordings 131
Mode settings 132
Mode settings (overview) 132
Checking the selected mode 133
Accessing the mode screen 133
Selecting modes 133
Turning modes off 133
Preset modes 133
Creating new modes 134
Editing modes 135
Deleting modes 135
Status 135
Camera battery level 135
Camera signal strength 136
Image, sound, and recording settings 136
Speaker volume settings 136
Recording settings 137
Using night vision 137
Video settings 137
Detection settings 139
Detection area 139
Motion sensitivity 139
Disabling detections when leaving your house (front door cameras only) 139
Detection test 140
Front door camera and outdoor camera settings 140
Changing the name of cameras 140
Status LED 140
Updating firmware 141
Resetting camera settings 141
Access point features 141
Access point features (overview) 141
Recording settings 143
Bit rate settings for Amazon Echo Show and Google Home 143
Time adjustment 143
Displaying device information 144
Updating the firmware 144
Notification settings 144
Login settings 144
Network features 145
Home wireless network SSID features 146
Access point SD cards 147

Using an HD camera

HD camera setup 148
HD camera setup (overview) 148
Downloading the [HomeHawk] app 148
Setting up the HD camera 149
HD camera basics 151
HD camera basics (overview) 151
Displaying the options menu 151
Accessing the HD camera from multiple devices 152
HD camera main features 152
HD camera main features (overview) 152
Using the home screen 153
Viewing live HD camera images 153
Taking snapshots 155
Talking to the HD camera 155
Recording HD camera images (manual recording) 156
Viewing the HD camera recording list 156
Playing back HD camera recordings 157
Erasing HD camera recordings 158
HD camera SD cards 158
Confirming HD camera status 159
Confirming HD camera status (overview) 159
Status notifications 159
HD camera LED indicator 160
Smart recording features 161
Smart recording features (overview) 161
Creating smart recording scenarios 161
Turning smart recording scenarios on and off 162
Editing smart recording scenarios 163
Erasing smart recording scenarios 163
HD camera sensor features 163
HD camera sensor features (overview) 163
Viewing HD camera sensor history 163

Temperature sensor 164
Sound sensor 164
Motion detection 165
Image, sound, and recording settings 165
HD camera speaker volume 165
Image brightness 166
Image resolution 166
Frame rate 166
Recording overwrite 167
Talk mode 167
Recording sound 167
Night vision mode 167
Thumbnail image 168
Other image settings 168
HD camera settings 169
General settings 169
Login password 170
HD camera device profiles 171
Network features 171
Updating the HD camera's firmware 172
Resetting the HD camera's settings 173
System expansion 174
Registering other mobile devices to the HD camera 174
Adding another HD camera 174
Deregistering your mobile device 174

Troubleshooting

General information 176
Messages 178
Initial setup 179
Connecting from your mobile device 179
Notification features 180
Shelf camera features 181
General issues 181
Initial setup by WPS 182
Initial setup by Basic Setup 184
Floor camera features 185
General issues 185
Initial setup by WPS 186
Initial setup by Basic Setup 188
Window camera features 189
General issues 189
Initial setup by WPS 190
Initial setup by Bluetooth 191
Front door camera and outdoor camera features 191
HD camera sensor features 193
Amazon Alexa features 194
Google Home features 194

Warranty

Limited Warranty (ONLY FOR U.S.A.) 195

About this document

What is the HomeHawk?

Overview

The Panasonic Home Monitoring Camera is a wireless network of devices that help you monitor your home. Its easy-to-use app allows you to stay in charge even when away from home.

What kinds of devices are available?

Panasonic Home Monitoring Camera device lineup

The maximum number of camera devices for each type are listed below.
In order to use front door cameras and outdoor cameras, they must be connected to an access point.

Note:

- Availability and release dates of devices and bundles may vary by region.
- Device appearance may vary by region.

Devices for use with access points (KX-HNB700, KX-HNB705)

Access point (KX-HNB700, KX-HNB705)

Overview: Access point (KX-HNB700, KX-HNB705)

Setup: Front door camera and outdoor camera setup (overview)

Features: Access point features (overview)

Front door camera (KX-HNC700, KX-HNC705)

Overview: Front door camera (KX-HNC700, KX-HNC705)

Registration: Registering front door cameras and outdoor cameras

Features: Front door camera and outdoor camera features (overview)

Outdoor camera (KX-HNC710, KX-HNC715)

Overview: Outdoor camera (KX-HNC710, KX-HNC715)

Registration: Registering front door cameras and outdoor cameras

Features: Front door camera and outdoor camera features (overview)

Maximum number of devices that can be registered

The maximum number of devices that can be registered to each type of device are listed below.

- Number of devices that can be registered to an access point:
  - Front door cameras and outdoor cameras*1: 16
  - Mobile devices: 8
- Number of devices that can be registered to a mobile device:
  - Access points: 4

*1 Front door cameras and outdoor cameras can only be registered to 1 access point.

Devices for use without access points

Floor camera (KX-HNC850, KX-HNC855)

Overview: Floor camera (KX-HNC850, KX-HNC855)

Setup: Floor camera setup (overview)

Features: Floor camera features (overview)

Shelf camera (KX-HNC810, KX-HNC815)

Overview: Shelf camera (KX-HNC810, KX-HNC815)

Registration: Shelf camera setup (overview)

Features: Shelf camera features (overview)

Window camera (KX-HNC500, KX-HNC505)

Overview: Window camera (KX-HNC500, KX-HNC505)

Registration: Window camera setup (overview)

Features: Window camera features (overview)

HD camera (KX-HNC800, KX-HNC805, KX-HN1003)

Overview: HD Camera (KX-HNC800, KX-HNC805, KX-HN1003)

Registration: HD camera setup (overview)

Features: HD camera main features (overview)

Maximum number of devices that can be registered

The maximum number of devices that can be registered to each type of device are listed below.

- Number of devices that can be registered to a mobile device:
  - Shelf cameras, floor cameras, and window cameras: 32
  - HD cameras: 32
- Number of devices that can be registered to a floor camera, shelf camera, or HD camera:
  - Mobile devices: 8

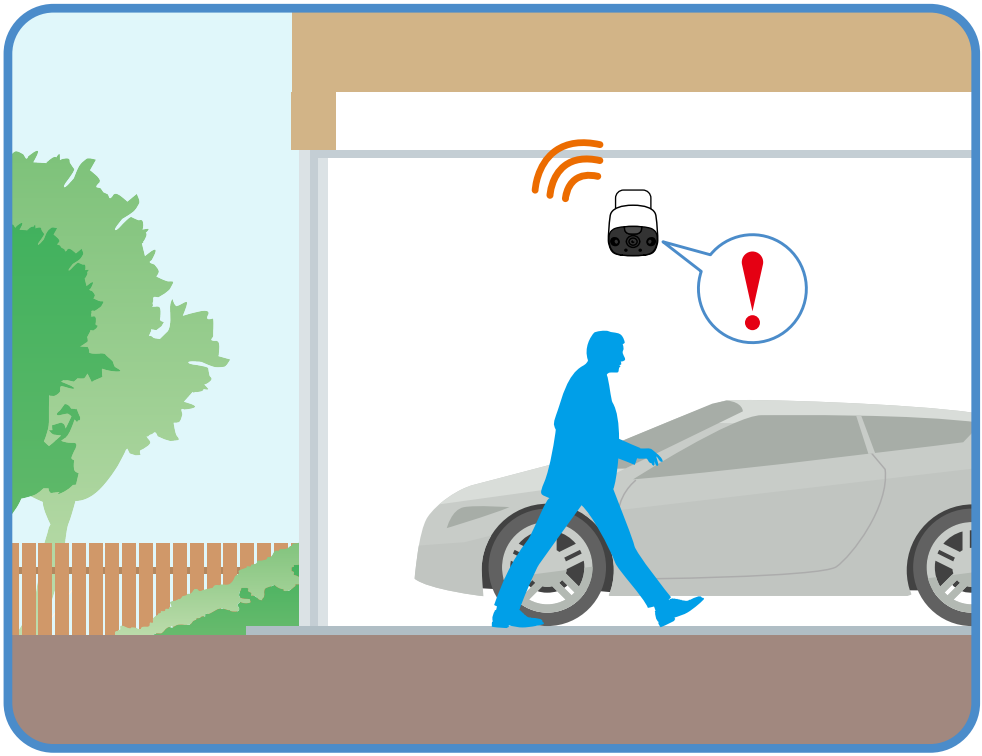
Access point (KX-HNB700, KX-HNB705)

- Joins front door cameras and outdoor cameras together
- Connects to your wireless router with an Ethernet cable
- Supports SD card connection for recording video and audio from cameras

Front door camera (KX-HNC700, KX-HNC705)

- Full-color camera with night vision (including color night vision) and built-in microphone for live monitoring and recording
- Built-in motion sensor (visual detection) can be used to trigger other actions (alerts, etc.)
- Built-in microphone and speaker for two-way communication

Outdoor camera (KX-HNC710, KX-HNC715)



- Full-color camera with night vision (including color night vision) and built-in microphone for live monitoring and recording
- Built-in motion sensor (visual detection) can be used to trigger other actions (alerts, etc.)
- Built-in microphone and speaker for two-way communication

HD Camera (KX-HNC800, KX-HNC805, KX-HN1003)

- Full-color, high-definition camera with night vision and built-in microphone for live monitoring and recording
- Built-in motion sensor (visual detection), sound sensor, and temperature sensor can be used to trigger other actions (camera recording, etc.)
- Built-in microphone and speaker for two-way communication

Shelf camera (KX-HNC810, KX-HNC815)

- Smart and discreet design that blends in with your home environment
- Full-color, high-definition camera with night vision and built-in microphone for live monitoring and recording
- Built-in motion sensor (visual detection) can be used to trigger other actions (camera recording, sending notifications, etc.)
- Built-in sound sensor and temperature sensor can be used to trigger other actions (sending notifications, etc.)
- Built-in microphone and speaker for two-way communication

Floor camera (KX-HNC850, KX-HNC855)

- Smart and discreet design that blends in with your home environment
- Ambient light that can be turned on and off, and adjusted to 3 different levels
- Full-color, high-definition camera with night vision and built-in microphone for live monitoring and recording
- Built-in motion sensor (visual detection) can be used to trigger other actions (camera recording, sending notifications, etc.)
- Built-in sound sensor and temperature sensor can be used to trigger other actions (sending notifications, etc.)
- Built-in microphone and speaker for two-way communication
- Adjustable ambient light (high, medium, low, and off)

Window camera (KX-HNC500, KX-HNC505)

- Full-color, high-definition camera with night vision for live monitoring and recording
- Built-in motion sensor (visual detection) can be used to trigger other actions (camera recording, sending notifications, etc.)
- 24/7 recording available for continuous recording
- Can distinguishing between motion for people and objects.

Usage examples

Introduction

This section describes commonly used system features, the devices required for each example, and briefly explains the required settings.

I want to view live camera images while I'm out

While away from home, you can view live camera images.

Supported devices

- Shelf camera (KX-HNC810, KX-HNC815)
- Floor camera (KX-HNC850, KX-HNC855)
- Window camera (KX-HNC500, KX-HNC505)
- Front door camera (KX-HNC700, KX-HNC705)
- Outdoor camera (KX-HNC710, KX-HNC715)
- HD Camera (KX-HNC800, KX-HNC805, KX-HN1003)

Required procedures

- Use the **[HomeHawk]** app to access the desired camera.
  - Shelf cameras: See "Viewing the live camera image screen", Page 50.
  - Floor cameras: See "Viewing the live camera image screen", Page 72.
  - Window cameras: See "Viewing the live camera image screen", Page 95
  - Front door cameras and outdoor cameras: See "Viewing the live camera image screen", Page 50.
  - HD Camera: See "Viewing live HD camera images", Page 153.

I want to know if someone approaches my home while I'm out

While away from home, you can receive a notification on your mobile device if it was detected that someone approaches your home.

Supported devices

- Front door camera (KX-HNC700, KX-HNC705)
- Outdoor camera (KX-HNC710, KX-HNC715)
- Window camera (KX-HNC500, KX-HNC505)

Required procedures

- **Front door cameras and outdoor cameras:**
  - Use the **[HomeHawk]** app to configure a mode or use a preset mode. See "Mode settings (overview)", Page 132.
- **Window cameras:**
  - Use the **[HomeHawk]** app to configure a mode, or use the **[Protection]** or **[24/7 Recording]** modes. See "Window camera mode settings (overview)", Page 106.

I want to automatically sound a voice alert to protect my packages

You can configure the front door camera to sound a voice alert if a suspicious person approaches your house or package.

Supported devices
- Front door camera (KX-HNC700, KX-HNC705)

Required procedures
- Use the **[HomeHawk]** app to configure a mode or use a preset mode. See “Mode settings (overview)”, Page 132.

I want to view color images at night

You can configure cameras to display images in color even at night or when the area surrounding the cameras is dark.

Supported devices
- Floor camera (KX-HNC850, KX-HNC855)
- Window camera (KX-HNC500, KX-HNC505)
- Front door camera (KX-HNC700, KX-HNC705)
- Outdoor camera (KX-HNC710, KX-HNC715)

Required procedures
- Use the **[HomeHawk]** app to set **[Night Vision]** to **[Color]**.
  - Floor cameras: See “Using night vision (shelf cameras and floor cameras only)”, Page 111.
  - Window cameras: NIght vision is enabled automatically depending on the lighting conditions.
  - Front door cameras and outdoor cameras: See “Using night vision”, Page 137.

I want to know when my baby wakes up

You can configure cameras to notify your mobile device when sound (such as a crying baby) is detected.

Supported devices
- Shelf camera (KX-HNC810, KX-HNC815)
- Floor camera (KX-HNC850, KX-HNC855)
- HD Camera (KX-HNC800, KX-HNC805, KX-HN1003)

Required procedures
- Use the **[HomeHawk]** app to configure the camera’s sound alert feature.
  - Floor cameras: See “Notification settings”, Page 115.
  - Shelf cameras: See “Notification settings”, Page 115.
  - HD Camera: See “[Notification Settings]”, Page 170.

I want to know when a room gets too hot or cold

You can configure cameras to notify your mobile device when the temperature of a room goes above or below the specified temperatures.

Supported devices
- Shelf camera (KX-HNC810, KX-HNC815)
- Floor camera (KX-HNC850, KX-HNC855)
- HD Camera (KX-HNC800, KX-HNC805, KX-HN1003)

Required procedures
- Use the **[HomeHawk]** app to configure the camera's sound alert feature.
  - Floor cameras: See "Notification settings", Page 115.
  - Shelf cameras: See "Notification settings", Page 115.
  - HD Camera: See "[Notification Settings]", Page 170.

I want the lights to turn on automatically when I come home

You can configure the floor camera to turn on its light when it detects your mobile device, such as when you return home from outside.

Supported devices
- Floor camera (KX-HNC850, KX-HNC855)

Required procedures
- Use the **[HomeHawk]** app to configure the camera's mode feature. See "Adjusting the lighting", Page 81.
- Use the **[HomeHawk]** app to configure the camera's geo-fencing feature. See "Automatic Mode Switching", Page 87.

I want the lights to turn on automatically when I'm away on vacation

You can configure the floor camera to turn on its light at specified schedules or when it detects motion.

Supported devices
- Floor camera (KX-HNC850, KX-HNC855)

Required procedures
- Use the **[HomeHawk]** app to configure the camera's lighting feature. See "Adjusting the lighting", Page 81.

I want to record images 24/7

You can configure the window camera to record images continuously 24/7.

Supported devices
- Window camera (KX-HNC500, KX-HNC505)

Required procedures
- Use the **[HomeHawk]** app to use the **[24/7 Recording]** mode. See "Window camera mode settings (overview)", Page 106.

I only want to receive notifications when motion is detected for people

You can configure the window camera to notify your mobile device only when motion is detected for a person and not for objects.

Supported devices

- Window camera (KX-HNC500, KX-HNC505)

Required procedures

- Use the **[HomeHawk]** app to set **[Send Notifications]** to **[Person Only]**. See “Once motion is detected”, Page 107.

Downloading the [HomeHawk] app

Downloading the [HomeHawk] app (overview)

Download information is available at the web page listed below.
{{"https://panasonic.net/cns/pcc/support/homehawk"|tolink("https://panasonic.net/cns/pcc/support/homehawk")}}

Using your device's app store

iPhone, iPad users
Search for "Panasonic HomeHawk". iPad users should search in the "iPhone only" category.

Android device users
Search for "Panasonic HomeHawk".

Compatible mobile devices

Please check the latest information at the following supported page.
{{"https://panasonic.net/cns/pcc/support/homehawk"|tolink("https://panasonic.net/cns/pcc/support/homehawk")}}
– iPhone 5s and later, iPad Air and later (iOS 10.0 and later), Android devices (Android 5.0 and later) (As of October, 2019)

Note:

- The **[HomeHawk]** app may not function properly depending on the system environment, such as the model of your mobile device, the peripherals connected to your mobile device, and the apps installed on your mobile device. Bluetooth headsets are not supported by the **[HomeHawk]** app.
- Operating systems for mobile devices are continually updated. Accordingly, the versions of operating systems the **[HomeHawk]** app supports may also be updated.
- The following Android devices are not compatible with the **[HomeHawk]** app.
  – Android devices that are not supported by Google Play
  – Android devices with limited hardware features
  (Bluetooth, Wireless LAN, and microphone support are required.)

Setting up devices

Refer to the following for information on setting up your device.

– **Shelf cameras:**
  “Shelf camera setup (overview)”, Page 45
– **Floor cameras:**
  “Floor camera setup (overview)”, Page 67
– **Window cameras:**
  “Window camera setup (overview)”, Page 90
– **Access points, front door cameras, and outdoor cameras:**
  “Front door camera and outdoor camera setup (overview)”, Page 119
– **HD cameras:**
  “HD camera setup (overview)”, Page 148

App basics

App basics (overview)

To begin, simply start the **[HomeHawk]** app on your mobile device by tapping its icon (shown below).

To prevent unauthorized access to your devices, you may need to enter a system password. Whether or not you need to enter the system password depends on how your mobile device is connecting to your devices, as explained below.

Accessing while at home

If your mobile device is connected to the same wireless network as your devices, you do not need to enter the system password when connecting to your devices. This is because it is assumed that in this situation, anyone in your home who is using your mobile device is authorized to access your devices. Note that even when you are at home, you will need to enter the system password if your mobile device is not connected to the same wireless network as your devices. This could occur if your mobile device is connected to the Internet using its mobile network connection instead of your wireless network, or if your mobile device is connected to a different wireless network.

Accessing while away from home

If your mobile device is not connected to the same wireless network as your devices, including situations when you are away from home, you will need to enter the system password when connecting to your devices. This is to prevent someone from using your mobile device to access your devices in the event that you lose your mobile device while away from home, for example.

Note:

- The password is set during initial setup.
  – **Shelf cameras:**
    “Shelf camera setup (overview)”, Page 45
  – **Floor cameras:**
    “Floor camera setup (overview)”, Page 67

  - **Window cameras:**
    “Window camera setup (overview)”, Page 90
  - **Access points, front door cameras, and outdoor cameras:**
    “Front door camera and outdoor camera setup (overview)”, Page 119
  - **HD cameras:**
    “HD camera setup (overview)”, Page 148
- You can change the password if necessary.
  - **Shelf cameras, floor cameras, and window cameras:**
    “Login settings”, Page 116
  - **Access points, front door cameras, and outdoor cameras:**
    “Login settings”, Page 144
  - **HD cameras:**
    “[Automatic Login]”, Page 169
- If the app disconnects from your devices while away from home (such as when you turn your mobile device’s screen off and then on, or you switch to another app and then return to the **[HomeHawk]** app), the app’s home screen will be displayed instead of the last screen you were viewing. Also note that in this case, it may take some time for the app’s screen to be displayed.

Automatic login

When entering the login password, you can enable the automatic login feature by turning on the **[Automatic Login (for remote access)]** checkbox. In this case, the password that you enter will be saved, allowing the **[HomeHawk]** app to connect to your devices automatically.

Note:

- You can turn this feature on and off later if desired.
  - **Shelf cameras, floor cameras, and window cameras:**
    “Login settings”, Page 116
  - **Access points, front door cameras, and outdoor cameras:**
    “Login settings”, Page 144
  - **HD cameras:**
    “Login password”, Page 170

Important:

- Turning on this feature could allow unauthorized parties to access your devices if they are using your mobile device.

Privacy information

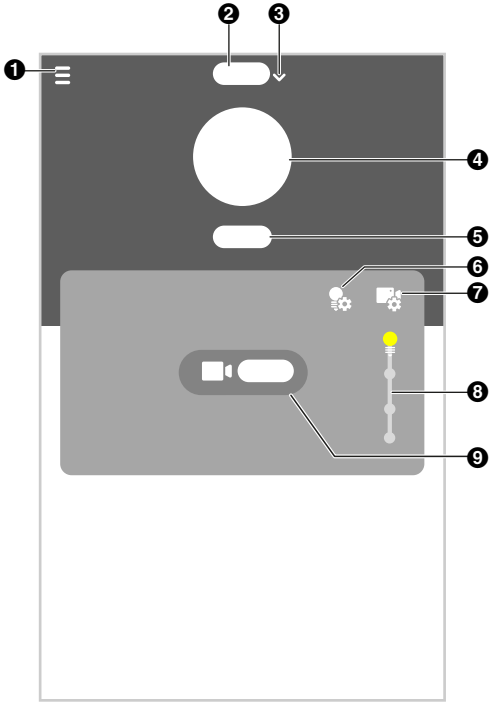
Certain features of the app function by accessing your mobile device’s hardware, such as the microphone, or the information stored in your mobile device. While using the app, a dialog may be displayed that asks whether you want to allow the app to access these features of your mobile device. You can change this setting later if desired in the privacy section of your mobile device’s **[Settings]** app.

- Please note the following for location information and geo-fencing features.
  - Access to location information is required to obtain wireless LAN information and location information for use with the geo-fencing feature.
  - If a dialog is displayed requesting access to location information, allow access.
  - When using the geo-fencing feature, set access to location information to always allow.

Using the home screen

The **[HomeHawk]** app home screen is displayed when you start the app.

Shelf camera, floor camera, and window camera home screen



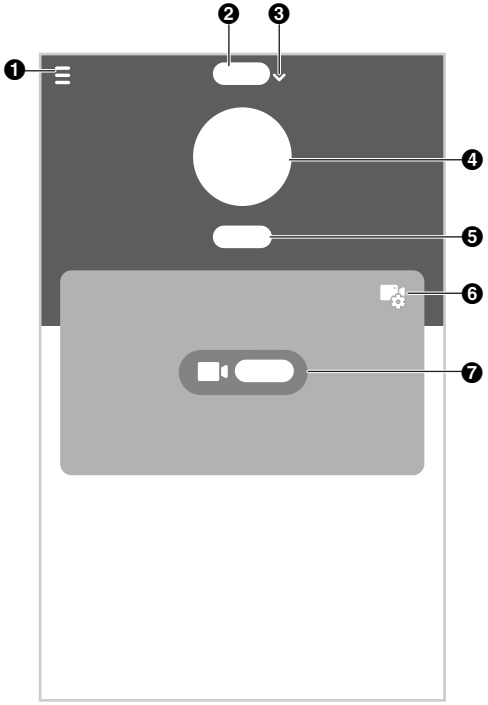
❶ Displays the settings menu
❷ Shows the camera's name
❸ Selects the camera to be displayed at the top of the list
❹ Shows the selected mode icon and displays the mode screen*1
❺ Shows the selected mode name
❻ Displays the brightness settings for the light (floor cameras only)
❼ Displays the camera setting screen
❽ Adjusts the brightness for the light (floor cameras only)
❾ Shows the camera's name

*1 **Shelf camera mode settings:**
"Shelf camera mode settings (overview)", Page 62
Floor camera mode settings:
"Floor camera mode settings (overview)", Page 85
Window camera mode settings:
"Window camera mode settings (overview)", Page 106

Note:

- For information about the home screen for HD cameras, see "HD camera home screen", Page 153.

Front door camera and outdoor camera home screen



❶ Displays the settings menu

❷ Shows the access point's name

❸ Selects the camera to be displayed at the top of the list

❹ Shows the selected mode icon and displays the mode screen
("Mode settings (overview)", Page 132)

❺ Shows the selected mode name

❻ Displays the camera setting screen

❼ Shows the camera's name

Note:

- For information about the home screen for HD cameras, see "HD camera home screen", Page 153.

Connection mode when away from home

When connected away from home (i.e., your mobile device is not connected to the same wireless router as your devices), an icon is displayed in the live camera image screen*1, camera image/recording list screen*2, and playback screen*3 to indicate that you are connected away from home and whether you are connected via a relay server. (A relay server is used to make connections with your wireless router when you are away from home.)

– is displayed when connected away from home using a relay server.

– is displayed when connected away from home without using a relay server.

*1 **Front door cameras/outdoor cameras:** "Viewing the live camera image screen", Page 125

Floor cameras: “Viewing the live camera image screen”, Page 72
Shelf cameras: “Viewing the live camera image screen”, Page 50
Window cameras: “Viewing the live camera image screen”, Page 95

*2 **Front door cameras/outdoor cameras:** “Viewing the camera image/recording list screen”, Page 123
Floor cameras: “Viewing the camera image/recording list screen”, Page 71
Shelf cameras: “Viewing the camera image/recording list screen”, Page 49
Window cameras: “Viewing the camera image/recording list screen”, Page 94

*3 **Front door cameras/outdoor cameras:** “Playing back recordings”, Page 130
Floor cameras: “Playing back recordings”, Page 78
Shelf cameras: “Playing back recordings”, Page 56
Window cameras: “Playing back recordings”, Page 100

Viewing live images

Cameras can be selected on the home screen to watch live images for.
See the following for more information.
– Floor cameras: “Viewing the live camera image screen”, Page 72
– Shelf cameras: “Viewing the live camera image screen”, Page 50
– Window cameras: “Viewing the live camera image screen”, Page 95
– Front door cameras/outdoor cameras: “Viewing the live camera image screen”, Page 125
– HD cameras: “Viewing live HD camera images”, Page 153

Returning to the previous screen

iPhone, iPad

Tap <.

Android devices

Press your device’s “back” button.

Returning to the [HomeHawk] app home screen

Tap or press your mobile device’s home button and then start the **[HomeHawk]** app again.

Home screen options

While viewing the home screen, the following items are available in the settings menu (see “Displaying the settings menu”, Page 26). Note that the available options may vary depending on system configuration and current connection status.
– **[Recording List] (not available for HD cameras)**
Displays a list of recordings for devices registered to the mobile device.
– **[Event Log] (not available for HD cameras)**
Displays logs of events such as motion detection.
– **[Settings]**
Allows you to configure settings for devices used with the **[HomeHawk]** app.
– **[Support]**
Allows you to access support options and information.
– **[Useful Feature] (not available for HD cameras)**
Displays information about convenient features.
– **[Add Camera(s)]**
Allows you to register cameras to your mobile device.
– **[Shop]**
Provides information about related products.

Displaying the settings menu

Tap ☰ to display the settings menu. Note that the settings menu is not available on all screens.

Selecting devices

You can select the desired device (cameras, access points, etc.) when viewing recorded images, configuring settings, etc.

If there are multiple devices registered to your mobile device, you can select devices by tapping ⌄ .

Accessing from multiple mobile devices

There are certain limitations when multiple mobile devices are connected to your devices at the same time, as explained below.

Shelf camera, floor camera, and window camera features:

Viewing camera images
Up to 4 mobile devices, including 2 connected while away from home (i.e., connecting while away from a different network) can view images from cameras.

Playing images
Only 1 mobile device can play images. Subsequent mobile devices are blocked from playing images while images are being played on another mobile device.

Changing settings
Only 1 mobile device can change settings. Subsequent mobile devices are blocked from changing settings while settings are being changed by another mobile device.

Front door camera and outdoor camera features:

Viewing camera images
Up to 4 mobile devices, including 2 connected while away from home (i.e., connecting while away from a different network) can view images from a maximum of 2 cameras.

Recording camera images
Images from up to 2 cameras can be recorded. If you attempt to record images from a 3rd camera, the recording for the 1st camera will stop, and recording for the 3rd camera will start.

Playing images
Only 1 mobile device can play images. Subsequent mobile devices are blocked from playing images while images are being played on another mobile device.

Changing settings
Only 1 mobile device can change settings. Subsequent mobile devices are blocked from changing settings while settings are being changed by another mobile device.

Note:

- **Information for HD cameras**
  See “Accessing the HD camera from multiple devices”, Page 152.

Exiting and logging out

Exiting and logging out

Use the standard method for exiting an app used by your mobile device.

Confirming system status

Confirming system status (overview)

Your devices can provide information about system status in a variety of ways.
– Displaying status notifications on your mobile device using your mobile device's notifications features ("Status notifications", Page 27)
– Lighting the LED indicators on each device ("Device LED indicators", Page 28)

Status notifications

Your mobile device can receive status notifications that provide feedback about how your devices are functioning. Details vary depending on the app's settings and the type of mobile device you are using.

Note:

- **Information for HD cameras**
  See "Status notifications", Page 159.

Enabling and disabling status notifications

See the following for information.
– **Shelf cameras:**
"Notification settings", Page 115
"Once motion is detected", Page 64
– **Floor cameras:**
"Notification settings", Page 115
"Once motion is detected", Page 87
– **Window cameras:**
"Notification settings", Page 115
"Once motion is detected", Page 107
– **Access points, front door cameras, and outdoor cameras:**
"Notification settings", Page 144
"[Send Notifications]", Page 134

Alert tone

The app sounds an alert tone when your mobile device receives a notification from your devices. The volume is determined by your mobile device's alert volume setting.

Status notifications for iPhone, iPad

The app provides information about system status by displaying status notifications and error messages in the iOS Notifications Center.

If your mobile device is registered to multiple devices, your mobile device can receive notifications from all devices, regardless of the device that your mobile device is currently connected to. When you tap a notification in the iOS Notifications Center, the app will attempt to connect to the corresponding device.

Status notifications for Android devices

The app provides information about system status by displaying status notifications, error messages, and the following icons in your mobile device's status bar and notifications panel.
If your mobile device is registered to multiple devices, your mobile device can receive notifications from all devices, regardless of the device that your mobile device is currently connected to. When you tap a notification in the notifications panel, the app will attempt to connect to the corresponding device.

Shelf cameras and floor cameras:

The camera's motion sensor was triggered

The selected mode was changed

The sound sensor was triggered

The temperature sensor was triggered

The privacy mode was enabled

The privacy mode was disabled

A different event other than the above occurred

Window cameras:

The camera's motion sensor was triggered for objects

The camera's motion sensor was triggered for people

The selected mode was changed

A different event other than the above occurred

Front door cameras and outdoor cameras:

The camera's motion sensor was triggered

The selected mode was changed

A different event other than the above occurred

HD cameras:
For information about status notifications for HD cameras, see "Status notifications for Android devices", Page 160.

Device LED indicators

Each device can provide information about its status by turning on its LED indicator.

Meaning of symbols used in this section

- Indicator off
- Indicator lit
- Indicator blinking slowly
- Indicator blinking
- Indicator blinking quickly
- Indicator blinking very quickly
- Indicator blinking slowly in two colors
- Indicator blinking in two colors

Access point LED indicator

Off		No power, or LED indicator is turned off *1
Green		Power is on (normal operations)*1, or registration completed for the camera or mobile device
		Registration mode, updating
		Obtaining an IP address, or accessing a microSD card*1
Green or yellow (amber) (alternating)	or	Starting up*2
Red		Registration failed
Yellow (amber)		Power on until start up completed
		IP address is not obtained, or Ethernet cable is not connected to the router

*1 You can configure the access point so that its LED indicator does not light in most states. See “Status LED”, Page 140.
*2 It may take some time for the access point to finish starting up.

Front door camera and outdoor camera LED indicator

Off		● No power ● More than 5 seconds have passed since turning on the power when the camera is not registered to the access point ● LED indicator is turned off*1
Green		Registration successfully completed or signal level is strong*3
		Registration mode, updating

		Camera is searching for an access point*1
Green or yellow (amber) blinking quickly - off for 1 second	or	Camera is on*1
Red		Registration failed, signal level is weak*3, or detecting motion*1, *4
		Camera is out of range of the access point*1, *3
		Streaming data*1
Yellow (amber)		Not registered to the access point*2, or signal level is good*3
		Battery is running low*1

*1 You can configure the camera so that its LED indicator does not light in most states. See “Status LED”, Page 140.
*2 The LED indicator lights in yellow (amber) for 5 seconds after the power is turned on for the camera.
*3 The signal level (strong, good, weak, out of range) is shown after pressing the **SETUP** button for 3 seconds. You can also check the signal level from “Camera signal strength”, Page 136.
*4 Motion detection can also be checked from “Detection test”, Page 140.

Front door camera and outdoor camera charging LED indicator

Red		Charging is completed
		Charging
		Charging failure

HD camera LED indicator

Off		No power, or LED indicator is turned off*1
Blue		Normal operation, connected to wireless router*1, privacy shutter is open
White		Normal operation, connected to wireless router*1, privacy shutter is closed
		Camera is searching for wireless router
Green		Initial setup required
		Initial setup is in progress with mobile device connected
		Initial setup is starting
Red		Motion detected*1, or camera is starting up
		Live images are being viewed or recorded, or camera is starting up
		Device malfunction

*1 You can configure the camera so that its LED indicator does not light during normal operation or when motion is detected. See “HD camera device profiles”, Page 171.

Floor camera LED indicator

Off		● No power ● LED indicator is turned off*1
Green		Registration successfully completed*3 or signal level is strong*2
		Registration mode, updating
		Camera is searching for your wireless router
Blinking every 1.5 seconds		Batteries for power backup are in use
Red		Registration failed*3, signal level is weak*2
		● Streaming data*1 or detecting motion*1 ● Accessing microSD card (when privacy mode is off)
		● Camera is out of range of your wireless router*2 ● LED lights are abnormally hot ● Wireless LAN connection failed
Yellow		Not registered to your wireless router (usually for initial setup), or signal level is good*2
		Initial setup is being performed using WPS on your router
Blue		Registration to your wireless router successfully completed or camera is on*1
White		Privacy mode is on*1
		Accessing microSD card (when privacy mode is on)

*1 You can configure the camera so that its LED indicator does not light in most states. See “Status”, Page 109.
*2 The signal level (strong, good, weak, out of range) is shown after pressing the **SETUP** button for 3 seconds. You can also check the signal level from “Camera signal strength”, Page 109.
*3 Lights for 3 seconds after registration is successfully completed or failed.

Shelf camera LED indicator

Off		● No power ● LED indicator is turned off*1
Green		Registration successfully completed*3 or signal level is strong*2
		Registration mode, updating
		Camera is searching for your wireless router
Red		Registration failed*3, signal level is weak*2
		● Streaming data*1 or detecting motion*1 ● Accessing microSD card (when privacy mode is off)

		● Camera is out of range of your wireless router*2 ● Wireless LAN connection failed
Yellow		Not registered to your wireless router (usually for initial setup), or signal level is good*2
		Initial setup is being performed using WPS on your router
Blue		Registration to your wireless router successfully completed or camera is on*1
White		Privacy mode is on*1
		Accessing microSD card (when privacy mode is on)

*1 You can configure the camera so that its LED indicator does not light in most states. See “Status”, Page 109.
*2 The signal level (strong, good, weak, out of range) is shown after pressing the **SETUP** button for 3 seconds. You can also check the signal level from “Camera signal strength”, Page 109.
*3 Lights for 3 seconds after registration is successfully completed or failed.

Window camera LED indicator

Off		● No power ● LED indicator is turned off*1
Green		Registration successfully completed*3 or signal level is strong*2
		Registration mode, updating
		Camera is searching for your wireless router
Red		● Registration failed*3 ● Accessing microSD card (when using 24/7 recording) ● Signal level is weak*2
		● Streaming data*1 or detecting motion*1 ● Accessing microSD card (when not using 24/7 recording) ● Device error (fan error)
		● Camera is out of range of your wireless router*2 ● Wireless LAN connection failed
Yellow		Not registered to your wireless router (usually for initial setup), or signal level is good*2
		Initial setup is being performed using WPS on your router
Blue		Registration to your wireless router successfully completed or camera is on*1

*1 You can configure the camera so that its LED indicator does not light in most states. See “Status”, Page 109.
*2 The signal level (strong, good, weak, out of range) is shown after pressing the **SETUP** button for 3 seconds. You can also check the signal level from “Camera signal strength”, Page 109.
*3 Lights for 3 seconds after registration is successfully completed or failed.

System expansion

System expansion (overview)

You can expand the system by registering additional devices. See “Panasonic Home Monitoring Camera device lineup”, Page 7 for information on the types and number of devices that can be registered.

Registering devices

If you purchased devices that are not registered, you must register them before you can use them.

Note:

- To register a mobile device, use the procedure described in the following.
  - Floor cameras: “Registering other mobile devices to the floor camera”, Page 69
  - Shelf cameras: “Registering other mobile devices to the shelf camera”, Page 47
  - Window cameras: “Registering other mobile devices to the window camera”, Page 92
  - Front door cameras/outdoor cameras: “Registering your mobile device to additional access points”, Page 142
  - HD cameras: “Registering other mobile devices to the HD camera”, Page 174

Registering shelf cameras

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Add Camera(s)]**.

2 Tap **[SHELF Camera]**.

3 Perform the procedure described in “Initial setup”, Page 45, starting from step 3.

Registering floor cameras

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Add Camera(s)]**.

2 Tap **[FLOOR Camera]**.

3 Perform the procedure described in “Initial setup”, Page 67, starting from step 3.

Registering window cameras

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Add Camera(s)]**.

2 Tap **[WINDOW Camera]**.

3 Perform the procedure described in “Initial setup”, Page 90, starting from step 3.

Registering access points

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Add Camera(s)]**.

2 Perform the procedure described in “Initial setup”, Page 119, starting from step 2.

Registering front door cameras and outdoor cameras

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Add Camera(s)]**.

2 Tap **[OUTDOOR Camera]** or **[FRONT DOOR Camera]**.

3 **If you are close to the access point and can press its SETUP button:**
Press and hold the access point's **SETUP** button until the access point's LED indicator blinks slowly in green, and then tap **[Tap here to continue]**.
If you are not close to the access point and cannot press its SETUP button:
Tap **[Tap here if AccessPoint isn't close]**.
- If there are multiple access points, select the access point that you want to register the device to.

4 Tap **[Next]** and follow the on-screen instructions.

5 When prompted, press and hold the **SETUP** button on the camera that you want to register until the camera's LED indicator blinks slowly in green.
- Follow the on-screen instructions.
- When registration is complete, the camera sounds one long beep.
- If registration fails, the camera sounds several short beeps.

Note:

- You can customize the name of each device for easier management. For details, see "Changing the name of cameras", Page 140.

Registering HD cameras

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Add Camera(s)]**.

2 Tap **[Indoor HD Camera]**.

3 **For iPhone or iPad:**
Continue from step 5 of "Initial setup for iPhone, iPad", Page 149.
For Android devices:
Continue from step 5 of "Initial setup for Android devices", Page 150.

Mobile device features

Mobile device features (overview)

You can configure settings for your mobile device.

Editing mobile device names

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Mobile Device Settings]**.

3 Tap **[Name]** and enter the desired name.

4 Tap **[OK]**.

Adjusting mobile device speaker and microphone volume (Android devices only)

You can adjust the volume of your mobile device's microphone, which determines the volume of your voice that is sent to the camera when talking to the camera, and your mobile device's speaker, which determines the volume of the camera audio that is heard on your mobile device.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Mobile Device Settings]**.

3 Under **[Mic Volume]**, select the desired volume for the microphone.

4 Under **[Speaker Volume]**, select the desired volume for the speaker.

Note:

- Speaker and microphone settings are not available for window cameras.

Remote access mode settings

Determines the protocol used when viewing camera images while away from home. This setting is set to **[UDP]** by default and normally should not be changed. Select **[TCP]** if camera images are not displayed, and **[Loading...]** is displayed for a long period when you are trying to view camera images.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Mobile Device Settings]** → **[Remote Access Mode]**.

3 Select the desired value and then tap **[OK]**.

Amazon Alexa features

Amazon Alexa features (overview)

You can link your devices with an Amazon Echo Show device or other Amazon devices*1 and control and view images from devices connected to your devices using Amazon Alexa.

Note:

- This feature requires third-party equipment and services.
- Feature availability may vary depending on the availability of third-party services. Panasonic cannot be held responsible for the availability and functionality of third-party services.
- Only English is supported for use with Amazon Alexa features.
- Amazon Alexa features are not available for HD cameras.

*1 The following Amazon devices are also supported. (Supported devices are subject to change without notice.)
  – Echo Spot
  – All generations of Fire TV
  – Second generations of Fire TV Stick
  – Fire TV Edition smart TVs
  – Fire tablets (generation 7 and above)
  Please note that the availability of devices may vary by region.

Linking with your Amazon Echo Show

You must do the following in order to link your devices with your Amazon Echo Show.
– Create a Panasonic ID for logging in to the Panasonic server (“Creating a Panasonic ID”, Page 36)
– Log in to the Panasonic server and configure your Amazon Echo to link with your devices (“Logging in to the Panasonic server and linking with your Amazon Echo Show”, Page 36)

Note:

- This feature requires third-party equipment and services.
- Confirm the following before you begin.
  – Make sure your Amazon Echo Show can connect to the Internet.
  – Make sure you have installed the Amazon Alexa mobile app on your mobile device.

Creating a Panasonic ID

A Panasonic ID is required to log in to the Panasonic server.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Amazon Alexa]**.

3 Select the desired device.
- An agreement may be displayed. If displayed, tap **[Accept]** to proceed.

4 Tap **[Create]**.
- A browser is opened. Follow the on-screen prompts to create a Panasonic ID.

Logging in to the Panasonic server and linking with your Amazon Echo Show

If you have a Panasonic ID you can log in to the Panasonic server and then configure your Amazon Echo Show to link with your devices.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Amazon Alexa]**.

3 Select the desired device.
- An agreement may be displayed. If displayed, tap **[Accept]** to proceed.

4 Enter your Panasonic ID and password and then tap **[Login]**.

5 Using your Amazon Alexa mobile app, search for the “Panasonic HomeHawk” skill. Enable the skill and enter your Panasonic ID in the displayed screen.
- For details about these settings, refer to the operating instructions and support information provided for your Amazon Echo Show.

Changing your Panasonic ID

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Amazon Alexa]**.

3 Select the desired device.

4 Tap **[Unlink from Alexa]** → **[OK]**, and follow the steps in “Logging in to the Panasonic server and linking with your Amazon Echo Show”, Page 36 to log in using the new Panasonic ID.

Using Amazon Alexa to control devices

Once you have enabled the “Panasonic HomeHawk” skill and linked your devices to your Amazon Echo Show, you can use Amazon Alexa to control your devices. Devices are controlled by talking to Amazon Alexa and using the voice commands specified in the enabled “Panasonic HomeHawk” skill.

Note:

- Available features and voice commands are subject to change without notice. Refer to the information provided with the “Panasonic HomeHawk” skill for available features and voice commands.

Displaying live images from a camera (all cameras except HD cameras)

Live images from a camera connected to your devices can be displayed and turned off (hidden).

Displaying images voice command example:

- Alexa, show <camera name>.

Hiding images voice command example:

- Alexa, hide <camera name>.

Note:

- Images stop being displayed after about 1 minute if no operations are performed.

Enabling/disabling the privacy mode (shelf cameras and floor cameras only)

The privacy mode of cameras can be enabled and disabled.

Enabling privacy mode voice command example:

- Alexa, turn on privacy mode of <camera name>.

Disabling privacy mode voice command example:

- Alexa, turn off privacy mode of <camera name>.

Checking the temperature of cameras (shelf cameras and floor cameras only)

You can check the temperature of the area surrounding the camera.

Checking the temperature voice command example:

- Alexa, what’s the temperature of <camera name>.

Adjusting the lighting of cameras (floor cameras only)

You can adjust the lighting of the camera.

Adjusting the lighting voice command example:

- Alexa, turn on <camera name + light>.
- Alexa, set <camera name + light> to xx %.
- Alexa, brighten <camera name + light>.
- Alexa, dim <camera name + light>.
- Alexa, turn off <camera name + light>.

Google Home features

Google Home features (overview)

You can link your devices with a Google Home device and control and view images from your devices.

Note:

- This feature requires third-party equipment and services.
- Feature availability may vary depending on the availability of third-party services. Panasonic cannot be held responsible for the availability and functionality of third-party services.
- Google Home features are not available for HD cameras.

Linking with your Google Home

You must do the following in order to link your devices with your Google Home.

– Create a Panasonic ID for logging in to the Panasonic server (“Creating a Panasonic ID”, Page 38)

– Log in to the Panasonic server and configure your Google Home to link with your devices (“Logging in to the Panasonic server and linking with your Google Home”, Page 38)

Note:

- This feature requires third-party equipment and services.
- Confirm the following before you begin.
  – Make sure your Google Home can connect to the Internet.
  – Make sure you have installed the Google Home app on your mobile device.

Creating a Panasonic ID

A Panasonic ID is required to log in to the Panasonic server.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Google Home]**.

3 Select the desired device.
- An agreement may be displayed. If displayed, tap **[Accept]** to proceed.

4 Tap **[Create]**.
- A browser is opened. Follow the on-screen prompts to create a Panasonic ID.

Logging in to the Panasonic server and linking with your Google Home

If you have a Panasonic ID you can log in to the Panasonic server and then configure your Google Home to link with your devices.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Google Home]**.

3 Select the desired device.
- An agreement may be displayed. If displayed, tap **[Accept]** to proceed.

4 Enter your Panasonic ID and password and then tap **[Login]**.

5 Using your Google Home app, search for the “Panasonic HomeHawk” service. Enter your Panasonic ID in the displayed screen and enable your devices.
- For details about these settings, refer to the operating instructions and support information provided for your Google Home.

Changing your Panasonic ID

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Google Home]**.

3 Select the desired device.

4 Tap **[Unlink from Google Home]** → **[OK]**, and follow the steps in “Logging in to the Panasonic server and linking with your Google Home”, Page 38 to log in using the new Panasonic ID.

Using Google Home to control devices

Once you have enabled your devices for use with your Google Home, you can use your Google Home to control your devices. Devices are controlled by talking to your Google Home and using the voice commands specified in the “Panasonic HomeHawk” service.

Note:
- Available features and voice commands are subject to change without notice. Refer to the information provided with the “Panasonic HomeHawk” skill for available features and voice commands.
- If Google Home does not recognize the camera names or mode names assigned to your devices, try changing the camera names*1 or mode names*1.

  *1 **Front door cameras/outdoor cameras:** “Changing the name of cameras”, Page 140
  Floor cameras/shelf cameras/window cameras: “Changing the name of cameras”, Page 113

  *2 **Front door cameras/outdoor cameras:** “Mode name”, Page 134
  Shelf cameras: “Mode name”, Page 63
  Floor cameras: “Mode name”, Page 86
  Window cameras: “Mode name”, Page 107

Displaying live images from a camera (all cameras except HD cameras)

Live images from cameras can be displayed and turned off (hidden) on a TV connected to Chromecast using Google Home.

Note:
- Chromecast must be registered to Google Home to display images from cameras.

Displaying images voice command example:
- OK Google, show <camera name>.
- OK Google, show <camera name> on <chromecast name>.

Hiding images voice command example:
- OK Google, stop <chromecast name>.

Note:
- Images stop being displayed after about 1 minute if no operations are performed.

Starting and stopping modes (all cameras except HD cameras)

Modes can be started and stopped using Google Home.

Starting modes command example:

- OK Google, start <mode name>.
- OK Google, activate <mode name>.

Stopping modes command example:

- OK Google, stop <mode name>.
- OK Google, activate Basic Mode. (front door cameras and outdoor cameras only)
- OK Google, activate Basic. (shelf cameras, floor cameras, and window cameras only)
- OK Google, deactivate <mode name>.

Enabling/disabling the privacy mode (shelf cameras and floor cameras only)

The privacy mode of cameras can be enabled and disabled.

Enabling privacy mode voice command example:

- OK Google, turn on privacy mode of <camera name>.

Disabling privacy mode voice command example:

- OK Google, turn off privacy mode of <camera name>.

Checking the temperature of cameras (shelf cameras and floor cameras only)

You can check the temperature of the area surrounding the camera.

Checking the temperature voice command example:

- OK Google, what's the temperature of <camera name>.

Adjusting the lighting of cameras (floor cameras only)

You can adjust the lighting of the camera.

Adjusting the lighting voice command example:

- OK Google, turn on <camera name + light>.
- OK Google, set <camera name + light> to xx %.
- OK Google, brighten <camera name + light>.
- OK Google, dim <camera name + light>.
- OK Google, turn off <camera name + light>.

System settings and maintenance

Country/region settings

You can select the country and region where you use your devices.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Mobile Device Settings]** → **[Country / Region]**.

3 Select the desired country/region and then tap **[OK]**.

Event logs

You can view and delete event logs that contain information about sensor detections, device errors, etc.

Viewing event logs

1 From the **[HomeHawk]** app home screen, tap ☰ .

2 Tap **[Event Log]**.

3 Select the desired device.
- Front door cameras and outdoor cameras only:
  Select **[All Cameras]** to view event logs from all the cameras.

4 Select a date.
- A list of all event logs recorded on the selected date is displayed.

Deleting event logs

1 From the **[HomeHawk]** app home screen, tap ☰ .

2 Tap **[Event Log]**.

3 Select the desired device.
- Front door cameras and outdoor cameras only:
  Select **[All Cameras]** to view event logs from all the cameras.

4 Tap 🗑 → **[OK]**.
- All event logs for the selected device are deleted.

Deregistering devices

Deregistering mobile devices

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Deregistration]** → **[Mobile Device]**.

3 Select the desired device.
- A list of mobile devices registered to the selected device is displayed.

4 Select the mobile device that you want to deregister.
- A dialog is displayed asking whether you want to deregister the device.

5 Tap **[OK]**.

Note:
- Refer to the following if you want to register your mobile device again.
  - **Access points:** “Registering your mobile device to additional access points”, Page 142
  - **Floor cameras:** “Registering other mobile devices to the floor camera”, Page 69
  - **Shelf cameras:** “Registering other mobile devices to the shelf camera”, Page 47
  - **Window cameras:** “Registering other mobile devices to the window camera”, Page 92
  - **HD cameras:** “Registering other mobile devices to the HD camera”, Page 174

Deregistering floor cameras, shelf cameras, and window cameras

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Deregistration]** → **[Camera(s)]**.

3 Select the device that you want to deregister.
- A dialog is displayed asking whether you want to deregister the device.

4 Tap **[OK]**.

Note:

- **Floor cameras:**
  Refer to "Registering floor cameras", Page 33 if you want to register your camera again.
- **Shelf cameras:**
  Refer to "Registering shelf cameras", Page 33 if you want to register your camera again.
- **Window cameras:**
  Refer to "Registering window cameras", Page 33 if you want to register your camera again.

Deregistering access points

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Deregistration]** → **[Access Point]**.

3 Select the device that you want to deregister.
- A dialog is displayed asking whether you want to deregister the device.

4 Tap **[OK]**.

Note:

- Refer to "Registering access points", Page 33 if you want to register your access point again.

Deregistering front door camera/outdoor cameras

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Deregistration]** → **[Camera(s)]**.

3 Select the device that you want to deregister.
- A dialog is displayed asking whether you want to deregister the device.

4 Tap **[OK]**.

Note:

- Refer to "Registering front door cameras and outdoor cameras", Page 34 if you want to register your front door camera or outdoor camera again.

Deregistering HD cameras

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Deregistration]** → **[Indoor HD Camera]**.

3 Select the device that you want to deregister.
- A dialog is displayed asking whether you want to deregister the device.

4 Tap **[OK]**.

Note:

- Refer to "Registering HD cameras", Page 34 if you want to register your HD camera again.

Support information

Accessing the User's Guide

You can access the User's Guide (this document).

1 From the **[HomeHawk]** app home screen, tap ☰ .

2 Tap **[Support]** → **[User's Guide]**.

Accessing customer support

You can access the support information.

1 From the **[HomeHawk]** app home screen, tap ☰ .

2 Tap **[Support]** → **[Customer Support]**.

Viewing the Camera Installation / Removal Guide

You can view information about the installation and removal of the front door camera, outdoor camera, and window camera.

1 From the **[HomeHawk]** app home screen, tap ☰ .

2 Tap **[Support]** → **[Camera Installation / Removal Guide]**.

3 Select the desired device.
- Installation/removal information is displayed for the selected device.

Note:

- This setting is only available when a front door camera, outdoor camera, or window camera is registered.

Viewing system information

You can view mobile device and system information such as the version of the app and the SSID of the wireless network that devices are connected to.

1 From the **[HomeHawk]** app home screen, tap ☰ .

2 Tap **[Support]** → **[System Info]**.

Viewing privacy information

You can view information related to how privacy information is managed.

1 From the **[HomeHawk]** app home screen, tap ☰ .

2 Tap **[Support]** → **[Privacy Notice]**.

Note:

- This setting may not be available in some regions.

Appendix

Copyright information

- Preset melodies used in certain products in this product series © 2014 Copyrights Vision Inc. Used with permission.

Open source software information

- Parts of this product use open source software supplied based on the relevant conditions of the Free Software Foundation's GPL and/or LGPL and other conditions. Please read all license information and copyright notices related to the open source software used by this product. This information is available at the following web page:
  {{"https://panasonic.net/cns/pcc/support/homehawk"|tolink("https://panasonic.net/cns/pcc/support/homehawk")}}
  At least three (3) years from delivery of this product, Panasonic Corporation will give to any third party who contacts us at the contact information provided below, for a charge of no more than the cost of physically distributing source code, a complete machine-readable copy of the corresponding source code and the copyright notices covered under the GPL and the LGPL. Please note that software licensed under the GPL and the LGPL is not under warranty.
  {{"https://panasonic.net/cns/pcc/support/homehawk"|tolink("https://panasonic.net/cns/pcc/support/homehawk")}}

Software information

- The End User License Agreement (EULA) for the **[HomeHawk]** app is available at the following web page:
  {{"https://panasonic.net/cns/pcc/support/homehawk"|tolink("https://panasonic.net/cns/pcc/support/homehawk")}}

Notice for AVC patent portfolio license

THIS PRODUCT IS LICENSED UNDER THE AVC PATENT PORTFOLIO LICENSE FOR THE PERSONAL AND NONCOMMERCIAL USE OF A CONSUMER TO (i) ENCODE VIDEO IN COMPLIANCE WITH THE AVC STANDARD ("AVC VIDEO") AND/OR (ii) DECODE AVC VIDEO THAT WAS ENCODED BY A CONSUMER ENGAGED IN A PERSONAL AND NON-COMMERCIAL ACTIVITY AND/OR WAS OBTAINED FROM A VIDEO PROVIDER LICENSED TO PROVIDE AVC VIDEO. NO LICENSE IS GRANTED OR SHALL BE IMPLIED FOR ANY OTHER USE. ADDITIONAL INFORMATION MAY BE OBTAINED FROM MPEG LA, L.L.C. SEE {{"https://www.mpegla.com/"|tolink("https://www.mpegla.com/")}}

Shelf camera setup

Shelf camera setup (overview)

There are 3 basic steps you need to perform in order to connect to the camera from your mobile device.

1 **Download the app**
Download the **[HomeHawk]** app to your mobile device.
See “Downloading the [HomeHawk] app (overview)”, Page 20.

2 **Set up the camera**
Use the **[HomeHawk]** app to configure the camera to connect to your wireless router, and then register your mobile device to the camera.
See “Shelf camera initial setup”, Page 45.

3 **Register additional mobile devices (optional)**
You can register additional mobile devices to the camera, for a total of 8.
See “Registering other mobile devices to the shelf camera”, Page 47.

Shelf camera initial setup

Before you begin

Confirm the following before you begin.
– Make sure you have installed the **[HomeHawk]** app on your mobile device
– Make sure your wireless router and the camera are turned on
– Make sure your mobile device is connected to your wireless router
– Make sure your mobile device can connect to the Internet

Note:

- If you have completed this procedure and want to register another mobile device to the camera, see “Registering other mobile devices to the shelf camera”, Page 47.
- If you experience trouble while performing this procedure, refer to the information in “Initial setup by WPS”, Page 182 and “Initial setup by Basic Setup”, Page 184.

Initial setup

1 Start the **[HomeHawk]** app by tapping its icon (shown below).

- The end-user license agreement is displayed the first time you start the app.
- Confirm all of the displayed permission screens and agree as necessary.
- Select your country or region if displayed, and then tap **[Next]**.

2 Tap **[SHELF Camera]**.

3 Tap **[Add New Camera]**.

4 Follow the on-screen instructions, remove the rear cover from the camera, and then tap **[Next]**.

5 Follow the on-screen instructions, plug in the camera, and then tap **[Next]**.
- Wait about 1 minute for the camera to start up.

6 Follow the on-screen instructions and confirm the LED color on your camera.
- If the camera's LED indicator lights in yellow, tap the yellow icon and proceed to step 7.
- If the camera's LED indicator lights in a color other than yellow, tap the icon for that color and follow the on-screen instructions.

7 Confirm that the wireless network name (SSID) of the wireless router that the camera will connect to is displayed, and then tap **[Done]**.
- If a different wireless network name is displayed, tap **[Change Wi-Fi]** and follow the on-screen instructions.

8 Determine if you will complete the initial setup using WPS or without using WPS (Basic Setup).
- **Set up using WPS:**
  Select **[WPS]** and proceed from WPS.
- **Set up without using WPS:**
  Select **[Basic Setup]** and proceed from Basic Setup.

WPS
WPS is a function of wireless routers that is used to easily connect wireless devices to wireless routers. A WPS button on a wireless router indicates that it has the WPS function.

WPS

1 Press and hold the WPS button on the wireless router until the router's WPS LED indicator starts blinking.

2 Tap **[Next]**.

3 Press the **SETUP** button on the camera for about 5 seconds until the camera beeps.
- The camera's LED indicator starts blinking in yellow.

4 Tap **[Next]**.
- When **[Linking]** is displayed, wait for up to about 2 minutes until the camera is connected to your wireless network and mobile device.

5 Press the **SETUP** button on the camera for about 2 seconds until the camera beeps.
- The camera's LED indicator starts blinking in green.

6 When prompted, create a login password for the camera, and then tap **[Next]**.

7 When prompted, enter a name for the camera and mobile device, and then tap **[OK]**.
- The camera name setting is used by your mobile device to identify the camera. This is useful when you have multiple cameras.
- The mobile device name setting is used to identify your mobile device. This is useful when performing certain operations, such as deregistering.

8 When **[Congrats!]** is displayed, tap **[Explore HomeHawk]**.
- A screen asking you to set the home position of geo-fencing (“Automatic Mode Switching”, Page 64) is displayed, tap **[Set Current pos as Home]** → **[OK]**.
- The app’s home screen is displayed when initial setup is completed.

9 Reattach the rear cover.

Basic Setup

1 Enter the password for the wireless network and then tap **[Next]**.

2 Depending on the type of mobile device that you use, proceed as follows.
Android users:
Go to step 3.
iOS 11.0 and later users:
Tap **[Join]**.
iOS 10.x users:
Change your mobile device’s wireless network setting temporarily so that it connects to the camera directly.
- Open your mobile device’s **[Settings]** app, tap **[Wi-Fi]**, select “Pansonic_Camera”, enter “12345678” as the password, and then tap **[Join]**.

Note:
- Your mobile device starts searching for the camera.
- When **[Linking]** is displayed, wait for up to about 3 minutes until the camera is connected to your wireless network and mobile device.

3 Press the **SETUP** button on the camera for about 2 seconds until the camera beeps.
- The camera’s LED indicator starts blinking in green.

4 When prompted, create a login password for the camera, and then tap **[Next]**.

5 When prompted, enter a name for the camera and mobile device, and then tap **[OK]**.
- The camera name setting is used by your mobile device to identify the camera. This is useful when you have multiple cameras.
- The mobile device name setting is used to identify your mobile device. This is useful when performing certain operations, such as deregistering.

6 When **[Congrats!]** is displayed, tap **[Explore HomeHawk]**.
- A screen asking you to set the home position of geo-fencing (“Automatic Mode Switching”, Page 64) is displayed, tap **[Set Current pos as Home]** → **[OK]**.
- The app’s home screen is displayed when initial setup is completed.

7 Reattach the rear cover.

Registering other mobile devices to the shelf camera

Confirm the following before you begin.
– Make sure you have installed the **[HomeHawk]** app on your mobile device
– Make sure your wireless router and the camera are turned on
– Make sure your mobile device is connected to your wireless router
– Make sure your mobile device can connect to the Internet

1 Start the **[HomeHawk]** app by tapping its icon (shown below).

- The end-user license agreement is displayed the first time you start the app.
- Confirm all of the displayed permission screens and agree as necessary.
- Select your country or region if displayed, and then tap **[Next]**.

2 Tap **[SHELF Camera]**.

3 Tap **[Connect to Existing]**.

4 Follow the on-screen instructions, remove the rear cover from the camera, and then tap **[Next]**.

5 Follow the on-screen instructions and confirm the LED color on your camera.

– If the camera's LED indicator lights in blue or white, tap the blue or white icon and proceed to step 6.

– If the camera's LED indicator lights in a color other than blue or white, tap the icon for that color and follow the on-screen instructions.

Note:

- When **[Linking]** is displayed, wait for up to about 40 seconds until the mobile device finds the camera on your wireless network.

6 Press the **SETUP** button on the camera for about 2 seconds until the camera beeps.

- The camera's LED indicator starts blinking in green.

7 When prompted, enter the login password for the camera, and then tap **[Next]**.

8 When prompted, enter a name for the mobile device, and then tap **[OK]**.

9 When **[Congrats!]** is displayed, tap **[Explore HomeHawk]**.

- The app's home screen is displayed when initial setup is completed.

10 Reattach the rear cover.

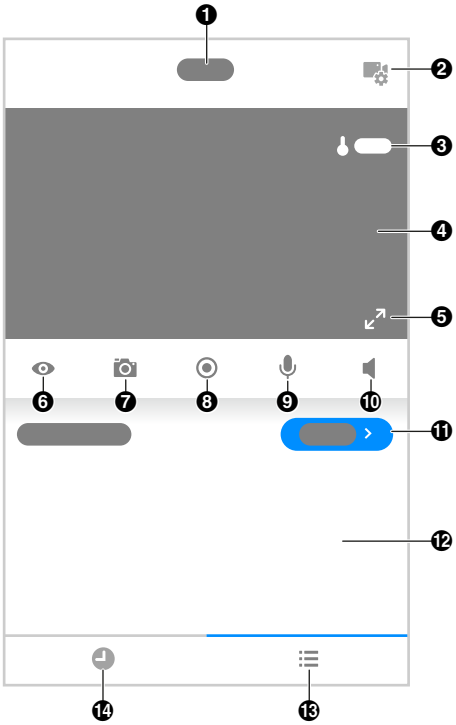
Shelf camera features

Shelf camera features (overview)

You can use a shelf camera to monitor and record the sights and sounds of the area where the camera is located. Shelf cameras have built-in motion, sound, and temperature detection features. When the motion detection is triggered, camera images can be recorded, notifications can be sent to your mobile device, and beeps can be sounded from the camera. When the sound or temperature detection is triggered, notifications can be sent to your mobile device. Additionally, built-in speakers and microphones allow you to talk to anyone who is near the camera.

Viewing the camera image/recording list screen

The camera image/recording list screen shows live images and a list of recordings for the selected camera.
To access the camera image/recording list screen, tap the desired camera from the **[HomeHawk]** app home screen (“Shelf camera, floor camera, and window camera home screen”, Page 23).



❶ Shows the camera’s name

❷ Shows the camera’s setting screen

❸ Displays the temperature of the area surrounding the camera

❹ Shows the live camera image

❺ Indicates that by tapping the camera image (❹) or this icon (❺), the camera image can be enlarged and the live camera image screen (“Viewing the live camera image screen”, Page 50) can be accessed

❻ Enables/disables privacy mode for the camera (“Turning the privacy mode on and off”, Page 52)

❼ Takes snapshots (“Taking snapshots”, Page 53)

❽ Starts/stops recording (“Recording camera images (manual recording)”, Page 53)

❾ Enables talking with the camera (“Talking to the camera”, Page 54)

❿ Turns sound on/off (“Turning the camera audio on and off”, Page 52)

⓫ Displays the recording list screen where all the images can be displayed for the selected date (“Viewing the recording list screen”, Page 54)

⓬ Shows today’s recorded image list for the selected camera

⓭ Displays the recorded images in a list

⓮ Displays the recorded images in a timeline

Note:

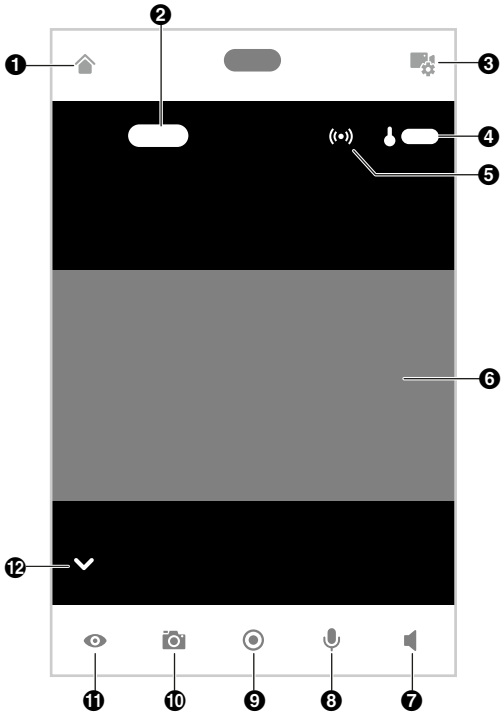
- When connected away from home, or

is displayed next to the camera’s name. See “Connection mode when away from home”, Page 24 for more information.

Viewing the live camera image screen

The live camera image screen shows you live camera images and also allows you to operate the selected camera to zoom in, recording images, etc.

To access the live camera image screen, tap the desired camera from the **[HomeHawk]** app home screen (“Shelf camera, floor camera, and window camera home screen”, Page 23), and then tap the displayed camera image.



❶ Returns you to the home screen (“Shelf camera, floor camera, and window camera home screen”, Page 23)
- **iPhone, iPad:**
  Displayed on the right side of the screen
- **Android devices:**
  Displayed on the left side of the screen

❷ When recording images, ● is displayed together with the recording duration and details about the recording
- – The recording was started manually
- – The recording was started when motion was detected

❸ Displays the camera setting screen

❹ Displays the temperature of the area surrounding the camera

❺ Shows the bit rate (“Displaying the bit rate level icon”, Page 112)

❻ Shows the live camera image

❼ Turns sound on/off (“Turning the camera audio on and off”, Page 52)

❽ Enables talking with the camera (“Talking to the camera”, Page 54)

❾ Starts/stops recording (“Recording camera images (manual recording)”, Page 53)

❿ Takes snapshots (“Taking snapshots”, Page 53)

⓫ Enables/disables privacy mode for the camera (“Turning the privacy mode on and off”, Page 52)

⓬ Hides/displays the buttons on the bottom of the screen

Tap ⌄ to hide the buttons and ⌃ to display the buttons.

Note:

- Multiple mobile devices can view live images from the same camera at the same time (“Accessing from multiple mobile devices”, Page 26). However, only one mobile device can use certain features at a time (talking to the camera, etc.).
- When connected away from home, or is displayed next to the camera’s name. See “Connection mode when away from home”, Page 24 for more information.
- When displaying images while away from home, the app will disconnect from the camera after a certain period of time in some conditions. This is to minimize data usage. If you are disconnected automatically, a dialog is displayed asking if you want to connect to the camera again. The time out period cannot be changed.

Turning the camera audio on and off

Tap the icon to select the desired setting while viewing live images from a camera.

: Camera audio will be heard

: Camera audio will not be heard

Turning the privacy mode on and off

Tap the icon to select the desired setting while viewing live images from a camera.
When privacy mode is enabled, images and audio from the camera are unavailable and operations such as recording images and talking with the camera cannot be performed. This is useful when you are at home and don’t want other people to be able to watch you with the camera.

: The privacy mode is enabled

: The privacy mode is disabled

Viewing images horizontally

By turning your mobile device on its side, you can display camera images horizontally.
When viewing images horizontally, icons for operating the camera (e.g., recording, talking, etc.) are not displayed. To display these icons, tap anywhere on the camera image.

Zooming in and out

Pinch in and out on the camera image while viewing live images from a camera. While zoomed in, you can swipe your finger on the camera image to display a different area of the image.

Using night vision

If there is not adequate light to illuminate the subject, such as at night, the camera switches to night vision mode depending on the settings (see “Using night vision (shelf cameras and floor cameras only)”, Page 111).

Recording camera images

To record camera images manually, see “Recording camera images (manual recording)”, Page 53.
To record images automatically when a sensor is triggered, see “Shelf camera mode settings (overview)”, Page 62.

Taking snapshots

To save snapshots (i.e., still images) while viewing live camera images, see “Taking snapshots”, Page 75.

Displaying images upside down

To display images upside down while viewing live camera images, see “Displaying images upside down (shelf cameras only)”, Page 113.

Talking to the camera

To use your mobile device’s microphone and the camera’s built-in speaker to talk to someone where the camera is installed, see “Talking to the camera”, Page 54.

Recording camera images (manual recording)

You can record camera images while viewing live camera images. Camera recordings are saved on the camera’s SD card.

1 View live images from the desired camera.

2 Tap to start recording.

- Recordings include both audio and video. To disable audio recording, see “Recording with sound (shelf cameras and floor cameras only)”, Page 110.

3 Tap to stop recording.

Note:

- The maximum recording time is 15 minutes.
- If **[Recording Error (Memory full)]** is displayed, the camera’s SD card is full and new recordings cannot be saved. Erase unneeded recordings (see “Erasing recordings”, Page 57).
- For information about SD cards and how recordings are saved, see “Camera SD cards”, Page 60.

Taking snapshots

You can save snapshots (i.e., still images) while viewing live camera images. Snapshots are saved in your mobile device’s default photo album app.

1 View live images from the desired camera.

2 Tap .

Note:

- Snapshot sizes are scaled to fit the width of your mobile device’s display.
- **iPhone, iPad**
  Snapshots are saved as JPEG files in your mobile device’s “Photos” app.
- **Android devices**

Snapshots are saved as JPEG files in your mobile device's picture directory. The file naming convention is: device name + the date and time.

Talking to the camera

You can use your mobile device's microphone and the camera's built-in speaker to talk to someone where the camera is installed. You can either tap and hold to talk or tap once to talk alternatively with the other party.

Tap and hold to talk

1 View live images from the desired camera.

2 Tap and hold .

- The audio from your mobile device's microphone is played through the camera's speaker until you release your finger.
- Talk in turns with the other party. (While you are talking to the camera, you will not be able to hear audio from the camera's microphone.)

Tap and talk

1 View live images from the desired camera.

2 Tap .

- Talk in turns with the other party.

3 When finished, tap .

Note:

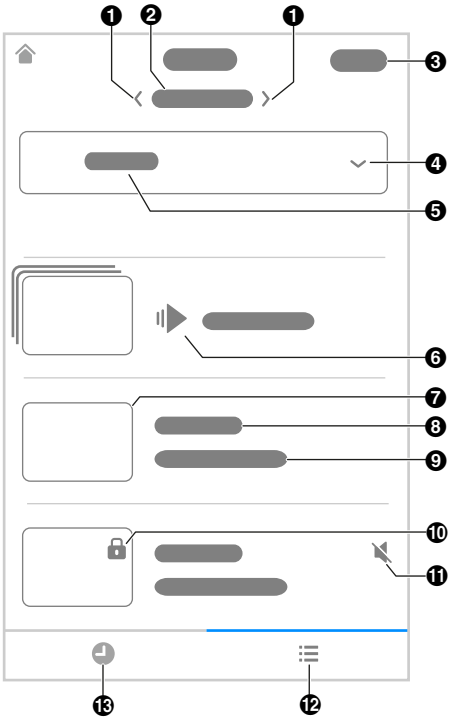
- For information about adjusting the camera's speaker volume, see "Adjusting the talk volume", Page 109.

Viewing the recording list screen

From the **[HomeHawk]** app home screen, tap → **[Recording List]** to display the recording list screen.

- You can also access the recording list screen by tapping **[Show all]** in the camera image/recording list screen ("Viewing the camera image/recording list screen", Page 49).

The recording list displays all recordings for the specified dates and filters can be used to specify the recordings that you want to display.



❶ 〈: Displays recorded images for the previous date
〉: Displays recorded images for the next date

❷ Displays the selected date and you can tap here to select a date

❸ **[Select]**: Used to select multiple recordings for deleting or protecting

❹ Selects the camera when there are multiple cameras registered

❺ Shows the camera's name

❻ Goes to rapid playback
("Rapid playback", Page 57)

❼ Displays a thumbnail image for the recording

❽ Shows information about the type of recording
– **[Manual]:** Recordings that were recorded manually.
– **[Motion]:** Recordings that were recorded when a motion sensor was triggered.

❾ Shows the time when the recording was made and its duration

❿ Indicates that a recording is protected

⓫ Indicates recordings were recorded with the sound muted by the recording settings

⓬ Displays the recorded images in a list

⓭ Displays the recorded images in a timeline

Playing back recordings

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Recording List]**.

2 Select the desired camera.

3 Tap ❮, ❯, or the displayed date to select a recording date.
- A list of all recordings recorded on the selected date is displayed.
- Tap 🕘 to display recordings in a timeline. Tap ☰ to display recordings in a list.

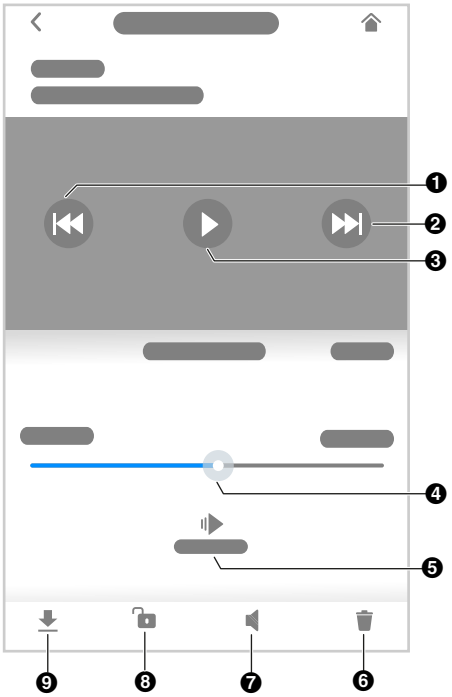
4 Select a recording.
- The selected recording starts playing in the playback screen.

Note:

- When connected away from home, 🪐 or 🪐ᴿ is displayed on the playback screen. See “Connection mode when away from home”, Page 24 for more information.
- Recorded images can also be played back from the camera image/recording list screen (“Viewing the camera image/recording list screen”, Page 49).

Normal playback

The normal playback screen allows you play back recording and perform other operations.



❶ Goes to the start of the recording
- Tap twice to go to the previous recording.

❷ Goes to the next recording

❸ Starts or resumes playback

❹ Allows you to quickly move to the desired area of the recording by sliding the progress bar

❺ Goes to rapid playback

❻ Erases the current recording

❼ Tap to enable or disable audio for the recording
- indicates audio is enabled.
- indicates audio is disabled.

❽ Protects the recording
- Tap to remove the protection for the recording.

❾ Downloads the recording to the mobile device
- Do not perform any function on your mobile device while downloading is in progress.
- Only 1 recording can be downloaded at a time.
- Recordings can only be downloaded when the mobile device is connected to the same wireless network as the camera.

Rapid playback

Rapid playback allows you to play a condensed playback of the selected day's recordings.
Tap **[Rapid Playback]** to start rapid playback. The following controls are displayed.

Starts or resumes playback

Pauses playback

Goes to normal playback

Erasing recordings

Erasing individual images

1 From the **[HomeHawk]** app home screen, tap → **[Recording List]**.

2 Select the desired camera.

3 Tap , , or the displayed date to select a recording date.

4 Select the desired recording.

5 Tap → **[OK]**.

Erasing multiple images

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Recording List]**.
2 Select the desired camera.
3 Tap ❮, ❯, or the displayed date to select a recording date.
4 Tap **[Select]**.
5 Select the desired recordings.
- Tap ○/✓ displayed next to the date to select or deselect all images shown in the list.

6 When finished, tap **[Delete]** → **[OK]**.

Protecting recordings

You can protect recordings so that they cannot be erased.

Protecting individual images

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Recording List]**.
2 Select the desired camera.
3 Tap ❮, ❯, or the displayed date to select a recording date.
4 Select the desired recording.
5 Tap 🔓.
- Tap 🔒 to remove the protection.
- 🔒 is displayed in the thumbnail of images to indicate that the image is protected.

Protecting multiple images

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Recording List]**.
2 Select the desired camera.
3 Tap ❮, ❯, or the displayed date to select a recording date.
4 Tap **[Select]** → 🔒.
5 Select the desired recordings.
- 🔒 is displayed in the thumbnail of images to indicate that the image is protected.
- Tap ○/✓ displayed next to the date to select or deselect all images shown in the list.

6 When finished, tap **[Protect]**.

Detection area

You can select which areas of the camera image are monitored for motion detection. This allows you to ignore motion in certain areas of the camera's image.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Tap **[Detection]** → **[Set Detection Area]**.

4 Tap the desired areas of the camera image.

- Gray areas of the camera image indicate areas for which image detection is disabled.
- Tap to change the number of areas displayed on the screen.

5 When finished, tap **[Set]**.

Motion sensitivity

You can adjust the sensitivity of the camera's motion detection features.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Tap **[Detection]** → **[Motion Sensitivity]**.

4 Select the desired setting.

- **[High]**: The sensors are very sensitive to changes, i.e., even a small change will trigger the sensors.
- **[Normal]**: The sensors are moderately sensitive to changes.
- **[Low]**: The sensors are somewhat sensitive to changes.
- **[Very Low]**: The image sensor is only slightly sensitive to changes, i.e., a large change is required to trigger the sensor.

5 When finished, tap **[OK]**.

Detection test

You can test which areas of the camera image can be detected while viewing live images from the camera. This is useful when determining where to install cameras, and also which areas you should enable or disable detection for.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Tap **[Detection]** → **[Detection Test]**.

Video motion

A live image of the selected camera is displayed with detection areas colored to show their detection status.

- **Green areas**: Areas where motion was detected.
- **Clear areas**: Areas where motion was not detected.
- **Black areas**: Areas where detection is disabled. (See "Detection area", Page 59 for more information.)

Temperature sensor

You can configure the camera to send notifications if the camera's ambient temperature is too cold or too hot.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Tap **[Detection]** → **[Temperature Alert Range]**.

4 Select the desired temperature for the lower threshold of the acceptable temperature range.

5 Select the desired temperature for the upper threshold of the acceptable temperature range, and then tap **[OK]**.

Temperature units

You can change the units displayed for the temperature.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Tap **[System]** → **[Temperature Units]**.

4 Select whether the temperature is displayed and specified in Fahrenheit or Celsius, and then tap **[OK]**.

Sound sensitivity

You can configure the sound sensitivity used for sound detection.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Tap **[Detection]** → **[Sound Sensitivity]**.

4 Select the desired setting, and then tap **[OK]**.
- **[High]**: The microphone is very sensitive to sound, i.e., even a small sound will trigger the notification.
- **[Normal]**: The microphone is moderately sensitive to sound.
- **[Low]**: The microphone is only slightly sensitive to sound, i.e., a large sound is required to trigger the notification.

Camera SD cards

SD card capacity and total recording time

The following recording times apply when images from one camera are recorded. All times are approximate.
- 4 GB card: 4 hours
- 8 GB card: 9 hours
- 16 GB card: 18 hours

– 32 GB card: 36 hours
– 64 GB card: 72 hours
– 128 GB card: 145 hours
– 256 GB card: 290 hours

Note:

- SD cards larger than 256 GB cannot be used.
- The times listed here are calculated theoretically. Actual recording time may vary.
- The times listed here apply during the following condition.
  – **[Resolution]** is set to **[HD (1280x720)]** (“Changing the camera resolution”, Page 112)
- The file system and other information is stored on the SD card, therefore the card’s actual available capacity will be less than the card’s noted capacity.

SD card formatting

Before inserting an SD card into the camera, format the SD card using your computer and the SD formatting tool available from the web page listed below.
{{"www.sdcard.org/downloads/formatter_4/"|tolink("http://www.sdcard.org/downloads/formatter_4/")}}

Note:

- All data stored on the SD card will be erased when it is formatted.

How recordings are saved on the SD card

- Recordings are saved on the camera’s SD card in folders based on the recording date, in the following path.
  /PRIVATE/PANA_GRP/HH/SHELF/MM-DD-YYYY
- The file naming convention is: camera number + recording type + recording start time.
  – First character: 1 (fixed).
  – Second character: Recording type. A=sensor recordings, M=manual recordings.
  – Remaining characters: Recording start time (hhmmss).
  Example: 1M123455.mp4
  This file is a manual recording (“M”) that started at 12:34 PM and 55 seconds (“123455”).

Shelf camera mode settings

Shelf camera mode settings (overview)

Modes allow the cameras to operate according to pre-determined settings. You can use modes to match where you are (at home, away from home, etc.) and what actions you want cameras to make (record images when motion is detected, etc.). You can use preset modes or create your own modes.

Examples

The following are some examples of how you can use modes.
– I want the camera to record images and make a sound when motion is detected by the camera
– I want to receive notifications when motion is detected by the camera
– I want the privacy mode to turn on when I arrive home so that camera images can't be viewed (geo-fencing ("Automatic Mode Switching", Page 64) must be enabled)

Preset modes

There are 3 preset modes that can be used for cameras: **[Basic]**, **[Home]**, and **[Away]**.
– **[Basic]:**
Use this if you don't want to use a mode and don't want the camera to operate according to pre-determined settings.
– **[Home]:**
This mode is typically used when you are at home. Use this in the following situations.
- You want the camera to:
→Turn on the privacy mode when you arrive home
- You don't want the camera to:
→Record images or make sounds when motion is detected
→Send notifications to you when motion is detected

– **[Away]:**
This mode is typically used when you are away from home. Use this in the following situations.
- You want the camera to:
→Record images or make sounds when motion is detected
→Send notifications to you when motion is detected
→Turn off the privacy mode when you leave home

The following describes the settings for the **[Home]** and **[Away]** modes.

Settings for when the mode changes
You can specify the settings for when the mode is activated, such as when you select this mode or when it is automatically activated via automatic mode switching using geo-fencing ("Automatic Mode Switching", Page 64).

Setting	[Away]	[Home]
Privacy Mode	Off	On

Settings for when motion is detected
You can specify the settings for when motion is detected.

Setting	[Away]	[Home]
Start Recording	On	Off

Setting	[Away]	[Home]
Duration	[15 sec]	–
Play Sound	On	Off
Send Notifications	On	Off

Checking the selected mode

The name of the selected mode is displayed below the name of the camera in the home screen (“Shelf camera, floor camera, and window camera home screen”, Page 23).

Accessing the mode screen

The mode screen can be accessed by tapping the mode icon displayed below the name of the camera in the home screen (“Shelf camera, floor camera, and window camera home screen”, Page 23).

Selecting modes

1 Access the mode screen (“Accessing the mode screen”, Page 63).

2 Select the desired mode.

Turning modes off

If you don’t want the camera to operate by a mode, you can turn off modes by selecting **[Basic]**.

1 Access the mode screen (“Accessing the mode screen”, Page 63).

2 Tap **[Basic]**.

Creating new modes

You can create new modes to operate your devices when an event occurs such as motion is detected.

1 Access the mode screen (“Accessing the mode screen”, Page 63).

2 Tap .

3 Change the settings as required.
- Each setting is explained in this section.

4 When finished, tap **[Create]**.

Mode name

When creating a new mode, you can set the name used for the mode. This helps you to identify the mode from other modes used on your mobile device.

– **To enter a name:** Tap the text field and enter the text.

When switched to this mode

You can choose the actions that will take place when the mode is switched to (either via a manual change or via geo-fencing).

– **[Privacy Mode]:** Turns the privacy mode on or off, or keeps the privacy mode in its current state.

Once motion is detected

You can choose the actions that will take place when the camera detects motion.

– **[Start Recording]:** Enables recording when motion is detected.
  - **[Duration]:** Specifies the recording duration when motion is detected.

– **[Send Notifications]:** Enables notifications for when motion is detected.

– **[Play Sound]:** Specifies the sound (beeps or no sound) for when motion is detected.

Editing modes

1 Access the mode screen (“Accessing the mode screen”, Page 63).

2 Tap **[Edit]**, and then tap next to the desired mode.

3 Edit the desired settings.

4 When finished, tap **[Done]**.

Deleting modes

1 Access the mode screen (“Accessing the mode screen”, Page 63).

2 Tap **[Edit]**, and then tap next to the desired mode.

3 Tap .

4 Tap **[OK]**.

Automatic Mode Switching

You can enable modes to be switched automatically depending on your location as determined by geo-fencing.

Geo-fencing is a location-based feature that can set up virtual boundaries around a geographical location such as your home. When devices (mobile devices, etc.) enter or exit these boundaries, actions (changing modes, etc.) can be triggered.

To use geo-fencing, you must allow the **[HomeHawk]** app to use the location of your mobile device.

Note:

- In order to use Automatic Mode Switching with the geo-fencing feature, your mobile device must be able to communicate with your camera. Therefore, the mode may not switch automatically in the following situations.
  – your mobile device and/or your camera do not have good network conditions
  – your mobile device's battery does not have adequate charge remaining to use the Automatic Mode Switching feature

  In these cases, start the **[HomeHawk]** app on your mobile device.

Turning geo-fencing on and off

1 Access the mode screen (“Accessing the mode screen”, Page 63).

2 Under **[Automatic Mode Switching]**, slide the **[Geo-fencing]** switch to turn geo-fencing on or off.

Configuring geo-fencing

You can specify the settings to be used with geo-fencing.

1 Access the mode screen (“Accessing the mode screen”, Page 63).

2 Tap **[Edit]**

3 Tap next to **[Geo-fencing]**.

4 Change the settings as required.
- Each setting is explained in this section.

Setting the base position and radius

In order to use geo-fencing, you must specify the location and size of the geo-fencing area. The base position (usually your home) determines where the geo-fence will be located and the radius determines the size of the geo-fencing area.

Setting the radius

1 Tap the size displayed next to **[Radius]**.

2 Specify the desired size, and then tap **[Done]**.

Setting the base position for iPhone, iPad

On the map displayed under **[Position]**, tap and hold the area you want to specify for the base position.

Setting the base position for Android devices

Tap **[Use current location]** → **[OK]**. The location information of the mobile device is obtained and is used as the base location. After this, tap **[Check Map]** and confirm the location displayed on the map.

Note:

- Although the position can be set using the map, it may not be set accurately.

Setting the mode for when you are not at home (out of radius).

You can specify the mode that will be used when your mobile device is outside of the specified radius around the geo-fencing area (i.e., when you are away from home).
This mode will be activated when all of the selected mobile devices (“Selecting the mobile devices to use with geo-fencing”, Page 65) are out of the radius.
Tap **[Out of Radius]**, select the mode, and then tap **[Done]**.

Setting the mode for when you are at home (in radius)

You can specify the mode that will be used when your mobile device is inside of the specified radius around the geo-fencing area (i.e., when you are at home).
This mode will be activated when any one of the selected mobile devices (“Selecting the mobile devices to use with geo-fencing”, Page 65) is in the radius.
Tap **[In Radius]**, select the mode, and then tap **[Done]**.

Selecting the mobile devices to use with geo-fencing

You can specify the mobile devices to be used with geo-fencing.

Tap **[Select the Mobile Devices]**, specify the mobile devices to be used with geo-fencing, and then tap **[OK]**.

Note:

- All mobile devices in the list can be deselected. However, each mobile device can only be selected (enabled) by itself and not from other mobile devices.
- A mobile device can only be selected for use with the geo-fencing settings of a maximum of 4 cameras.

Floor camera setup

Floor camera setup (overview)

There are 3 basic steps you need to perform in order to connect to the camera from your mobile device.

1 **Download the app**
Download the **[HomeHawk]** app to your mobile device.
See “Downloading the [HomeHawk] app (overview)”, Page 20.

2 **Set up the camera**
Use the **[HomeHawk]** app to configure the camera to connect to your wireless router, and then register your mobile device to the camera.
See “Floor camera initial setup”, Page 67.

3 **Register additional mobile devices (optional)**
You can register additional mobile devices to the camera, for a total of 8.
See “Registering other mobile devices to the floor camera”, Page 69.

Floor camera initial setup

Before you begin

Confirm the following before you begin.
– Make sure you have installed the **[HomeHawk]** app on your mobile device
– Make sure your wireless router and the camera are turned on
– Make sure your mobile device is connected to your wireless router
– Make sure your mobile device can connect to the Internet

Note:

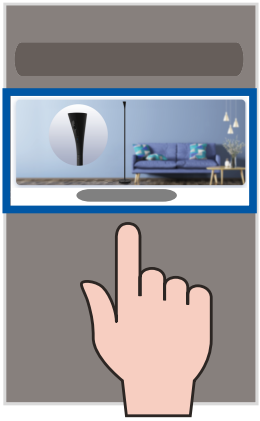
- If you have completed this procedure and want to register another mobile device to the camera, see “Registering other mobile devices to the floor camera”, Page 69.
- If you experience trouble while performing this procedure, refer to the information in “Initial setup by WPS”, Page 186 and “Initial setup by Basic Setup”, Page 188.

Initial setup

1 Start the **[HomeHawk]** app by tapping its icon (shown below).

- The end-user license agreement is displayed the first time you start the app.
- Confirm all of the displayed permission screens and agree as necessary.
- Select your country or region if displayed, and then tap **[Next]**.

2 Tap **[FLOOR Camera]**.



3 Tap **[Add New Camera]**.

4 Follow the on-screen instructions, plug in the camera, and then tap **[Next]**.
- Wait about 1 minute for the camera to start up.

5 Follow the on-screen instructions and confirm the LED color on your camera.
- If the camera's LED indicator lights in yellow, tap the yellow icon and proceed to step 6.
- If the camera's LED indicator lights in a color other than yellow, tap the icon for that color and follow the on-screen instructions.

6 Confirm that the wireless network name (SSID) of the wireless router that the camera will connect to is displayed, and then tap **[Done]**.
- If a different wireless network name is displayed, tap **[Change Wi-Fi]** and follow the on-screen instructions.

7 Determine if you will complete the initial setup using WPS or without using WPS (Basic Setup).
- **Set up using WPS:**
  Select **[WPS]** and proceed from WPS.
- **Set up without using WPS:**
  Select **[Basic Setup]** and proceed from Basic Setup.

WPS
WPS is a function of wireless routers that is used to easily connect wireless devices to wireless routers. A WPS button on a wireless router indicates that it has the WPS function.

WPS

1 Press and hold the WPS button on the wireless router until the router's WPS LED indicator starts blinking.

2 Tap **[Next]**.

3 Press the **SETUP** button on the camera for about 5 seconds until the camera beeps.
- The camera's LED indicator starts blinking in yellow.

4 Tap **[Next]**.
- When **[Linking]** is displayed, wait for up to about 2 minutes until the camera is connected to your wireless network and mobile device.

5 Press the **SETUP** button on the camera for about 2 seconds until the camera beeps.
- The camera's LED indicator starts blinking in green.

6 When prompted, create a login password for the camera, and then tap **[Next]**.

7 When prompted, enter a name for the camera and mobile device, and then tap **[OK]**.
- The camera name setting is used by your mobile device to identify the camera. This is useful when you have multiple cameras.
- The mobile device name setting is used to identify your mobile device. This is useful when performing certain operations, such as deregistering.

8 When **[Congrats!]** is displayed, tap **[Explore HomeHawk]**.
- A screen explaining how to insert an SD card into the camera is displayed.
  If you will use an SD card to record images, follow the on-screen instructions and insert an SD card into the camera.
- A screen asking you to set the home position of geo-fencing (“Automatic Mode Switching”, Page 87) is displayed, tap **[Set Current pos as Home]** → **[OK]**.
- The app’s home screen is displayed when initial setup is completed.

Basic Setup

1 Enter the password for the wireless network and then tap **[Next]**.

2 Depending on the type of mobile device that you use, proceed as follows.
Android users:
Go to step 3.
iOS 11.0 and later users:
Tap **[Join]**.
iOS 10.x users:
Change your mobile device’s wireless network setting temporarily so that it connects to the camera directly.
- Open your mobile device’s **[Settings]** app, tap **[Wi-Fi]**, select “Pansonic_Camera”, enter “12345678” as the password, and then tap **[Join]**.

Note:
- Your mobile device starts searching for the camera.
- When **[Linking]** is displayed, wait for up to about 3 minutes until the camera is connected to your wireless network and mobile device.

3 Press the **SETUP** button on the camera for about 2 seconds until the camera beeps.
- The camera’s LED indicator starts blinking in green.

4 When prompted, create a login password for the camera, and then tap **[Next]**.

5 When prompted, enter a name for the camera and mobile device, and then tap **[OK]**.
- The camera name setting is used by your mobile device to identify the camera. This is useful when you have multiple cameras.
- The mobile device name setting is used to identify your mobile device. This is useful when performing certain operations, such as deregistering.

6 When **[Congrats!]** is displayed, tap **[Explore HomeHawk]**.
- A screen explaining how to insert an SD card into the camera is displayed.
  If you will use an SD card to record images, follow the on-screen instructions and insert an SD card into the camera.
- A screen asking you to set the home position of geo-fencing (“Automatic Mode Switching”, Page 87) is displayed, tap **[Set Current pos as Home]** → **[OK]**.
- The app’s home screen is displayed when initial setup is completed.

Registering other mobile devices to the floor camera

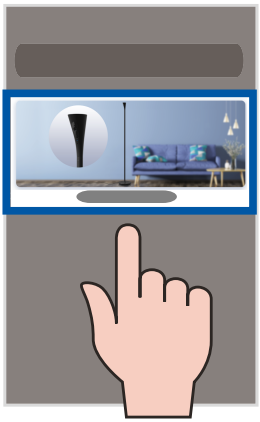
Confirm the following before you begin.
– Make sure you have installed the **[HomeHawk]** app on your mobile device
– Make sure your wireless router and the camera are turned on

– Make sure your mobile device is connected to your wireless router
– Make sure your mobile device can connect to the Internet

1 Start the **[HomeHawk]** app by tapping its icon (shown below).

- The end-user license agreement is displayed the first time you start the app.
- Confirm all of the displayed permission screens and agree as necessary.
- Select your country or region if displayed, and then tap **[Next]**.

2 Tap **[FLOOR Camera]**.



3 Tap **[Connect to Existing]**.

4 Follow the on-screen instructions and confirm the LED color on your camera.
– If the camera's LED indicator lights in blue or white, tap the blue or white icon and proceed to step 5.
– If the camera's LED indicator lights in a color other than blue or white, tap the icon for that color and follow the on-screen instructions.

Note:

- When **[Linking]** is displayed, wait for up to about 40 seconds until the mobile device finds the camera on your wireless network.

5 Press the **SETUP** button on the camera for about 2 seconds until the camera beeps.
- The camera's LED indicator starts blinking in green.

6 When prompted, enter the login password for the camera, and then tap **[Next]**.

7 When prompted, enter a name for the mobile device, and then tap **[OK]**.

8 When **[Congrats!]** is displayed, tap **[Explore HomeHawk]**.
- The app's home screen is displayed when initial setup is completed.

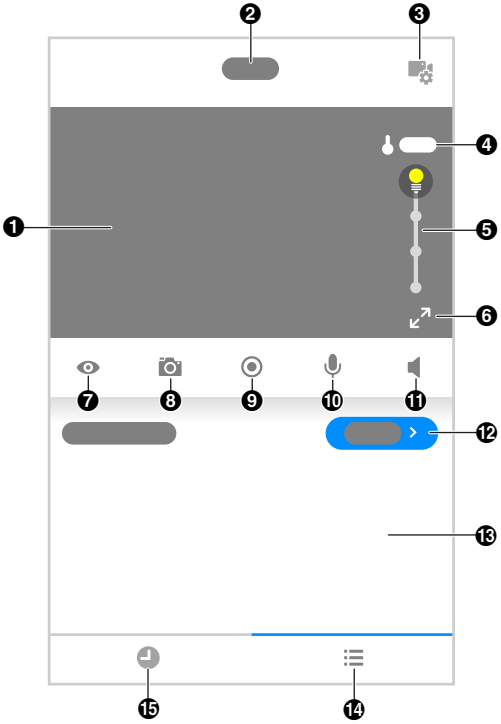
Floor camera features

Floor camera features (overview)

You can use a floor camera to monitor and record the sights and sounds of the area where the camera is located. Floor cameras have built-in motion, sound, and temperature detection features. When the motion detection is triggered, camera images can be recorded, notifications can be sent to your mobile device, and beeps can be sounded from the camera. When the sound or temperature detection is triggered, notifications can be sent to your mobile device. Additionally, built-in speakers and microphones allow you to talk to anyone who is near the camera. Floor cameras also have a light that can be turned on and off, and adjusted to 3 different levels.

Viewing the camera image/recording list screen

The camera image/recording list screen shows live images and a list of recordings for the selected camera.
To access the camera image/recording list screen, tap the desired camera from the **[HomeHawk]** app home screen (“Shelf camera, floor camera, and window camera home screen”, Page 23).



❶ Shows the live camera image (“Viewing the live camera image screen”, Page 72)

❷ Shows the camera’s name

❸ Displays the camera setting screen

❹ Displays the temperature of the area surrounding the camera

❺ Adjusts the brightness for the light
Slide to the bottom to turn off the light

❻ Indicates that by tapping the camera image (❶) or this icon (❻), the camera image can be enlarged and the live camera image screen (“Viewing the live camera image screen”, Page 72) can be accessed

❼ Enables/disables privacy mode for the camera (“Turning the privacy mode on and off”, Page 74)

❽ Takes snapshots (“Taking snapshots”, Page 75)

❾ Starts/stops recording (“Recording camera images (manual recording)”, Page 75)

❿ Enables talking with the camera (“Talking to the camera”, Page 76)

⓫ Turns sound on/off (“Turning the camera audio on and off”, Page 74)

⓬ Displays the recording list screen where all the images can be displayed for the selected date (“Viewing the recording list screen”, Page 76)

⓭ Shows today’s recorded image list for the selected camera

⓮ Displays the recorded images in a list

⓯ Displays the recorded images in a timeline

Note:

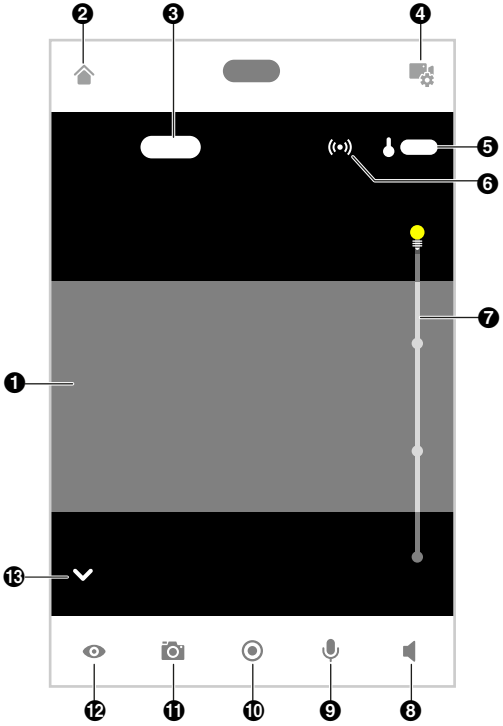
- When connected away from home, or

is displayed next to the camera’s name. See “Connection mode when away from home”, Page 24 for more information.

Viewing the live camera image screen

The live camera image screen shows you live camera images and also allows you to operate the selected camera to zoom in, recording images, etc.

To access the live camera image screen, tap the desired camera from the **[HomeHawk]** app home screen (“Shelf camera, floor camera, and window camera home screen”, Page 23), and then tap the displayed camera image.



❶ Shows the live camera image

❷ Returns you to the home screen (“Shelf camera, floor camera, and window camera home screen”, Page 23)
- **iPhone, iPad:**
  Displayed on the right side of the screen
- **Android devices:**
  Displayed on the left side of the screen

❸ When recording images, ● is displayed together with the recording duration and details about the recording
- – The recording was started manually
- – The recording was started when motion was detected

❹ Displays the camera setting screen

❺ Displays the temperature of the area surrounding the camera

❻ Shows the bit rate (“Displaying the bit rate level icon”, Page 112)

❼ Adjusts the brightness for the light
Slide to the bottom to turn off the light

❽ Turns sound on/off
(“Turning the camera audio on and off”, Page 74)

❾ Enables talking with the camera
(“Talking to the camera”, Page 76)

❿ Starts/stops recording
(“Recording camera images (manual recording)”, Page 75)

⓫ Takes snapshots
(“Taking snapshots”, Page 75)

⓬ Enables/disables privacy mode for the camera
(“Turning the privacy mode on and off”, Page 74)

⓭ Hides/displays the buttons on the bottom of the screen

Tap ⌄ to hide the buttons and ⌃ to display the buttons.

Note:

- Multiple mobile devices can view live images from the same camera at the same time (“Accessing from multiple mobile devices”, Page 26). However, only one mobile device can use certain features at a time (talking to the camera, etc.).
- When connected away from home, or is displayed next to the camera’s name. See “Connection mode when away from home”, Page 24 for more information.
- When displaying images while away from home, the app will disconnect from the camera after a certain period of time in some conditions. This is to minimize data usage. If you are disconnected automatically, a dialog is displayed asking if you want to connect to the camera again. The time out period cannot be changed.

Turning the camera audio on and off

Tap the icon to select the desired setting while viewing live images from a camera.

: Camera audio will be heard

: Camera audio will not be heard

Turning the privacy mode on and off

Tap the icon to select the desired setting while viewing live images from a camera.
When privacy mode is enabled, images and audio from the camera are unavailable and operations such as recording images and talking with the camera cannot be performed. This is useful when you are at home and don’t want other people to be able to watch you with the camera.

: The privacy mode is enabled

: The privacy mode is disabled

Viewing images horizontally

By turning your mobile device on its side, you can display camera images horizontally.
When viewing images horizontally, icons for operating the camera (e.g., recording, talking, etc.) are not displayed. To display these icons, tap anywhere on the camera image.

Zooming in and out

Pinch in and out on the camera image while viewing live images from a camera. While zoomed in, you can swipe your finger on the camera image to display a different area of the image.

Using night vision

If there is not adequate light to illuminate the subject, such as at night, the camera switches to night vision mode depending on the settings (see "Using night vision (shelf cameras and floor cameras only)", Page 111).

Recording camera images

To record camera images manually, see "Recording camera images (manual recording)", Page 75.
To record images automatically when a sensor is triggered, see "Floor camera mode settings (overview)", Page 85.

Taking snapshots

To save snapshots (i.e., still images) while viewing live camera images, see "Taking snapshots", Page 75.

Talking to the camera

To use your mobile device's microphone and the camera's built-in speaker to talk to someone where the camera is installed, see "Talking to the camera", Page 76.

Adjusting the brightness of the lights

You can adjust the brightness of the lights. See "Adjusting the lighting", Page 81.

Recording camera images (manual recording)

You can record camera images while viewing live camera images. Camera recordings are saved on the camera's SD card.

1 View live images from the desired camera.

2 Tap to start recording.

- Recordings include both audio and video. To disable audio recording, see "Recording with sound (shelf cameras and floor cameras only)", Page 110.

3 Tap to stop recording.

Note:

- The maximum recording time is 15 minutes.
- If **[Recording Error (Memory full)]** is displayed, the camera's SD card is full and new recordings cannot be saved. Erase unneeded recordings (see "Erasing recordings", Page 79).
- For information about SD cards and how recordings are saved, see "Camera SD cards", Page 83.

Taking snapshots

You can save snapshots (i.e., still images) while viewing live camera images. Snapshots are saved in your mobile device's default photo album app.

1 View live images from the desired camera.

2 Tap .

Note:

- Snapshot sizes are scaled to fit the width of your mobile device's display.
- **iPhone, iPad**
  Snapshots are saved as JPEG files in your mobile device's "Photos" app.
- **Android devices**
  Snapshots are saved as JPEG files in your mobile device's picture directory. The file naming convention is: device name + the date and time.

Talking to the camera

You can use your mobile device's microphone and the camera's built-in speaker to talk to someone where the camera is installed. You can either tap and hold to talk or tap once to talk alternatively with the other party.

Tap and hold to talk

1 View live images from the desired camera.

2 Tap and hold .

- The audio from your mobile device's microphone is played through the camera's speaker until you release your finger.
- Talk in turns with the other party. (While you are talking to the camera, you will not be able to hear audio from the camera's microphone.)

Tap and talk

1 View live images from the desired camera.

2 Tap .

- Talk in turns with the other party.

3 When finished, tap .

Note:

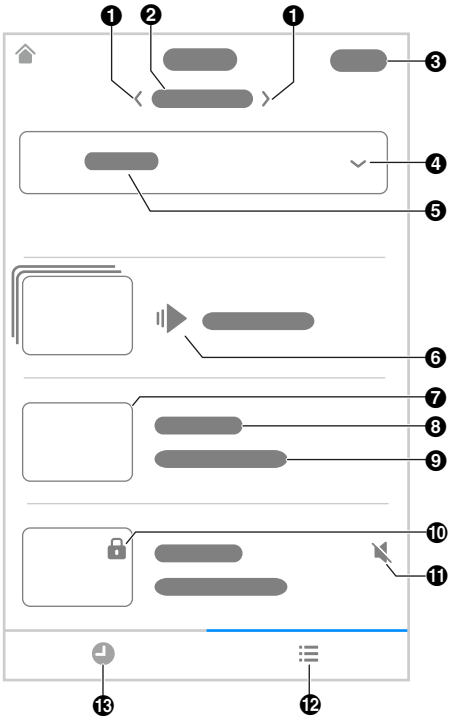
- For information about adjusting the camera's speaker volume, see "Adjusting the talk volume", Page 109.

Viewing the recording list screen

From the **[HomeHawk]** app home screen, tap → **[Recording List]** to display the recording list screen.

- You can also access the recording list screen by tapping **[Show all]** in the camera image/recording list screen ("Viewing the camera image/recording list screen", Page 71).

The recording list displays all recordings for the specified dates and filters can be used to specify the recordings that you want to display.



❶ 〈: Displays recorded images for the previous date
〉: Displays recorded images for the next date

❷ Displays the selected date and you can tap here to select a date

❸ **[Select]**: Used to select multiple recordings for deleting or protecting

❹ Selects the camera when there are multiple cameras registered

❺ Shows the camera's name

❻ Goes to rapid playback
("Rapid playback", Page 79)

❼ Displays a thumbnail image for the recording

❽ Shows information about the type of recording
– **[Manual]:** Recordings that were recorded manually.
– **[Motion]:** Recordings that were recorded when a motion sensor was triggered.

❾ Shows the time when the recording was made and its duration

❿ Indicates that a recording is protected

⓫ Indicates recordings were recorded with the sound muted by the recording settings

⓬ Displays the recorded images in a list

⓭ Displays the recorded images in a timeline

Playing back recordings

1 From the **[HomeHawk]** app home screen, tap → **[Recording List]**.

2 Select the desired camera.

3 Tap ❮, ❯, or the displayed date to select a recording date.
- A list of all recordings recorded on the selected date is displayed.
- Tap to display recordings in a timeline. Tap to display recordings in a list.

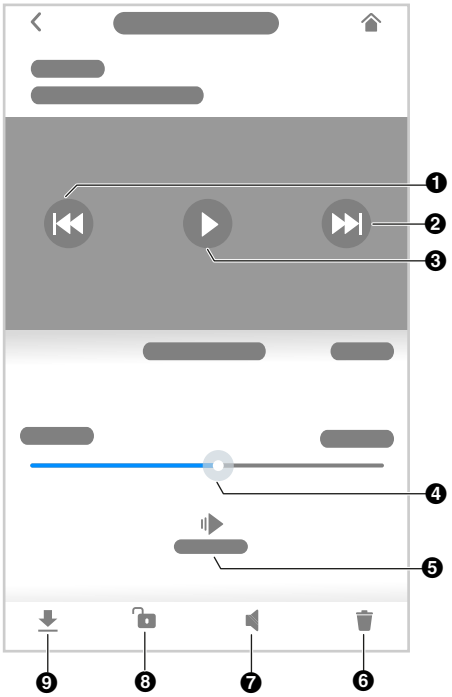
4 Select a recording.
- The selected recording starts playing in the playback screen.

Note:

- When connected away from home, or is displayed on the playback screen. See "Connection mode when away from home", Page 24 for more information.
- Recorded images can also be played back from the camera image/recording list screen ("Viewing the camera image/recording list screen", Page 71).

Normal playback

The normal playback screen allows you play back recording and perform other operations.



❶ Goes to the start of the recording
- Tap twice to go to the previous recording.

❷ Goes to the next recording

❸ Starts or resumes playback

❹ Allows you to quickly move to the desired area of the recording by sliding the progress bar

❺ Goes to rapid playback

❻ Erases the current recording

❼ Tap to enable or disable audio for the recording
- indicates audio is enabled.
- indicates audio is disabled.

❽ Protects the recording
- Tap to remove the protection for the recording.

❾ Downloads the recording to the mobile device
- Do not perform any function on your mobile device while downloading is in progress.
- Only 1 recording can be downloaded at a time.
- Recordings can only be downloaded when the mobile device is connected to the same wireless network as the camera.

Rapid playback

Rapid playback allows you to play a condensed playback of the selected day's recordings.
Tap **[Rapid Playback]** to start rapid playback. The following controls are displayed.

Starts or resumes playback

Pauses playback

Goes to normal playback

Erasing recordings

Erasing individual images

1 From the **[HomeHawk]** app home screen, tap → **[Recording List]**.

2 Select the desired camera.

3 Tap , , or the displayed date to select a recording date.

4 Select the desired recording.

5 Tap → **[OK]**.

Erasing multiple images

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Recording List]**.

2 Select the desired camera.

3 Tap ❮, ❯, or the displayed date to select a recording date.

4 Tap **[Select]**.

5 Select the desired recordings.

- Tap ○/✓ displayed next to the date to select or deselect all images shown in the list.

6 When finished, tap **[Delete]** → **[OK]**.

Protecting recordings

You can protect recordings so that they cannot be erased.

Protecting individual images

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Recording List]**.

2 Select the desired camera.

3 Tap ❮, ❯, or the displayed date to select a recording date.

4 Select the desired recording.

5 Tap 🔓.

- Tap 🔒 to remove the protection.
- 🔒 is displayed in the thumbnail of images to indicate that the image is protected.

Protecting multiple images

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Recording List]**.

2 Select the desired camera.

3 Tap ❮, ❯, or the displayed date to select a recording date.

4 Tap **[Select]** → 🔒.

5 Select the desired recordings.

- 🔒 is displayed in the thumbnail of images to indicate that the image is protected.
- Tap ○/✓ displayed next to the date to select or deselect all images shown in the list.

6 When finished, tap **[Protect]**.

Adjusting the lighting

You can adjust the brightness of the camera's light and configure the light to turn on automatically according to a schedule or when motion is detected, etc.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Tap **[Lighting]**.
- Each setting is explained in this section.

Using a schedule

You can enable the schedule so that the light is turned on and off at specified times and you can also specify the light to turn on and off at random times when you are away from home on a vacation, etc.
Slide the **[Use a Schedule]** switch to the "on" position to enable the schedule.

- Slide to specify the start time.
- Slide to specify the end time.
- **[Vacation Randomizer]:** Turns the light on and off at random times within an hour of the times specified in the schedule.

Turning on lights after detecting motion

You can enable the light to turn on if motion is detected when it is dark.
Slide the **[Motion Sensor]** switch to the "on" position to enable the use of motion detection to turn on the light.
- **[Duration]:** Determines how the long the light will be lit after motion is detected.

Adjusting the brightness of the light

You can adjust the brightness level for when the light is turned on through a schedule or motion detection.
Slide the **[Brightness]** slider to the desired level.

Battery status

When backup batteries are used with the camera, you can check the status of the batteries.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Tap **[System]**.
- **[Battery Status]:** Displays the status of the batteries.

Note:
- When inserting or replacing batteries, disconnect the AC adaptor from the wall outlet before inserting or replacing the batteries. If batteries are inserted or replaced with the AC adaptor connected to a wall outlet, the battery status may not be updated or may be incorrect.

Detection area

You can select which areas of the camera image are monitored for motion detection. This allows you to ignore motion in certain areas of the camera's image.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Tap **[Detection]** → **[Set Detection Area]**.

4 Tap the desired areas of the camera image.
- Gray areas of the camera image indicate areas for which image detection is disabled.
- Tap to change the number of areas displayed on the screen.

5 When finished, tap **[Set]**.

Motion sensitivity

You can adjust the sensitivity of the camera's motion detection features.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Tap **[Detection]** → **[Motion Sensitivity]**.

4 Select the desired setting.
- **[High]**: The sensors are very sensitive to changes, i.e., even a small change will trigger the sensors.
- **[Normal]**: The sensors are moderately sensitive to changes.
- **[Low]**: The sensors are somewhat sensitive to changes.
- **[Very Low]**: The image sensor is only slightly sensitive to changes, i.e., a large change is required to trigger the sensor.

5 When finished, tap **[OK]**.

Detection test

You can test which areas of the camera image can be detected while viewing live images from the camera. This is useful when determining where to install cameras, and also which areas you should enable or disable detection for.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Tap **[Detection]** → **[Detection Test]**.

Video motion
A live image of the selected camera is displayed with detection areas colored to show their detection status.
- **Green areas**: Areas where motion was detected.
- **Clear areas**: Areas where motion was not detected.
- **Black areas**: Areas where detection is disabled. (See "Detection area", Page 82 for more information.)

Temperature sensor

You can configure the camera to send notifications if the camera's ambient temperature is too cold or too hot.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Tap **[Detection]** → **[Temperature Alert Range]**.

4 Select the desired temperature for the lower threshold of the acceptable temperature range.

5 Select the desired temperature for the upper threshold of the acceptable temperature range, and then tap **[OK]**.

Temperature units

You can change the units displayed for the temperature.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Tap **[System]** → **[Temperature Units]**.

4 Select whether the temperature is displayed and specified in Fahrenheit or Celsius, and then tap **[OK]**.

Sound sensitivity

You can configure the sound sensitivity used for sound detection.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Tap **[Detection]** → **[Sound Sensitivity]**.

4 Select the desired setting, and then tap **[OK]**.
- **[High]**: The microphone is very sensitive to sound, i.e., even a small sound will trigger the notification.
- **[Normal]**: The microphone is moderately sensitive to sound.
- **[Low]**: The microphone is only slightly sensitive to sound, i.e., a large sound is required to trigger the notification.

Camera SD cards

SD card capacity and total recording time

The following recording times apply when images from one camera are recorded. All times are approximate.
- 4 GB card: 4 hours
- 8 GB card: 9 hours
- 16 GB card: 18 hours

– 32 GB card: 36 hours
– 64 GB card: 72 hours
– 128 GB card: 145 hours
– 256 GB card: 290 hours

Note:

- SD cards larger than 256 GB cannot be used.
- The times listed here are calculated theoretically. Actual recording time may vary.
- The times listed here apply during the following condition.
  – **[Resolution]** is set to **[HD (1280x720)]** (“Changing the camera resolution”, Page 112)
- The file system and other information is stored on the SD card, therefore the card’s actual available capacity will be less than the card’s noted capacity.

SD card formatting

Before inserting an SD card into the camera, format the SD card using your computer and the SD formatting tool available from the web page listed below.
{{"www.sdcard.org/downloads/formatter_4/"|tolink("http://www.sdcard.org/downloads/formatter_4/")}}

Note:

- All data stored on the SD card will be erased when it is formatted.

How recordings are saved on the SD card

- Recordings are saved on the camera’s SD card in folders based on the recording date, in the following path.
  /PRIVATE/PANA_GRP/HH/FLOOR/MM-DD-YYYY
- The file naming convention is: camera number + recording type + recording start time.
  – First character: 1 (fixed).
  – Second character: Recording type. A=sensor recordings, M=manual recordings.
  – Remaining characters: Recording start time (hhmmss).
  Example: 1M123455.mp4
  This file is a manual recording (“M”) that started at 12:34 PM and 55 seconds (“123455”).

Floor camera mode settings

Floor camera mode settings (overview)

Modes allow the cameras to operate according to pre-determined settings. You can use modes to match where you are (at home, away from home, etc.) and what actions you want cameras to make (record images when motion is detected, etc.). You can use preset modes or create your own modes.

Examples

The following are some examples of how you can use modes.
– I want the camera light to turn on when I arrive home and turn off when I leave home
– I want the camera to record images and make a sound when motion is detected by the camera
– I want to receive notifications when motion is detected by the camera
– I want the privacy mode to turn on when I arrive home so that camera images can't be viewed (geo-fencing ("Automatic Mode Switching", Page 87) must be enabled)

Preset modes

There are 3 preset modes that can be used for cameras: **[Basic]**, **[Home]**, and **[Away]**.
– **[Basic]:**
Use this if you don't want to use a mode and don't want the camera to operate according to pre-determined settings.
– **[Home]:**
This mode is typically used when you are at home. Use this in the following situations.
- You want the camera to:
  →Turn on the light when you arrive home
  →Turn on the privacy mode when you arrive home
- You don't want the camera to:
  →Record images or make sounds when motion is detected
  →Send notifications to you when motion is detected

– **[Away]:**
This mode is typically used when you are away from home. Use this in the following situations.
- You want the camera to:
  →Record images or make sounds when motion is detected
  →Send notifications to you when motion is detected
  →Turn off the light when you leave home
  →Turn off the privacy mode when you leave home

The following describes the settings for the **[Home]** and **[Away]** modes.

Settings for when the mode changes
You can specify the settings for when the mode is activated, such as when you select this mode or when it is automatically activated via automatic mode switching using geo-fencing ("Automatic Mode Switching", Page 87).

Setting	[Away]	[Home]
Lighting	Off	On
Brightness	–	[High]
Privacy Mode	Off	On

Settings for when motion is detected
You can specify the settings for when motion is detected.

Setting	[Away]	[Home]
Start Recording	On	Off
Duration	[15 sec]	–
Play Sound	On	Off
Send Notifications	On	Off

Checking the selected mode

The name of the selected mode is displayed below the name of the camera in the home screen (“Shelf camera, floor camera, and window camera home screen”, Page 23).

Accessing the mode screen

The mode screen can be accessed by tapping the mode icon displayed below the name of the camera in the home screen (“Shelf camera, floor camera, and window camera home screen”, Page 23).

Selecting modes

1 Access the mode screen (“Accessing the mode screen”, Page 86).
2 Select the desired mode.

Turning modes off

If you don’t want the camera to operate by a mode, you can turn off modes by selecting **[Basic]**.
1 Access the mode screen (“Accessing the mode screen”, Page 86).
2 Tap **[Basic]**.

Creating new modes

You can create new modes to operate your devices when an event occurs such as motion is detected.
1 Access the mode screen (“Accessing the mode screen”, Page 86).
2 Tap .
3 Change the settings as required.
- Each setting is explained in this section.

4 When finished, tap **[Create]**.

Mode name

When creating a new mode, you can set the name used for the mode. This helps you to identify the mode from other modes used on your mobile device.

– **To enter a name:** Tap the text field and enter the text.

When switched to this mode

You can choose the actions that will take place when the mode is switched to (either via a manual change or via geo-fencing).
– **[Lighting]:** Turns the light on or off, or keeps the light in its current state.
  ● **[Brightness]:** Sets the brightness of the light when it is turned on.
– **[Privacy Mode]:** Turns the privacy mode on or off, or keeps the privacy mode in its current state.

Once motion is detected

You can choose the actions that will take place when the camera detects motion.
– **[Start Recording]:** Enables recording when motion is detected.
  ● **[Duration]:** Specifies the recording duration when motion is detected.
– **[Send Notifications]:** Enables notifications for when motion is detected.
– **[Play Sound]:** Specifies the sound (beeps or no sound) for when motion is detected.

Editing modes

1 Access the mode screen (“Accessing the mode screen”, Page 86).

2 Tap **[Edit]**, and then tap next to the desired mode.

3 Edit the desired settings.

4 When finished, tap **[Done]**.

Deleting modes

1 Access the mode screen (“Accessing the mode screen”, Page 86).

2 Tap **[Edit]**, and then tap next to the desired mode.

3 Tap .

4 Tap **[OK]**.

Automatic Mode Switching

You can enable modes to be switched automatically depending on your location as determined by geo-fencing.
Geo-fencing is a location-based feature that can set up virtual boundaries around a geographical location such as your home. When devices (mobile devices, etc.) enter or exit these boundaries, actions (changing modes, etc.) can be triggered.
To use geo-fencing, you must allow the **[HomeHawk]** app to use the location of your mobile device.

Note:

● In order to use Automatic Mode Switching with the geo-fencing feature, your mobile device must be able to communicate with your camera. Therefore, the mode may not switch automatically in the following situations.
  – your mobile device and/or your camera do not have good network conditions

– your mobile device's battery does not have adequate charge remaining to use the Automatic Mode Switching feature

In these cases, start the **[HomeHawk]** app on your mobile device.

Turning geo-fencing on and off

1 Access the mode screen (“Accessing the mode screen”, Page 86).

2 Under **[Automatic Mode Switching]**, slide the **[Geo-fencing]** switch to turn geo-fencing on or off.

Configuring geo-fencing

You can specify the settings to be used with geo-fencing.

1 Access the mode screen (“Accessing the mode screen”, Page 86).

2 Tap **[Edit]**

3 Tap next to **[Geo-fencing]**.

4 Change the settings as required.
- Each setting is explained in this section.

Setting the base position and radius

In order to use geo-fencing, you must specify the location and size of the geo-fencing area. The base position (usually your home) determines where the geo-fence will be located and the radius determines the size of the geo-fencing area.

Setting the radius

1 Tap the size displayed next to **[Radius]**.

2 Specify the desired size, and then tap **[Done]**.

Setting the base position for iPhone, iPad

On the map displayed under **[Position]**, tap and hold the area you want to specify for the base position.

Setting the base position for Android devices

Tap **[Use current location]** → **[OK]**. The location information of the mobile device is obtained and is used as the base location. After this, tap **[Check Map]** and confirm the location displayed on the map.

Note:

- Although the position can be set using the map, it may not be set accurately.

Setting the mode for when you are not at home (out of radius).

You can specify the mode that will be used when your mobile device is outside of the specified radius around the geo-fencing area (i.e., when you are away from home).
This mode will be activated when all of the selected mobile devices (“Selecting the mobile devices to use with geo-fencing”, Page 89) are out of the radius.
Tap **[Out of Radius]**, select the mode, and then tap **[Done]**.

Setting the mode for when you are at home (in radius)

You can specify the mode that will be used when your mobile device is inside of the specified radius around the geo-fencing area (i.e., when you are at home).
This mode will be activated when any one of the selected mobile devices (“Selecting the mobile devices to use with geo-fencing”, Page 89) is in the radius.
Tap **[In Radius]**, select the mode, and then tap **[Done]**.

Selecting the mobile devices to use with geo-fencing

You can specify the mobile devices to be used with geo-fencing.
Tap **[Select the Mobile Devices]**, specify the mobile devices to be used with geo-fencing, and then tap **[OK]**.

Note:

- All mobile devices in the list can be deselected. However, each mobile device can only be selected (enabled) by itself and not from other mobile devices.
- A mobile device can only be selected for use with the geo-fencing settings of a maximum of 4 cameras.

Window camera setup

Window camera setup (overview)

There are 3 basic steps you need to perform in order to connect to the camera from your mobile device.

1 **Download the app**
Download the **[HomeHawk]** app to your mobile device.
See “Downloading the [HomeHawk] app (overview)”, Page 20.

2 **Set up the camera**
Use the **[HomeHawk]** app to configure the camera to connect to your wireless router, and then register your mobile device to the camera.
See “Window camera initial setup”, Page 90.

3 **Register additional mobile devices (optional)**
You can register additional mobile devices to the camera, for a total of 8.
See “Registering other mobile devices to the window camera”, Page 92.

Window camera initial setup

Before you begin

Confirm the following before you begin.
– Make sure you have installed the **[HomeHawk]** app on your mobile device
– Make sure your wireless router and the camera are turned on
– Make sure your mobile device is connected to your wireless router
– Make sure your mobile device can connect to the Internet

Note:

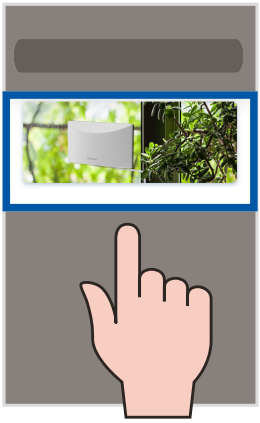
- If you have completed this procedure and want to register another mobile device to the camera, see “Registering other mobile devices to the window camera”, Page 92.
- If you experience trouble while performing this procedure, refer to the information in “Initial setup by WPS”, Page 190 and “Initial setup by Bluetooth”, Page 191.

Initial setup

1 Start the **[HomeHawk]** app by tapping its icon (shown below).

- The end-user license agreement is displayed the first time you start the app.
- Confirm all of the displayed permission screens and agree as necessary.
- Select your country or region if displayed, and then tap **[Next]**.

2 Tap **[WINDOW Camera]**.



3 Tap **[Add New Camera]**.

4 Follow the on-screen instructions, remove the cover from the camera, and then tap **[Next]**.

5 Follow the on-screen instructions, plug in the camera, and then tap **[Next]**.
- Wait about 1 minute for the camera to start up.

6 Follow the on-screen instructions and confirm the LED color on your camera.
- If the camera's LED indicator lights in yellow, tap the yellow icon and proceed to step 7.
- If the camera's LED indicator lights in a color other than yellow, tap the icon for that color and follow the on-screen instructions.

7 Confirm that the wireless network name (SSID) of the wireless router that the camera will connect to is displayed, and then tap **[Done]**.
- If a different wireless network name is displayed, tap **[Change Wi-Fi]** and follow the on-screen instructions.

8 Determine if you will complete the initial setup using Bluetooth or WPS.
- **Set up using Bluetooth:**
  Select **[Bluetooth]** and proceed from Bluetooth.
  - If Bluetooth is disabled on your mobile device, a dialog asking you to enable Bluetooth may be displayed. Follow the on-screen instructions to enable Bluetooth.
- **Set up using WPS:**
  Select **[WPS]** and proceed from WPS.

Bluetooth
Bluetooth is a wireless technology used for exchanging data between devices over short distances. The Bluetooth function of your mobile device can be used to connect to the camera and send it network information.

WPS
WPS is a function of wireless routers that is used to easily connect wireless devices to wireless routers. A WPS button on a wireless router indicates that it has the WPS function.

Bluetooth

1 Enter the password for the wireless network and then tap **[Next]**.
- Your mobile device starts searching for the camera.
- When **[Linking]** is displayed, wait for up to about 3 minutes until the camera is connected to your wireless network and mobile device.

2 Press the **SETUP** button on the camera for about 2 seconds.
- The camera's LED indicator starts blinking in green.

3 When prompted, create a login password for the camera, and then tap **[Next]**.

4 When prompted, enter a name for the camera and mobile device, and then tap **[OK]**.
- The camera name setting is used by your mobile device to identify the camera. This is useful when you have multiple cameras.
- The mobile device name setting is used to identify your mobile device. This is useful when performing certain operations, such as deregistering.

5 When **[Congrats!]** is displayed, tap **[Explore HomeHawk]**.
- The app's home screen is displayed when initial setup is completed.

6 Reattach the cover.

WPS

1 Press and hold the WPS button on the wireless router until the router's WPS LED indicator starts blinking.

2 Tap **[Next]**.

3 Press the **SETUP** button on the camera for about 5 seconds.
- The camera's LED indicator starts blinking in yellow.

4 Tap **[Next]**.
- When **[Linking]** is displayed, wait for up to about 2 minutes until the camera is connected to your wireless network and mobile device.

5 Press the **SETUP** button on the camera for about 2 seconds.
- The camera's LED indicator starts blinking in green.

6 When prompted, create a login password for the camera, and then tap **[Next]**.

7 When prompted, enter a name for the camera and mobile device, and then tap **[OK]**.
- The camera name setting is used by your mobile device to identify the camera. This is useful when you have multiple cameras.
- The mobile device name setting is used to identify your mobile device. This is useful when performing certain operations, such as deregistering.

8 When **[Congrats!]** is displayed, tap **[Explore HomeHawk]**.
- The app's home screen is displayed when initial setup is completed.

9 Reattach the cover.

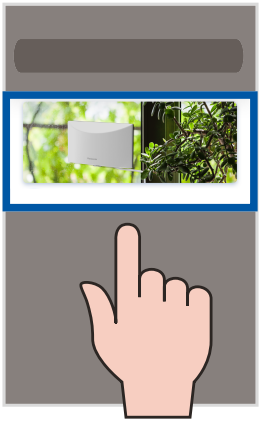
Registering other mobile devices to the window camera

Confirm the following before you begin.
– Make sure you have installed the **[HomeHawk]** app on your mobile device
– Make sure your wireless router and the camera are turned on
– Make sure your mobile device is connected to your wireless router
– Make sure your mobile device can connect to the Internet

1 Start the **[HomeHawk]** app by tapping its icon (shown below).

- The end-user license agreement is displayed the first time you start the app.
- Confirm all of the displayed permission screens and agree as necessary.
- Select your country or region if displayed, and then tap **[Next]**.

2 Tap **[WINDOW Camera]**.



3 Tap **[Connect to Existing]**.

4 Follow the on-screen instructions, remove the cover from the camera, and then tap **[Next]**.

5 Follow the on-screen instructions and confirm the LED color on your camera.
- If the camera's LED indicator lights in blue, tap the blue icon and proceed to step 6.
- If the camera's LED indicator lights in a color other than blue, tap the icon for that color and follow the on-screen instructions.

Note:

- When **[Linking]** is displayed, wait for up to about 40 seconds until the mobile device finds the camera on your wireless network.

6 Press the **SETUP** button on the camera for about 2 seconds.
- The camera's LED indicator starts blinking in green.

7 When prompted, enter the login password for the camera, and then tap **[Next]**.

8 When prompted, enter a name for the mobile device, and then tap **[OK]**.

9 When **[Congrats!]** is displayed, tap **[Explore HomeHawk]**.
- The app's home screen is displayed when initial setup is completed.

10 Reattach the cover.

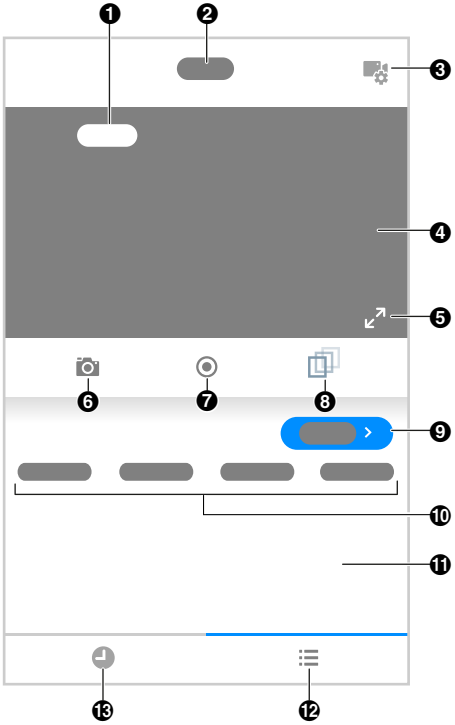
Window camera features

Window camera features (overview)

You can use a window camera to monitor and record the area where the camera is located. Window cameras have built-in motion detection features. When the motion detection is triggered, camera images can be recorded and notifications can be sent to your mobile device. It is possible to distinguish between motion for people and objects. You can use **[Person Only]** notifications (“Once motion is detected”, Page 107) to only receive notifications when motion is detected for people. You can also filter recordings to only show you recordings where motion was detected for people. Additionally, 24/7 recording (“Preset modes”, Page 106) is also available.

Viewing the camera image/recording list screen

The camera image/recording list screen shows live images and a list of recordings for the selected camera.
To access the camera image/recording list screen, tap the desired camera from the **[HomeHawk]** app home screen (“Shelf camera, floor camera, and window camera home screen”, Page 23).



❶ When recording images, ● is displayed together with the recording duration and details about the recording
- – The recording was started manually
- – 24/7 recording is in use
- – The recording was started when motion was detected

❷ Shows the camera's name

❸ Shows the camera's setting screen

❹ Shows the live camera image

❺ Indicates that by tapping the camera image (❹) or this icon (❺), the camera image can be enlarged and the live camera image screen ("Viewing the live camera image screen", Page 95) can be accessed

❻ Takes snapshots ("Taking snapshots", Page 98)

❼ Starts/stops recording ("Recording camera images (manual recording)", Page 97)

❽ Displays/hides rectangle boxes that indicate where motion is detected ("Displaying/hiding rectangles for motion detection", Page 97)

❾ Displays the recording list screen where all the images can be displayed for the selected date ("Viewing the recording list screen", Page 98)

❿ Filters the displayed recorded images according to the selected category ("Filters", Page 100)

⓫ Shows today's recorded image list for the selected camera

⓬ Displays the recorded images in a list

⓭ Displays the recorded images in a timeline

Note:

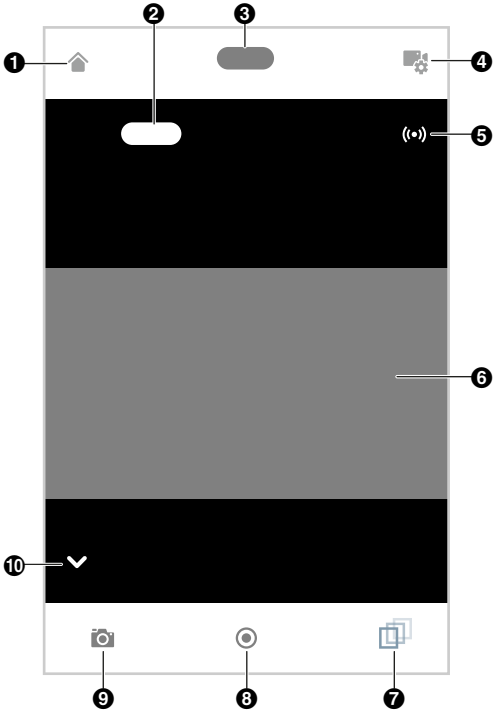
- When connected away from home, or R is displayed next to the camera's name. See "Connection mode when away from home", Page 24 for more information.

Viewing the live camera image screen

The live camera image screen shows you live camera images and also allows you to operate the selected camera to zoom in, recording images, etc.

Using a shelf, floor, and window camera

To access the live camera image screen, tap the desired camera from the **[HomeHawk]** app home screen (“Shelf camera, floor camera, and window camera home screen”, Page 23), and then tap the displayed camera image.



❶ Returns you to the home screen (“Shelf camera, floor camera, and window camera home screen”, Page 23)
- **iPhone, iPad:**
  Displayed on the right side of the screen
- **Android devices:**
  Displayed on the left side of the screen

❷ When recording images, ● is displayed together with the recording duration and details about the recording
- – The recording was started manually
- – 24/7 recording is in use
- – The recording was started when motion was detected

❸ Shows the camera’s name

❹ Displays the camera setting screen

❺ Shows the bit rate (“Displaying the bit rate level icon”, Page 112)

❻ Shows the live camera image

❼ Displays/hides rectangle boxes that indicate where motion is detected (“Displaying/hiding rectangles for motion detection”, Page 97)

❽ Starts/stops recording (“Recording camera images (manual recording)”, Page 97)

❾ Takes snapshots
(“Taking snapshots”, Page 98)

❿ Hides/displays the buttons on the bottom of the screen

Tap ⌄ to hide the buttons and ⌃ to display the buttons.

Note:

- Multiple mobile devices can view live images from the same camera at the same time (“Accessing from multiple mobile devices”, Page 26). However, only one mobile device can use certain features at a time (recording, etc.).
- When connected away from home, or is displayed next to the camera’s name. See “Connection mode when away from home”, Page 24 for more information.
- When displaying images while away from home, the app will disconnect from the camera after a certain period of time in some conditions. This is to minimize data usage. If you are disconnected automatically, a dialog is displayed asking if you want to connect to the camera again. The time out period cannot be changed.

Viewing images horizontally

By turning your mobile device on its side, you can display camera images horizontally.
When viewing images horizontally, icons for operating the camera (e.g., recording, etc.) are not displayed. To display these icons, tap anywhere on the camera image.

Zooming in and out

Pinch in and out on the camera image while viewing live images from a camera. While zoomed in, you can swipe your finger on the camera image to display a different area of the image.

Night vision

If there is not adequate light to illuminate the subject, such as at night, the camera switches to night vision mode.

Recording camera images

To record camera images manually, see “Recording camera images (manual recording)”, Page 97.
To record images automatically when a sensor is triggered, see “Window camera mode settings (overview)”, Page 106. To record images 24/7, see “Preset modes”, Page 106.

Taking snapshots

To save snapshots (i.e., still images) while viewing live camera images, see “Taking snapshots”, Page 98.

Displaying/hiding rectangles for motion detection

You can display or hide rectangles on the screen that indicate where motion was detected on the screen.

Note:

- When rectangles are displayed on the screen, recorded images of the screen will also show the rectangles.

Recording camera images (manual recording)

You can record camera images while viewing live camera images. Camera recordings are saved on the camera’s SD card.

1 View live images from the desired camera.

2 Tap to start recording.

3 Tap to stop recording.

Note:

- Manual recording is not available when 24/7 recording is in use (“Window camera mode settings (overview)”, Page 106).
- The maximum recording time is 5 minutes.
- If **[Recording Error (Memory full)]** is displayed, the camera’s SD card is full and new recordings cannot be saved. Erase unneeded recordings (see “Erasing recordings”, Page 102).
- For information about SD cards and how recordings are saved, see “Camera SD cards”, Page 104.

Taking snapshots

You can save snapshots (i.e., still images) while viewing live camera images. Snapshots are saved in your mobile device’s default photo album app.

1 View live images from the desired camera.

2 Tap .

Note:

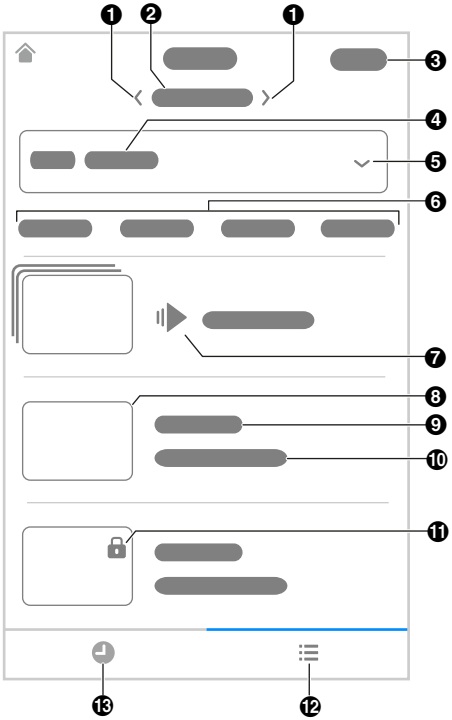
- Snapshot sizes are scaled to fit the width of your mobile device’s display.
- **iPhone, iPad**
  Snapshots are saved as JPEG files in your mobile device’s “Photos” app.
- **Android devices**
  Snapshots are saved as JPEG files in your mobile device’s picture directory. The file naming convention is: device name + the date and time.

Viewing the recording list screen

From the **[HomeHawk]** app home screen, tap → **[Recording List]** to display the recording list screen.

- You can also access the recording list screen by tapping **[Show all]** in the camera image/recording list screen (“Viewing the camera image/recording list screen”, Page 94).

The recording list displays all recordings for the specified dates and filters can be used to specify the recordings that you want to display.



❶ 〈: Displays recorded images for the previous date
〉: Displays recorded images for the next date

❷ Displays the selected date and you can tap here to select a date

❸ **[Select]**: Used to select multiple recordings for deleting or protecting

❹ Shows the camera's name

❺ Selects the camera when there are multiple cameras registered

❻ Filters the displayed recorded images according to the selected category
("Filters", Page 100)

❼ Goes to rapid playback
("Rapid playback", Page 101)

❽ Displays a thumbnail image for the recording

❾ Shows information about the type of recording
– **[Person]:** Recordings that contain detections for the motion of people.
– **[Motion]:** Recordings that were recorded when a motion sensor was triggered.
– **[Manual]:** Recordings that were recorded manually.

❿ Shows the time when the recording was made and its duration

⓫ Indicates that a recording is protected

⓬ Displays the recorded images in a list

⓭ Displays the recorded images in a timeline

Filters

Filters can be used to specify the type recordings that you want to display. A single or multiple categories can be selected. The following filter categories can be selected.

– **[Person]:** Displays recordings that contain detections for the motion of people.
– **[Motion]:** Displays recordings recorded when motion for objects was detected.
– **[Manual]:** Displays recordings that were recorded manually.
– **[Protected]:** Displays recordings that are protected.

Playing back recordings

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Recording List]**.

- The recording list screen is displayed (“Viewing the recording list screen”, Page 98).

2 Select the desired camera.

3 Tap 〈, 〉, or the displayed date to select a recording date.

- A list of all recordings recorded on the selected date is displayed.
- Filter categories (“Filters”, Page 100) can be used to display to the desired recordings.
- Tap 🕘 to display recordings in a timeline. Tap ☰ to display recordings in a list.

4 Select a recording.

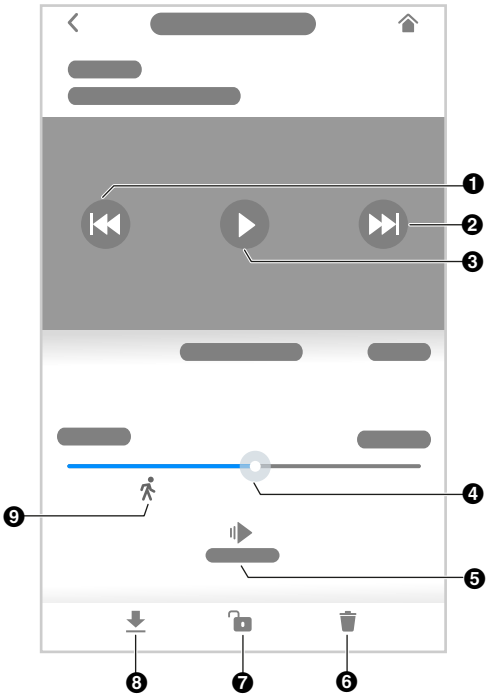
- The selected recording starts playing in the playback screen.

Note:

- When connected away from home, 🪐 or 🪐ᴿ is displayed on the playback screen. See “Connection mode when away from home”, Page 24 for more information.
- Recorded images can also be played back from the camera image/recording list screen (“Viewing the camera image/recording list screen”, Page 94).

Normal playback

The normal playback screen allows you play back recording and perform other operations.



❶ Goes to the start of the recording
- Tap twice to go to the previous recording.

❷ Goes to the next recording

❸ Starts or resumes playback

❹ Allows you to quickly move to the desired area of the recording by sliding the progress bar

❺ Goes to rapid playback

❻ Erases the current recording

❼ Protects the recording
- Tap to remove the protection for the recording.

❽ Downloads the recording to the mobile device
- Do not perform any function on your mobile device while downloading is in progress.
- Only 1 recording can be downloaded at a time.
- Recordings can only be downloaded when the mobile device is connected to the same wireless network as the camera.

❾ Indicates when motion for a person was detected during a recording

Rapid playback

Rapid playback allows you to play a condensed playback of the selected day's recordings.

Tap **[Rapid Playback]** to start rapid playback. The following controls are displayed.

Starts or resumes playback

Pauses playback

Goes to normal playback

Erasing recordings

Erasing individual images

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Recording List]**.
- The recording list screen is displayed (“Viewing the recording list screen”, Page 98).

2 Select the desired camera.

3 Tap 〈, 〉, or the displayed date to select a recording date.

4 Select the desired recording.

5 Tap 🗑 → **[OK]**.

Erasing multiple images

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Recording List]**.
- The recording list screen is displayed (“Viewing the recording list screen”, Page 98).

2 Select the desired camera.

3 Tap 〈, 〉, or the displayed date to select a recording date.

4 Tap **[Select]**.

5 Select the desired recordings.
- Tap ○/✓ displayed next to the date to select or deselect all images shown in the list.
- Filter categories (“Filters”, Page 100) can be used to display to the desired recordings.

6 When finished, tap **[Delete]** → **[OK]**.

Protecting recordings

You can protect recordings so that they cannot be erased.

Note:
- Protected images will be erased if the SD card is formatted (“Formatting SD cards (window cameras only)”, Page 111).

Protecting individual images

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Recording List]**.
- The recording list screen is displayed (“Viewing the recording list screen”, Page 98).

2 Select the desired camera.

3 Tap 〈, 〉, or the displayed date to select a recording date.

4 Select the desired recording.

5 Tap 🔓.
- Tap 🔒 to remove the protection.
- 🔒 is displayed in the thumbnail of images to indicate that the image is protected.

Protecting multiple images

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Recording List]**.
- The recording list screen is displayed (“Viewing the recording list screen”, Page 98).

2 Select the desired camera.

3 Tap 〈, 〉, or the displayed date to select a recording date.

4 Tap **[Select]** → 🔒.

5 Select the desired recordings.
- 🔒 is displayed in the thumbnail of images to indicate that the image is protected.
- Tap ○/✓ displayed next to the date to select or deselect all images shown in the list.
- Filter categories (“Filters”, Page 100) can be used to display to the desired recordings.

6 When finished, tap **[Protect]**.

Detection area

You can select which areas of the camera image are monitored for motion detection. This allows you to ignore motion in certain areas of the camera’s image.
You can also test which areas are actually detected while viewing live images from the camera. This is useful when determining where to install cameras, and also which areas you should enable or disable detection for.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Tap **[Detection]** → **[Set Detection Area]**.

4 Tap the desired areas of the camera image.
- ■ : Indicates areas of the camera image where motion was detected

- : Indicates areas of the camera image where motion was not detected
- : Indicates areas of the camera image where image detection is disabled
- Tap to change the number of areas displayed on the screen.

5 When finished, tap **[Set]**.

Motion sensitivity

You can adjust the sensitivity of the camera's motion detection features.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Tap **[Detection]** → **[Motion Sensitivity]**.

4 Select the desired setting.
- **[High]**: The sensors are very sensitive to changes, i.e., even a small change will trigger the sensors.
- **[Normal]**: The sensors are moderately sensitive to changes.
- **[Low]**: The sensors are somewhat sensitive to changes.
- **[Very Low]**: The image sensor is only slightly sensitive to changes, i.e., a large change is required to trigger the sensor.

5 When finished, tap **[OK]**.

Camera SD cards

SD card capacity and total recording time

The following recording times apply when images from one camera are recorded. All times are approximate.
- 4 GB card: 4 hours
- 8 GB card: 9 hours
- 16 GB card: 18 hours
- 32 GB card: 36 hours
- 64 GB card: 72 hours
- 128 GB card: 145 hours
- 256 GB card: 290 hours
- 512 GB card: 582 hours
- 1 TB card: 1165 hours

Note:
- SD cards larger than 1 TB cannot be used.
- The times listed here are calculated theoretically. Actual recording time may vary.
- The times listed here apply during the following condition.
  - **[Resolution]** is set to **[HD (1280x720)]** ("Changing the camera resolution", Page 112)
- The file system and other information is stored on the SD card, therefore the card's actual available capacity will be less than the card's noted capacity.

SD card formatting

Before use, format the SD card inserted into the camera using **[Format microSD Card]** (“Formatting SD cards (window cameras only)”, Page 111).

Note:

- All data stored on the SD card will be erased when it is formatted.
- You can also format the SD cards using your computer and the SD formatting tool available from the web page listed below.
  {{"www.sdcard.org/downloads/formatter_4/"|tolink("http://www.sdcard.org/downloads/formatter_4/")}}

How recordings are saved on the SD card

- Recordings are saved on the camera’s SD card in folders based on the recording date, in the following path.
  /PRIVATE/PANA_GRP/HH/WINDOW/MM-DD-YYYY
- The file naming convention is: camera number + recording type + recording start time.
  – First character: 1 (fixed).
  – Second character: Recording type. A=sensor recordings, M=manual recordings, C=continual recordings.
  – Remaining characters: Recording start time (hhmmss).
  Example: 1M123455.mp4
  This file is a manual recording (“M”) that started at 12:34 PM and 55 seconds (“123455”).

Window camera mode settings

Window camera mode settings (overview)

Modes allow the cameras to operate according to pre-determined settings. You can use modes to match what actions you want cameras to make (record images when motion is detected, etc.). You can use preset modes or create your own modes.

Examples

The following are some examples of how you can use modes.
– I want the camera to continually record images 24/7
– I want the camera to record images when motion is detected by the camera
– I want to receive notifications when motion is detected by the camera

Preset modes

There are 3 preset modes that can be used for cameras: **[Basic]**, **[Protection]**, and **[24/7 Recording]**.
– **[Basic]:**
Use this if you don't want to use a mode and don't want the camera to operate according to pre-determined settings.
– **[Protection]:**
Use this in the following situations.
- You want the camera to:
→Turn record images when motion is detected
→Send notifications to you when motion is detected
- You don’t want the camera to:
→Record images 24/7

– **[24/7 Recording]:**
Use this in the following situations.
- You want the camera to:
→Record images 24/7
→Send notifications to you when motion is detected

Note:
- When using **[24/7 Recording]**, because images are continuously recorded, separate recordings are not made when motion is detected.
- The firmware cannot be updated while **[24/7 Recording]** is in use. Change the mode to **[Basic]** to enable updating.

The following describes the settings for the **[Protection]** and **[24/7 Recording]** modes.

Settings for when motion is detected
You can specify the settings for when motion is detected.

Setting	[Protection]	[24/7 Recording]
Start Recording	On	–
Duration	[10 sec]	–
Send Notifications	[All Motion]	[All Motion]

Checking the selected mode

The name of the selected mode is displayed below the name of the camera in the home screen (“Shelf camera, floor camera, and window camera home screen”, Page 23).

Accessing the mode screen

The mode screen can be accessed by tapping the mode icon displayed below the name of the camera in the home screen (“Shelf camera, floor camera, and window camera home screen”, Page 23).

Selecting modes

1. Access the mode screen (“Accessing the mode screen”, Page 107).
2. Select the desired mode.

Turning modes off

If you don’t want the camera to operate by a mode, you can turn off modes by selecting **[Basic]**.

1. Access the mode screen (“Accessing the mode screen”, Page 107).
2. Tap **[Basic]**.

Creating new modes

You can create new modes to operate your devices when an event occurs such as motion is detected.

1. Access the mode screen (“Accessing the mode screen”, Page 107).
2. Tap .
3. Change the settings as required.
   - Each setting is explained in this section.
4. When finished, tap **[Create]**.

Mode name

When creating a new mode, you can set the name used for the mode. This helps you to identify the mode from other modes used on your mobile device.

– **To enter a name:** Tap the text field and enter the text.

During this mode

You can choose the actions that will take place while the mode is selected.

– **[24/7 Recording]:** Enables 24/7 recording while the mode is selected.

Once motion is detected

You can choose the actions that will take place when the camera detects motion.

– **[Start Recording]:** Enables recording when motion is detected.
  - **[Duration]:** Specifies the recording duration when motion is detected.

– **[Send Notifications]**
  - **[All Motion]:** Sends notifications for all types of motion detection (objects and people).
  - **[Person Only]:** Only sends notifications when motion is detected for people.
  - **[OFF]:** Disables notifications.

Editing modes

1 Access the mode screen (“Accessing the mode screen”, Page 107).

2 Tap **[Edit]**, and then tap next to the desired mode.

3 Edit the desired settings.

4 When finished, tap **[Done]**.

Deleting created modes

1 Access the mode screen (“Accessing the mode screen”, Page 107).

2 Tap **[Edit]**, and then tap next to the desired mode.

3 Tap .

4 Tap **[OK]**.

Note:

- Preset modes cannot be deleted.

General features

Status

Camera signal strength

You can check the signal strength of the camera's wireless connection.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Tap **[Signal Strength]**.

4 Confirm the number of blue bars.
- More blue bars indicate a stronger signal.

Strongest signal

Good signal

Weak signal

No signal

Could not obtain signal information

Sound settings (shelf cameras and floor cameras only)

Adjusting the talk volume

You can adjust the volume of your mobile device's microphone, which determines the volume of your voice that is sent to the camera when talking to the camera.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Tap **[Sound]**.

4 Under **[Talk Volume]**, adjust the volume as desired.

Adjusting the motion detection volume

You can adjust the volume of the camera audio (beeps) that sounds from the camera when motion is detected.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Tap **[Sound]**.

4 Under **[Motion detection volume]**, adjust the volume as desired.

Adjusting the privacy mode change volume

You can adjust the volume of the camera audio (beeps) that sounds from the camera when the privacy mode setting is changed.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Tap **[Sound]**.

4 Under **[Privacy Mode Change Sound Volume]**, adjust the volume as desired.

Adjusting the microphone sensitivity

You can adjust the sensitivity of the microphone.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Tap **[Sound]**.

4 Under **[Microphone sensitivity]**, select the desired setting.
- **[High]**: The microphone is very sensitive to sound.
- **[Normal]**: The microphone is moderately sensitive to sound.
- **[Low]**: The microphone is only slightly sensitive to sound, i.e., a large sound is required to trigger the notification.

Recording settings

Recording with sound (shelf cameras and floor cameras only)

You can select whether audio is recorded when recording camera images.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Tap **[Recording Settings]**.

4 Slide the **[Recording with Sound]** switch to the desired position.
- When this switch is turned off, audio is not recorded when recording camera images.

Adjusting the time stamp

You can change the time format and position of the time stamp that is displayed when viewing camera images or recording. You can also turn the time stamp off.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Tap **[Recording Settings]** → **[Time Stamp]**.

4 Select the desired setting and then tap **[OK]**.
- **[Time Stamp]** (window cameras only): Determines whether the time stamp is displayed or not.
- **[Position]** (shelf cameras and floor cameras only): Determines the position of the time stamp. To turn the time stamp off, select **[OFF]**.
- **[24-Hour Format]**: Determines whether the time stamp is displayed in 24-hour format or 12-hour format. Enable this setting to use 24-hour format time.

Recording to SD cards

You can specify whether to allow recorded camera images to be erased automatically by new images when the SD card is full, and check the remaining capacity of the SD card.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Tap **[Recording Settings]**.

4 Select the desired setting.
- **[Overwrite Recording]**: Determines whether recorded camera images are erased automatically by new images when the SD card is full.
- **[microSD Card]**: Displays the currently used capacity and the maximum capacity of the SD card, the current number of recorded files, and the maximum number of files that can be recorded.
  - A maximum of 65,535 files can be recorded. If 65,535 files are recorded, additional files cannot be recorded even if there is free capacity in the SD card.

Formatting SD cards (window cameras only)

You can format SD cards inserted into the window camera.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Tap **[Recording Settings]**.

4 Tap **[Format microSD Card]** → **[OK]**.

Using night vision (shelf cameras and floor cameras only)

If there is not adequate light to illuminate the subject, such as at night, the camera switches to night vision mode depending on the settings.
The following settings can be selected for the night vision.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Tap **[Night Vision]**.

4 Select the desired setting and then tap **[OK]**.

Shelf camera:
- **[ON]:** Lights infrared LEDs so that images can be seen in the dark.
- **[OFF]:** Turns off night vision mode.

Floor camera:
- **[Color]:** Turns on the light so that images can be displayed in color. Has shorter visibility range than **[Monochrome]**.
  - When recording is started after a detection is made or if viewing live images from a mobile device, the light will turn on if it is dark so that the images can be viewed or recorded in color.
- **[Monochrome]:** Lights infrared LEDs so that images can be seen in the dark. Has longer visibility range than **[Color]**.
- **[OFF]:** Turns off night vision mode.

Video settings

Changing the camera resolution

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Tap **[Video]** → **[Resolution]**.

4 Select the desired setting and then tap **[OK]**.

Changing the frame rate

The frame rate determines the speed at which images from the camera are refreshed.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Tap **[Video]** → **[Frame Rate]**.

4 Select the desired setting and then tap **[OK]**.

Note:

- Higher frame rates mean images are refreshed faster and moving subjects are displayed more smoothly, however, images displayed on your mobile device may be delayed and sound may cut out or be delayed when talking to the camera (shelf cameras and floor cameras only), especially over a slow or congested network connection.
- Lower frame rates mean images are refreshed less often and moving subjects may appear “choppy”, however, images displayed on your mobile device will be less delayed and sound may be more consistent when talking (shelf cameras and floor cameras only) to the camera over a slow or congested network connection.

Changing the brightness

You can adjust the overall brightness of the camera image.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Tap **[Video]** → **[Brightness]**.

4 Select the desired setting.

Enabling HDR (window cameras only)

You can enable HDR for viewing images from the camera.
HDR (high dynamic range) is a technique used to reproduce a greater dynamic range of luminosity than what is possible with standard digital imaging techniques.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Tap **[Video]**.

4 Slide the **[HDR]** switch to the desired position.

Displaying the bit rate level icon

You can display the bit rate level icons on camera images.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.
2 Tap **[Camera Settings]** and select the desired camera.
3 Tap **[Video]**.
4 Slide the **[Bit Rate Level Icon]** switch to the desired position.
- When the switch is turned on, the bit rate is displayed while viewing camera images as follows.

Highest bit rate

High bit rate

Moderate bit rate

Lowest bit rate

Displaying images upside down (shelf cameras only)

You can display the camera image upside down.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.
2 Tap **[Camera Settings]** and select the desired camera.
3 Tap **[Video]**.
4 Slide the **[Upside Down]** switch to the desired position.

Changing the name of cameras

You can edit camera names.
The camera name setting is used to identify cameras. This is useful when you have multiple cameras.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.
2 Tap **[Camera Settings]** and select the desired camera.
3 Tap **[Name]**.
4 Enter the desired name.
5 When finished, tap **[OK]**.

Note:

- If your camera is linked with an Amazon Echo Show device or a Google Home device and the Amazon Echo Show device or Google Home device does not recognize the camera name, try changing the camera name.

Status LED

You can determine whether the camera's LED indicator lights or is disabled.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.
2 Tap **[Camera Settings]** and select the desired camera.
3 Slide the **[Status LED]** switch to the desired position.

Maintenance reminder (window cameras only)

You can determine whether the maintenance reminders are sent to your mobile device or not.
A maintenance reminder is sent to remind you to reattach the camera to the window periodically to prevent the camera from falling.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Tap **[System]** and select the desired camera.

4 Slide the **[Maintenance Reminder]** switch to the desired setting.

Updating firmware

You can use this feature to check for a newer version of the camera firmware (i.e., system software). If a newer version is found, you can update the firmware.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Tap **[System]** → **[Firmware Update]**.
- The camera will connect to the Internet and check for a newer version of its firmware.

4 Follow the on-screen instructions.

Resetting camera settings

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Tap **[System]** → **[Reset Camera Settings]**.

4 Select the desired setting.
- **[Reset All Settings]**: Resets all camera settings, including network settings.
- **[Reset Camera Settings]**: Resets all camera settings, except network settings.
- **[Reset Network Settings]**: Resets network settings only.

5 Follow the on-screen instructions.

Note:

- A camera can also be reset manually by pressing buttons on the camera.
  To reset all camera settings: Press and hold the **RESET** button for about 10 seconds using an object with a thin tip.

Bit rate settings for Amazon Echo Show and Google Home

You can select the bit rate to be used when transmitting data for Amazon Echo Show or Google Home Chromecast.
If you cannot display camera images on Amazon Echo Show or via Google Home Chromecast, or if images are not displayed smoothly, try using a lower bit rate setting.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Tap **[System]** → **[Bit Rate]**.

4 Select the desired setting and then tap **[OK]**.

Note:

- This setting is only available when Amazon Echo Show (“Amazon Alexa features (overview)”, Page 35) or Google Home (“Google Home features (overview)”, Page 38) settings are enabled.

Time adjustment

You can manually or automatically adjust the time of your devices to match the mobile device.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Tap **[System]** → **[Time Adjustment]**.

4 **To manually adjust the time:**
Tap **[Update Time]**.
To automatically adjust the time:
Tap the name of the displayed mobile device, select the mobile device to match the time with, and then tap **[OK]**.

Displaying device information

You can display device information, such as firmware versions and MAC addresses, and select whether or not to upload logs.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Tap **[System]** → **[System Info]**.
– **[Camera Log Upload]**: Determines whether or not logs are uploaded.

Notification settings

You can select which types of status notifications are displayed, and which are not.

Important:

- In order to receive notifications, your mobile device must be connected to the Internet. If your mobile device is not connected to a wireless network, a mobile network connection is required.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Tap **[Notification Settings]**.

4 Select the desired settings.
- **All cameras:**

  - **[Recording Error]:** Determines whether a notification is displayed when a recording error occurs.
  - **[Mode Change]:** Determines whether a notification is displayed when a mode is changed.
- **Shelf cameras and floor cameras only:**
  - **[Sound Detection]:** Determines whether a notification is displayed when sound is detected.
  - **[Temperature Detection]:** Determines whether a notification is displayed when the temperature is detected outside of the specified ranges.
  - **[Privacy Mode Change]:** Determines whether a notification is displayed when the privacy mode is changed.

Login settings

Configuring automatic login

You can specify whether or not you must enter a login password in order to connect to your devices while away from home.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Tap **[Login Settings]**.

4 Next to **[Automatic Login]**, slide the switch to the desired position.
To disable automatic login:
Slide the switch to the off position.
To enable automatic login:
Slide the switch to the on position, enter the password and then tap **[OK]**.

- To display the characters that you have entered, tap .

Changing the login password

You can change the login password used in order to connect to your devices while away from home.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Tap **[Login Settings]** → **[Change Login Password]**.

4 Enter the new password.

- To display the characters that you have entered, tap .

5 Tap **[OK]**.

Note:

- The login password can only be changed when you are at home (when your mobile device is connected to the same wireless router as the camera).

Network features

Changing IP settings

Typically these settings should not be changed.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Tap **[Network]** → **[IP Settings]**.

4 Select the desired IP address mode.
- In most cases **[Auto (DHCP)]** is preferred. In this case, no other settings are available on this screen.
- If you select **[Manual (Static)]**, other settings on this screen become available.

5 Configure the settings as needed and then tap **[OK]**.

Note:
- If you make a mistake while configuring your device to use a static IP address and you can no longer connect to your device, reset the device's network settings ("Resetting camera settings", Page 114).

Port forwarding settings

These settings are only required if you need to configure your wireless router's port forwarding feature in order to connect to your devices while away from home.

Important:
- In order to use this feature, you must first configure your devices to use a static IP address ("Changing IP settings", Page 116).

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Tap **[Network]** → **[Port Forwarding]**.

4 Turn on the **[Enable]** radio button.

5 Tap the field next to **[Port]** and then enter the desired port number.
- Only port numbers 55000-65000 can be assigned.
- Configure your wireless router's port forwarding feature to forward these ports to the static IP address that you have assigned to your devices.

6 When finished, tap **[OK]**.
- Your device restarts.

MTU settings

This setting affects how data is sent over the network. Typically this setting does not need to be changed.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Tap **[Network]** → **[MTU Settings]**.

4 Select the desired value and then tap **[OK]**.

Home wireless network SSID features

The app remembers the SSIDs of wireless routers that your mobile device uses at home to connect to your devices; it can remember 10 SSIDs, and saves them in the home wireless network SSID list. If the list is full and you try to connect to your devices using a new SSID while at home, the app may connect to your devices over the Internet even though you are at home, i.e., or will be displayed at the

top of the home screen. In this case, we recommend deleting unused SSIDs from the home wireless network SSID list.

Deleting wireless routers

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.
2 Tap **[Camera Settings]** and select the desired camera.
3 Tap **[Home Wireless Network SSID]**.
4 Select the wireless router that you want to delete and then tap **[Delete]**.

Updating the wireless network SSID information

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.
2 Tap **[Camera Settings]** and select the desired camera.
3 Tap **[Home Wireless Network SSID]**.
4 Tap **[Update]** to update the information.

Front door camera and outdoor camera setup

Front door camera and outdoor camera setup (overview)

There are 4 basic steps you need to perform in order to access the access point and your cameras from your mobile device.

Connections	Connect your access point to a power outlet and to your wireless router.*1
↓	
Download	Download the **[HomeHawk]** app to your mobile device.
↓	
Initial setup	Use the **[HomeHawk]** app to register your mobile device to the access point.
↓	
Register devices	Add more mobile devices (smartphones and tablets) or cameras to the system.

*1 Refer to the Installation Guide included with your access point for more information.

Initial setup

Before you begin

Confirm the following before you begin.
– Make sure you have installed the **[HomeHawk]** app on your mobile device
– Make sure your wireless router and the access point are turned on and the access point's LED indicator is lit in yellow (amber) or green
– Make sure your access point is connected to your wireless router with an Ethernet cable
– Make sure your mobile device is connected to the same wireless router as your access point
– Make sure your mobile device can connect to the Internet

Note:

- If you have completed this procedure and want to register another mobile device to the access point, see "Registering other mobile devices to the access point", Page 120.
- If you experience trouble while performing this procedure, refer to the information in "Sometimes I cannot connect while at home", Page 179.

Initial setup

1 Start the **[HomeHawk]** app by tapping its icon (shown below).

- The end-user license agreement is displayed the first time you start the app.
- Confirm all of the displayed permission screens and agree as necessary.
- Select your country or region if displayed, and then tap **[Next]**.

2 Tap **[FRONT DOOR Camera Kit (+ OUTDOOR Cameras)]**.

3 Tap **[Add New Camera]**.

4 Follow the on-screen instructions, plug in the access point, and then tap **[Next]**.

5 Follow the on-screen instructions, connect the access point to the wireless router, and then tap **[Next]**.

6 Follow the on-screen instructions and then tap **[Next]**.

7 Follow the on-screen instructions and confirm the access point's LED indicator's color.
- If the access point's LED indicator lights in green, tap the green lit icon, and then go to step 8.
- If the access point's LED indicator blinks in yellow (amber), tap the yellow (amber) blinking icon, and then connect the Ethernet cable between the access point and router. Next, follow the on-screen instructions, wait for a while, and then check the color of the LED lights again.
- If the access point's LED indicator blinks in green, tap the blinking green icon, check if DHCP (Dynamic Host Configuration Protocol) is operating for the router (refer to the operating instructions included with your router or contact your Internet service provider), and then tap **[Done]**.

8 When prompted, press the **SETUP** button on the access point.

9 When prompted, set the password that will be used to log in to the access point and then tap **[Next]**.

10 When prompted, enter a name for the access point*1 and for your mobile device and then tap **[OK]**.
- The access point name setting is used by your mobile device to identify the access point. This is useful when you have multiple access points.
- The mobile device name setting is used by the access point and other system users to identify your mobile device. This is useful when performing certain operations, such as deregistering.

11 Follow the on-screen instructions and tap **[Next]**.

12 When **[Congrats!]** is displayed, tap **[Explore HomeHawk]**.
- The app's home screen is displayed when initial setup is completed.

*1 A name can only be entered for the access point the first time initial setup is performed. See "Changing the name of cameras", Page 140 or information on how to change the name for the access point.

Registering other mobile devices to the access point

In order to access the access point and its connected devices from a mobile device, you must first register the mobile device to the access point. You can register up to 8 mobile devices to an access point.

Confirm the following before you begin.
– Make sure you have completed the initial setup procedure (“Initial setup”, Page 119)
– Make sure your mobile device can connect to the Internet
– Make sure your wireless router and the access point are turned on
– Make sure your mobile device and the access point are connected to the same wireless router

1 Start the **[HomeHawk]** app by tapping its icon (shown below).

- The end-user license agreement is displayed the first time you start the app.
- Confirm all of the displayed permission screens and agree as necessary.
- Select your country or region if displayed, and then tap **[Next]**.

2 Tap **[FRONT DOOR Camera Kit (+ OUTDOOR Cameras)]**.

3 Tap **[Connect to Existing]**.

4 Follow the on-screen instructions and confirm the access point’s LED indicator’s color.
- If the access point’s LED indicator lights in green, tap the green lit icon, and then go to step 5.
- If the access point’s LED indicator blinks in yellow (amber), tap the yellow (amber) blinking icon, and then connect the Ethernet cable between the access point and router. Next, follow the on-screen instructions, wait for a while, and then check the color of the LED lights again.
- If the access point’s LED indicator blinks in green, tap the blinking green icon, check if DHCP (Dynamic Host Configuration Protocol) is operating for the router (refer to the operating instructions included with your router or contact your Internet service provider), and then tap **[Done]**.

5 When prompted, press the **SETUP** button on the access point.

6 When prompted, enter the password used to log in to the access point and then tap **[Next]**.

7 When prompted, enter a name for your mobile device, and then tap **[OK]**.
- The mobile device name setting is used by the access point and other system users to identify your mobile device. This is useful when performing certain operations, such as deregistering.

8 Follow the on-screen instructions and tap **[Next]**.

9 When **[Congrats!]** is displayed, tap **[Explore HomeHawk]**.
- The app’s home screen is displayed when initial setup is completed.

Note:

- To register other devices, see “Registering devices”, Page 33.
- For privacy, we recommend that you deregister your mobile device from the access point (“Deregistering mobile devices”, Page 41) before handing it over to a third party (such as when submitting your mobile device for service, lending it to someone else, selling it, etc.), or if you no longer intend to use the mobile device with the access point.

Front door camera and outdoor camera features

Front door camera and outdoor camera features (overview)

You can use front door cameras and outdoor cameras to monitor and record the sights and sounds of the area where the cameras are located. Cameras have built-in motion detection features that, when triggered, allow cameras to record images automatically or send a notification to your mobile device. Additionally, built-in speakers and microphones allow you to talk to anyone who is near the camera.

Note:

- Front door cameras and outdoor cameras may stop working in extremely high or low temperatures. Normal operations will resume once the temperature is within the supported levels. See “The camera will not charge (the charging LED indicator blinks quickly in red)”, Page 191.

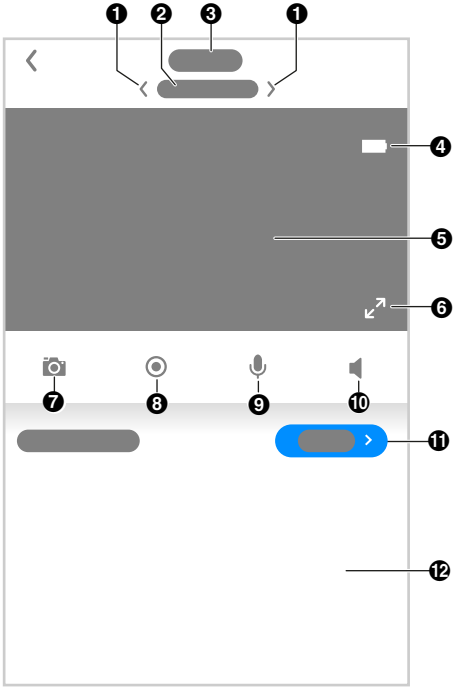
Main features

Viewing the camera image/recording list screen

The camera image/recording list screen shows live images and a list of recordings for the selected camera.

Using a front door camera and outdoor camera

To access the camera image/recording list screen, tap the desired camera from the **[HomeHawk]** app home screen (“Front door camera and outdoor camera home screen”, Page 24).



❶ Used to switch between available cameras

❷ Shows the camera’s name

❸ Shows the access point’s name

❹ Shows the battery level (“Camera battery level”, Page 135)

❺ Shows the live camera image

❻ Indicates that by tapping the camera image (❺) or this icon (❻), the camera image can be enlarged and the live camera image screen (“Viewing the live camera image screen”, Page 125) can be accessed

❼ Takes snapshots (“Taking snapshots”, Page 127)

❽ Starts/stops recording (“Recording camera images (manual recording)”, Page 127)

❾ Enables talking with the camera (“Talking to the camera”, Page 128)

❿ Turns sound on/off (“Turning the camera audio on and off”, Page 126)

⓫ Displays a recording list of all images of the selected camera (“Viewing the recording list screen”, Page 128)

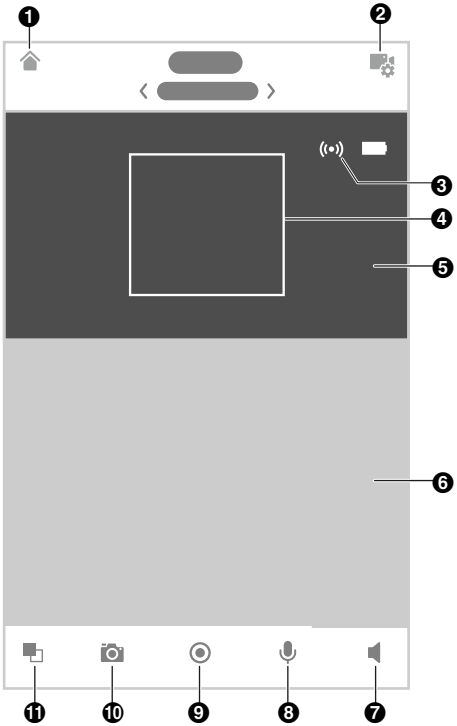
⓬ Shows today’s recorded image list for the selected camera

Note:

- When connected away from home, or is displayed next to the access point's name. See "Accessing while away from home", Page 21 for more information.

Viewing the live camera image screen

The live camera image screen shows you live camera images and also allows you to operate the selected camera to zoom in, recording images, etc.
To access the live camera image screen, tap the desired camera from the **[HomeHawk]** app home screen ("Front door camera and outdoor camera home screen", Page 24), and then tap the displayed camera image.



❶ Returns you to the home screen ("Front door camera and outdoor camera home screen", Page 24)
- **iPhone, iPad:**
  Displayed on the right side of the screen
- **Android devices:**
  Displayed on the left side of the screen

❷ Displays the camera setting screen

❸ Shows the bit rate ("Displaying the bit rate level icon", Page 138)

❹ Shows the area zoomed in on

❺ Shows the live camera image without zoom applied

❻ Shows the live camera image with zoom applied

❼ Turns sound on/off
(“Turning the camera audio on and off”, Page 126)

❽ Enables talking with the camera
(“Talking to the camera”, Page 128)

❾ Starts/stops recording
(“Recording camera images (manual recording)”, Page 127)

❿ Takes snapshots
(“Taking snapshots”, Page 127)

⓫ Switches between single and dual view
(“Viewing images in dual view”, Page 127)

Note:

- Multiple mobile devices can view live images from the same camera at the same time (“Accessing from multiple mobile devices”, Page 26). However, only one mobile device can use certain features at a time (talking to the camera, etc.).
- When connected away from home, or is displayed next to the access point’s name. See “Accessing while away from home”, Page 21 for more information.
- When displaying front door cameras or outdoor camera images while away from home, the app will disconnect from the access point after a certain period of time in some conditions. This is to minimize data usage. If you are disconnected automatically, a dialog is displayed asking if you want to connect to the camera again. The time out period cannot be changed.

Turning the camera audio on and off

Tap the icon to select the desired setting while viewing live images from a camera.

: Camera audio will be heard

: Camera audio will not be heard

Viewing images horizontally

By turning your mobile device on its side you can display camera images horizontally.
When viewing images horizontally, icons for operating the camera (e.g., recording, talking, etc.) are not displayed. To display these icons, tap anywhere on the camera image.

Zooming in and out

Pinch in and out on the camera image while viewing live images from a camera. While zoomed in, you can swipe your finger on the camera image to display a different area of the image.

Using night vision

If there is not adequate light to illuminate the subject, such as at night, the camera switches to night vision mode depending on the settings (see “Using night vision”, Page 137).

Recording camera images

To record camera images manually, see “Recording camera images (manual recording)”, Page 127.
To record images automatically when a sensor is triggered, see “Mode settings (overview)”, Page 132.

Taking snapshots

To save snapshots (i.e., still images) while viewing live camera images, see “Taking snapshots”, Page 127.

Talking to the camera

To use your mobile device's microphone and the camera's built-in speaker to talk to someone where the camera is installed, see "Talking to the camera", Page 128.

Viewing images in dual view

While viewing images from a camera you can split the screen and display 2 images from the same camera (dual view). While viewing images in dual view, the bottom image can be zoomed in on (the area zoomed in on is shown in a white box in the top image). This is convenient when you want to zoom in and focus in on 1 part of an image (e.g., where packages are left on your porch) while viewing the entire image to check for people approaching your house, etc.

You can switch between single view (displaying only 1 image) and dual view by tapping .

Dual images with horizontal viewing

Dual images can also be displayed when your mobile device is displaying camera images horizontally. You can move the sub-image by tapping and holding it and then selecting where it will be displayed. The sub-image can be displayed in the 4 corners of an image.

Recording camera images (manual recording)

You can record camera images while viewing live camera images. Camera recordings are saved on the access point's SD card.

1 View live images from the desired camera.

2 Tap to start recording.

- Recordings include both audio and video. To disable audio recording, see "Recording with sound", Page 137.

3 Tap to stop recording.

Note:

- The maximum recording time is 2 minutes.
- If **[Recording Error (Memory full)]** is displayed, the access point's SD card is full and new recordings cannot be saved. Erase unneeded recordings (see "Erasing recordings", Page 130).
- For information about SD cards and how recordings are saved, see "Access point SD cards", Page 147.

Taking snapshots

You can save snapshots (i.e., still images) while viewing live camera images. Snapshots are saved in your mobile device's default photo album app.

1 View live images from the desired camera.

2 Tap .

Note:

- Snapshot sizes are scaled to fit the width of your mobile device's display.
- **iPhone, iPad**
  Snapshots are saved as JPEG files in your mobile device's "Photos" app.

- **Android devices**
  Snapshots are saved as JPEG files in your mobile device's picture directory. The file naming convention is: device name + the date and time.

Talking to the camera

You can use your mobile device's microphone and the camera's built-in speaker to talk to someone where the camera is installed.

1 View live images from the desired camera.

2 Tap and hold .

- The audio from your mobile device's microphone is played through the camera's speaker until you release your finger.
- Talk in turns with the other party. (While you are talking to the camera, you will not be able to hear audio from the camera's microphone.)

Note:

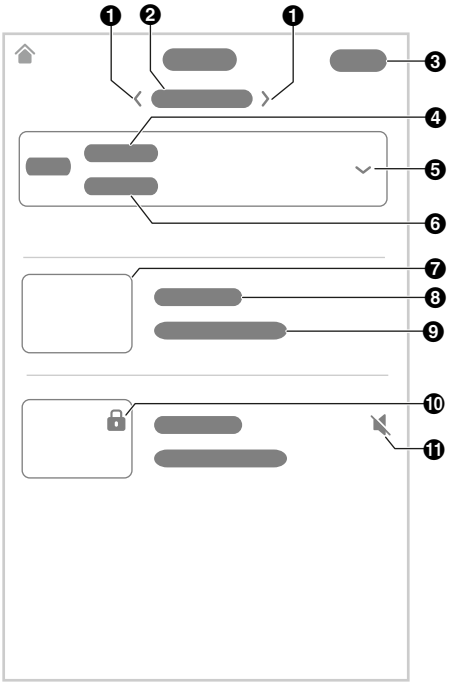
- For information about adjusting the camera's speaker volume, see "Adjusting the talk volume", Page 136.

Viewing the recording list screen

From the **[HomeHawk]** app home screen, tap → **[Recording List]** to display the recording list screen.

- You can also access the recording list screen by tapping **[Show all]** in the camera image/recording list screen ("Viewing the camera image/recording list screen", Page 123).

The recording list displays all recordings for the specified dates and filters can be used to specify the recordings that you want to display.



❶ 〈: Displays recorded images for the previous date
〉: Displays recorded images for the next date

❷ Displays the selected date and you can tap here to select a date

❸ **[Select]**: Used to select multiple recordings for deleting or protecting

❹ Shows the access point's name

❺ Selects devices when there are multiple devices registered

❻ Shows the camera's name
– Select **[All Cameras]** to see recorded images from all the cameras registered to the specified access point.

❼ Displays a thumbnail image for the recording

❽ Shows information about the type of recording
– **[Manual]:** Recordings that were recorded manually.
– **[Motion]:** Recordings that were recorded when a motion sensor was triggered.

❾ Shows the time when the recording was made and its duration

❿ Indicates that a recording is protected

⓫ Indicates recordings were recorded with the sound muted by the recording settings

Playing back recordings

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Recording List]**.

2 Select the desired access point and camera.
- Select **[All Cameras]** to see recorded images from all the cameras registered to the specified access point.

3 Tap 〈, 〉, or the displayed date to select a recording date.
- A list of all recordings recorded on the selected date is displayed.

4 Select a recording.
- The selected recording starts playing in the playback screen.

Note:

- When connected away from home, or is displayed on the playback screen. See “Accessing while away from home”, Page 21 for more information.
- Recorded images can also be played back from the camera image/recording list screen (“Viewing the camera image/recording list screen”, Page 123).

Playback controls

The following controls are displayed in the playback screen.

Starts or resumes playback

Pauses playback

Allows you to quickly move to the desired area of the recording by sliding the progress bar

Erases the current recording

Protects or removes the protection for the recording

Enables or disables audio for the recording

Erasing recordings

Erasing individual images

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Recording List]**.

2 Select the desired access point and camera.
- Select **[All Cameras]** to see recorded images from all the cameras registered to the specified access point.

3 Tap 〈, 〉, or the displayed date to select a recording date.

4 Select the desired recording.

5 Tap → **[OK]**.

Erasing multiple images

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Recording List]**.

2 Select the desired access point and camera.
- Select **[All Cameras]** to see recorded images from all the cameras registered to the specified access point.

3 Tap 〈, 〉, or the displayed date to select a recording date.

4 Tap **[Select]**.

5 Select the desired recordings.
- Tap ○/✓ displayed next to the date to select or deselect all images shown in the list.

6 When finished, tap **[Delete]** → **[OK]**.

Protecting recordings

You can protect recordings so that they cannot be erased.

Protecting individual images

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Recording List]**.

2 Select the desired access point and camera.
- Select **[All Cameras]** to see recorded images from all the cameras registered to the specified access point.

3 Tap 〈, 〉, or the displayed date to select a recording date.

4 Select the desired recording.

5 Tap .
- Tap to remove the protection.
- is displayed in the thumbnail of images to indicate that the image is protected.

Protecting multiple images

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Recording List]**.

2 Select the desired access point and camera.
- Select **[All Cameras]** to see recorded images from all the cameras registered to the specified access point.

3 Tap 〈, 〉, or the displayed date to select a recording date.

4 Tap **[Select]** → .

5 Select the desired recordings.

- is displayed in the thumbnail of images to indicate that the image is protected.
- Tap displayed next to the date to select or deselect all images shown in the list.

6 When finished, tap **[Protect]**.

Mode settings

Mode settings (overview)

Modes allow the access points and their connected front door cameras and outdoor cameras to operate according to pre-determined settings when motion is detected. The same mode is used for all front door cameras and outdoor cameras connected to the same access point. You can use preset modes, or create your own modes. Each mode answers the following questions.

1 **What sounds** are made?
   – Example: Beeps, announcements, etc.
2 **Which cameras** record images and for **how** long?
3 **Are cameras combined** together for pre-recording?
   – Example: 2 cameras can be linked together so that if 1 camera detects motion, the other camera starts pre-recording. (Images are temporarily stored, and if motion is detected later, images are then saved on the access point's SD card.)
4 **Are notifications sent** to mobile devices when motion is detected?

Note:

- Modes cannot be used with HD cameras.

Examples

Here are some examples of how you can use modes.

I want to know when a package arrives

1 **What sounds:** No sounds are made
2 **Which cameras:** Camera 1 and Camera 2 record images for 1 minute
3 **Are cameras combined:** Yes
4 **Are notifications sent:** Yes

I want to sound a voice alert if a suspicious person approaches my front door

1 **What sounds:** An announcement is played
2 **Which cameras:** Camera 1 and Camera 2 record images for 2 minutes
3 **Are cameras combined:** Yes
4 **Are notifications sent:** Yes

Checking the selected mode

The name of the selected mode is displayed below the name of access points in the home screen (“Front door camera and outdoor camera home screen”, Page 24).

Accessing the mode screen

The mode screen can be accessed by tapping the mode icon displayed below the name of access points in the home screen (“Front door camera and outdoor camera home screen”, Page 24).

Selecting modes

1 Access the mode screen (“Accessing the mode screen”, Page 133).

2 Select the desired mode.

Turning modes off

If you don’t want to receive notifications, record images, or have the camera make sounds when motion is detected by a camera, you can turn off modes by selecting **[Basic Mode]**.

1 Access the mode screen (“Accessing the mode screen”, Page 133).

2 Tap **[Basic Mode]**.

Preset modes

There are 3 preset modes that can be used for front door cameras and outdoor cameras: **[Basic Mode]**, **[Silent Mode]**, and **[Protection Mode]**.

– **[Basic Mode]:**
  Use this if you don't want to receive notifications, record images, or have the camera make sounds when motion is detected.
– **[Silent Mode]:**
  Use this if you want to receive notifications, record images, but not have the camera make sounds when motion is detected.
– **[Protection Mode]:**
  Use this if you want to receive notifications, record images, and have the camera make sounds when motion is detected.

The following table describes the settings for **[Silent Mode]** and **[Protection Mode]**.

Setting	[Silent Mode]		[Protection Mode]	
	1st camera	2nd or later camera	1st camera	2nd or later camera
Start Recording	On	On	On	On
[Duration]	[10 sec]	[10 sec]	[10 sec]	[10 sec]
[Sync]*1	Off	Off	Off	Off
Send Notifications	On	On	On	On

Setting	[Silent Mode]		[Protection Mode]	
	1st camera	2nd or later camera	1st camera	2nd or later camera
Play Sound	[OFF]	[OFF]	[Announcement]	[OFF]

*1 Refer to “Sync”, Page 134 for more information.

Creating new modes

You can create new modes to operate your devices when an event occurs such as motion is detected.

1 Access the mode screen (“Accessing the mode screen”, Page 133).

2 Tap ＋.

3 Change the settings as required.
- Each setting is explained in this section.

4 When finished, tap **[Create]**.

Mode name

When creating a new mode, you can set the name used for the mode. This helps you to identify the mode from other modes used on your mobile device.
– **To enter a name:** Tap the text field and enter the text.

Start Recording

You can enable and disable recording, and also specify the recording duration for each camera.
– **To enable/disable recording:** Slide the switch next to each camera name to the desired position.
– **To select a recording duration:** Tap the time displayed next to **[Duration]**, and then tap **[Done]**.

Sync

You can coordinate cameras so that when 1 camera detects motion, the other camera starts pre-recording. (Images are temporarily stored, and if motion is detected later, images are then saved on the access point’s SD card.)
– **To enable/disable camera coordination:** Slide the **[Sync]** switch to the desired position.

Note:
- Sync is only available when 2 or more front door cameras or outdoor cameras are registered to the access point.

[Send Notifications]

Push notifications are displayed on your mobile device when motion is detected.
– **To enable/disable push notifications:** Slide the switch to the desired position.

Note:
- After recording has started for a camera, motion detection notifications from that camera are not sent to mobile devices. However, motion detection notifications from other cameras are sent.

[Play Sound]

You can specify what sounds a camera will automatically make when motion is detected. This can be used to warn suspicious people approaching your house that they have been detected and that there are cameras that can record images of them.

1 Tap the setting value displayed next to **[Play Sound]**.
2 Select the desired sound.
   – **[Beep]:** Sounds a beep when motion is detected.
   – **[Announcement]:** Plays a predetermined announcement when motion is detected.
      ● This setting is only available for front door cameras.
      ● This setting may not be available in some regions.
      ● The available languages of announcements may differ depending on the region of use.
   – **[OFF]:** Disables sounds for motion detection.
3 When finished, tap **[OK]**.

Note:

● You can change the volume of beeps and announcements played form cameras. See “Speaker volume settings”, Page 136 for more information.

Editing modes

1 Access the mode screen (“Accessing the mode screen”, Page 133).
2 Tap **[Edit]**, and then tap next to the desired mode.
3 Edit the desired settings.
4 When finished, tap **[Done]**.

Deleting modes

1 Access the mode screen (“Accessing the mode screen”, Page 133).
2 Tap **[Edit]**, and then tap next to the desired mode.
3 Tap .
4 Tap **[OK]**.

Status

Camera battery level

Battery icons displayed on camera images show the battery level or charging status of the battery.

● **Battery level icons:**

high

medium

low

needs charging

- **Battery charging status icons:**

  charging

Camera signal strength

You can check the signal strength of each camera's wireless connection to the access point.

1. From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.
2. Tap **[Camera Settings]** and select the desired camera.
3. Tap **[Signal Strength]**.
4. Confirm the number of blue bars.
   - More blue bars indicate a stronger signal.

   Strongest signal

   Good signal

   Weak signal

    No signal

    Could not obtain signal information

Image, sound, and recording settings

Speaker volume settings

Adjusting the talk volume

You can adjust the volume of your mobile device's microphone, which determines the volume of your voice that is sent to the camera when talking to the camera.

1. From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.
2. Tap **[Camera Settings]** and select the desired camera.
3. Tap **[Sound]** → **[Talk Volume]**.
4. Adjust the volume as desired.

Adjusting the motion detection volume

You can adjust the volume of the camera audio (beeps, announcements, etc.) that sounds from the camera when motion is detected.

1. From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.
2. Tap **[Camera Settings]** and select the desired camera.
3. Tap **[Sound]** → **[Motion detection volume]**.
4. Adjust the volume as desired.

Recording settings

Recording with sound

You can select whether audio is recorded when recording camera images.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Tap **[Recording Settings]**.

4 Slide the **[Recording with Sound]** switch to the desired position.
- When this switch is turned off, audio is not recorded when recording camera images.

Adjusting the time stamp

You can change the time format and position of the time stamp that is displayed when viewing camera images or recording. You can also turn the time stamp off.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Tap **[Recording Settings]** → **[Time Stamp]**.

4 Select the desired setting and then tap **[OK]**.
- **[Position]**: Determines the position of the time stamp. To turn the time stamp off, select **[OFF]**.
- **[24-Hour Format]**: Determines whether the time stamp is displayed in 24-hour format or 12-hour format. Enable this setting to use 24-hour format time.

Using night vision

If there is not adequate light to illuminate the subject, such as at night, the camera switches to night vision mode depending on the settings.
The following settings can be selected for the night vision.
- **[Color]:** Lights white LEDs so that images can be displayed in color. Has shorter visibility range than **[Monochrome]**.
- **[Monochrome]:** Lights infrared LEDs so that images can be seen in the dark. Has longer visibility range than **[Color]**.
- **[OFF]:** Turns off night vision mode.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Tap **[Night Vision]**.

4 Select the desired setting and then tap **[OK]**.

Video settings

Changing the camera resolution

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Tap **[Video]** → **[Resolution]**.

4 Select the desired setting and then tap **[OK]**.

Changing the frame rate

The frame rate determines the speed at which images from the camera are refreshed.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Tap **[Video]** → **[Frame Rate]**.

4 Select the desired setting and then tap **[OK]**.

Note:

- Higher frame rates mean images are refreshed faster and moving subjects are displayed more smoothly, however, images displayed on your mobile device may be delayed and sound may cut out or be delayed when talking to the camera, especially over a slow or congested network connection.
- Lower frame rates mean images are refreshed less often and moving subjects may appear “choppy”, however, images displayed on your mobile device will be less delayed and sound may be more consistent when talking to the camera over a slow or congested network connection.

Changing the brightness

You can adjust the overall brightness of the camera image.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Tap **[Video]** → **[Brightness]**.

4 Select the desired setting.

Displaying the bit rate level icon

You can display the bit rate level icons on camera images.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Tap **[Video]**.

4 Slide the **[Bit Rate Level Icon]** switch to the desired position.
- When the switch is turned on, the bit rate is displayed while viewing camera images as follows.

  Highest bit rate

  High bit rate

  Moderate bit rate

  Lowest bit rate

Detection settings

Detection area

You can select which areas of the camera image are monitored for motion detection. This allows you to ignore motion in certain areas of the camera's image.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Tap **[Detection]** → **[Set Detection Area]**.

4 Tap the desired areas of the camera image.
- Gray areas of the camera image indicate areas for which image detection is disabled.

5 When finished, tap **[Set]**.

Motion sensitivity

You can adjust the sensitivity of the camera's motion detection features.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Tap **[Detection]** → **[Motion Sensitivity]**.

4 Select the desired setting.
If you want to use the same sensitivity level for the IR sensor and video motion sensor:
– **[High]**: The sensors are very sensitive to changes, i.e., even a small change will trigger the sensors.
– **[Normal]**: The sensors are moderately sensitive to changes.
– **[Low]**: The sensors are somewhat sensitive to changes.
If you want to use different sensitivity levels for the IR sensor and video motion sensor:
Tap **[Advanced]**.
– **[IR Sensor]**: Determines sensitivity levels for the IR sensor.
– **[Video Motion]**: Determines sensitivity levels for the video motion sensor.

5 When finished, tap **[OK]**.

Disabling detections when leaving your house (front door cameras only)

You can disable detections for when people leave your house.
This is convenient when you only want to detect people approaching your house and do not want to detect people leaving your house.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Tap **[Detection]**.

4 Slide the **[Disable when leaving]** switch to the desired position.
- **When turned on**: People leaving your house will not be detected.
- **When turned off**: People leaving your house will be detected.

Detection test

You can test which areas of the camera image can be detected while viewing live images from the camera. This is useful when determining where to install cameras, and also which areas you should enable or disable detection for.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Tap **[Detection]** → **[Detection Test]**.

IR Sensor
Shows which IR sensors of the camera detected motion.

Video Motion
A live image of the selected camera is displayed with detection areas colored to show their detection status.
- **Green areas**: Areas where motion was detected.
- **Clear areas**: Areas where motion was not detected.
- **Black areas**: Areas where detection is disabled. (See “Detection area”, Page 139 for more information.)

Front door camera and outdoor camera settings

Changing the name of cameras

You can edit camera names.
The camera name setting is used to identify cameras. This is useful when you have multiple cameras.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Tap **[Name]**.

4 Enter the desired name.

5 When finished, tap **[OK]**.

Note:
- If your camera is linked with an Amazon Echo Show device or a Google Home device and the Amazon Echo Show device or Google Home device does not recognize the camera name, try changing the camera name.

Status LED

You can determine whether the camera’s LED indicator lights or is disabled.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Slide the **[Status LED]** switch to the desired position.

Updating firmware

You can use this feature to check for a newer version of the camera firmware (i.e., system software). If a newer version is found, you can update the firmware.

Important:

- Make sure to fully charge the camera before updating its firmware. The firmware may not be able to be updated if the battery level is low.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Tap **[System]** → **[Firmware Update]**.
- The camera will connect to the Internet and check for a newer version of its firmware.

4 Follow the on-screen instructions.

Resetting camera settings

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Camera Settings]** and select the desired camera.

3 Tap **[System]** → **[Reset Camera Settings]**.

4 Follow the on-screen instructions.

Note:

- Camera registration information stored on the access point is not reset.

Access point features

Access point features (overview)

Using multiple access points

You can purchase and configure multiple systems, such as one for your home, one for your workplace, and one for your vacation home. If you register your mobile device to each access point, you can access any of your systems conveniently from the same mobile device, and switch between systems as desired.

Note:

- Your mobile device can only connect to and control one access point (and devices connected to it) at a time.

Registering your mobile device to additional access points

You can register your mobile device to multiple access points. Use this procedure to register your mobile device to an additional access point.

1 From the **[HomeHawk]** app home screen, tap ☰ .

2 Tap **[Add Camera(s)]**.

3 Tap **[FRONT DOOR Camera Kit (+ OUTDOOR Cameras)]** and continue from step 2 of "Initial setup", Page 119.

Changing access point names

You can change the access point name.
The access point name setting is used to identify the access point. This is useful when you have multiple access points.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Access Point Settings]** and select the desired access point.

3 Tap **[Name]**.

4 Enter the desired name.

5 Tap **[OK]**.

Status LED settings

You can specify whether the device's LED indicator lights or is disabled.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Access Point Settings]** and select the desired access point.

3 Tap **[System]**.
- **[Status LED]**: Determines whether the device's LED indicator lights or is disabled.

Resetting an access point

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Access Point Settings]** and select the desired access point.

3 Tap **[System]** → **[Reset Access Point]**.

4 Select the desired setting.
- **[Reset All Settings]**: Resets all access point settings except camera registration settings.
- **[Reset Access Point Settings]**: Resets access point settings except for camera registration information, smartphone registration information, and network related settings.

5 Follow the on-screen instructions.

Note:

- An access point can also be restarted or reset manually by pressing buttons on the access point.
  - **To restart an access point:**
    Press the reset button using an object with a thin tip.
  - **To reset all access point settings except camera registration settings:**
    Press and hold the reset button for about 5 seconds using an object with a thin tip.
  - **To reset access point network settings (do this if the network settings ("Changing IP settings", Page 145) are incorrectly configured):**
    While pressing and holding the **SETUP** button for 1 second or longer, press the reset button using an object with a thin tip.

Recording settings

You can specify whether to allow recorded camera images to be erased automatically by new images when the SD card is full, and check the remaining capacity of the SD card.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Access Point Settings]** and select the desired access point.

3 Tap **[Recording Settings]**.

4 Select the desired setting.
- **[Overwrite Recording]**: Determines whether recorded camera images are erased automatically by new images when the SD card is full.
- **[microSD Card]**: Displays the currently used capacity and the maximum capacity of the SD card.

Bit rate settings for Amazon Echo Show and Google Home

You can select the bit rate to be used when transmitting data for Amazon Echo Show or Google Home Chromecast.
If you cannot display camera images on Amazon Echo Show or via Google Home Chromecast, or if images are not displayed smoothly, try using a lower bit rate setting.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Access Point Settings]** and select the desired access point.

3 Tap **[System]** → **[Bit Rate]**.

4 Select the desired setting and then tap **[OK]**.

Note:

- This setting is only available when Amazon Echo Show (“Amazon Alexa features (overview)”, Page 35) or Google Home (“Google Home features (overview)”, Page 38) settings are enabled.

Time adjustment

You can manually or automatically adjust the time of your devices to match the mobile device.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Access Point Settings]** and select the desired access point.

3 Tap **[System]** → **[Time Adjustment]**.

4 **To manually adjust the time:**
Tap **[Update Time]**.
To automatically adjust the time:
Tap the name of the displayed mobile device, select the mobile device to match the time with, and then tap **[OK]**.

Displaying device information

You can display device information, such as firmware versions and MAC addresses, and select whether or not to upload logs.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Access Point Settings]** and select the desired access point.

3 Tap **[System]** → **[System Info]**.
– **[Access Point Log Upload]**: Determines whether or not logs are uploaded.

Updating the firmware

You can use this feature to check for a newer version of your device's firmware (i.e., system software). If a newer version is found, you can update the firmware.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Access Point Settings]** and select the desired access point.

3 Tap **[System]** → **[Firmware Update]**.
- Your device will connect to the Internet and check for a newer version of its firmware.

4 Follow the on-screen instructions.

Notification settings

You can select which types of status notifications are displayed, and which are not.

Important:

- In order to receive notifications, your mobile device must be connected to the Internet. If your mobile device is not connected to a wireless network, a mobile network connection is required.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Access Point Settings]** and select the desired access point.

3 Tap **[Notification Settings]**.

4 Select the desired settings.
– **[Recording Error]:** Determines whether a notification is displayed when a recording error occurs.
– **[Mode Change]:** Determines whether a notification is displayed when a mode is changed.

Login settings

Configuring automatic login

You can specify whether or not you must enter a login password in order to connect to your devices while away from home.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Access Point Settings]** and select the desired access point.

3 Tap **[Login Settings]**.

4 Next to **[Automatic Login]**, slide the switch to the desired position.
To disable automatic login:
Slide the switch to the off position.
To enable automatic login:
Slide the switch to the on position, enter the password and then tap **[OK]**.

- To display the characters that you have entered, tap .

Changing the login password

You can change the login password used in order to connect to your devices while away from home.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Access Point Settings]** and select the desired access point.

3 Tap **[Login Settings]** → **[Change Login Password]**.

4 Enter the new password.

- To display the characters that you have entered, tap .

5 Tap **[OK]**.

Note:

- The login password can only be changed when you are at home (when your mobile device is connected to the same wireless router as the access point).

Network features

Changing IP settings

Typically these settings should not be changed.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Access Point Settings]** and select the desired access point.

3 Tap **[Network]** → **[IP Settings]**.

4 Select the desired IP address mode.
- In most cases **[Auto (DHCP)]** is preferred. In this case, no other settings are available on this screen.
- If you select **[Manual (Static)]**, other settings on this screen become available.

5 Configure the settings as needed and then tap **[OK]**.

Note:

- If you make a mistake while configuring your device to use a static IP address and you can no longer connect to your device, reset the device's network settings ("Resetting an access point", Page 142).

Port forwarding settings

These settings are only required if you need to configure your wireless router's port forwarding feature in order to connect to your devices while away from home.

Important:

- In order to use this feature, you must first configure your devices to use a static IP address (“Changing IP settings”, Page 145).

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Access Point Settings]** and select the desired access point.

3 Tap **[Network]** → **[Port Forwarding]**.

4 Turn on the **[Enable]** radio button.

5 Tap the field next to **[Port]** and then enter the desired port number.
- Only port numbers 55000-65000 can be assigned.
- Configure your wireless router’s port forwarding feature to forward these ports to the static IP address that you have assigned to your devices.

6 When finished, tap **[OK]**.
- Your device restarts.

MTU settings

This setting affects how data is sent over the network. Typically this setting does not need to be changed.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Access Point Settings]** and select the desired access point.

3 Tap **[Network]** → **[MTU Settings]**.

4 Select the desired value and then tap **[OK]**.

Home wireless network SSID features

The app remembers the SSIDs of wireless routers that your mobile device uses at home to connect to your devices; it can remember 10 SSIDs, and saves them in the home wireless network SSID list. If the list is full and you try to connect to your devices using a new SSID while at home, the app may connect to your devices over the Internet even though you are at home, i.e., or will be displayed at the top of the home screen. In this case, we recommend deleting unused SSIDs from the home wireless network SSID list.

Deleting wireless routers

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Access Point Settings]** and select the desired access point.

3 Tap **[Home Wireless Network SSID]**.

4 Select the wireless router that you want to delete and then tap **[Delete]**.

Updating the wireless network SSID information

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Access Point Settings]** and select the desired access point.

3 Tap **[Home Wireless Network SSID]**.

4 Tap **[Update]** to update the information.

Access point SD cards

SD card capacity and total recording time

The following recording times apply when images from one camera are recorded. All times are approximate.

– 2 GB card: 4 hours
– 4 GB card: 9 hours
– 8 GB card: 18 hours
– 16 GB card: 36 hours
– 32 GB card: 72 hours
– 64 GB card: 145 hours
– 128 GB card: 291 hours

Note:

- SD cards larger than 128 GB cannot be used.
- The times listed here are calculated theoretically. Actual recording time may vary.
- The times listed here apply during the following condition.
  – **[Resolution]** is set to **[HD (1280x720)]** (“Changing the camera resolution”, Page 137)
- The file system and other information is stored on the SD card, therefore the card’s actual available capacity will be less than the card’s noted capacity.

SD card formatting

Before inserting an SD card into the access point, format the SD card using your computer and the SD formatting tool available from the web page listed below.
{{"www.sdcard.org/downloads/formatter_4/"|tolink("http://www.sdcard.org/downloads/formatter_4/")}}

Note:

- All data stored on the SD card will be erased when it is formatted.

How recordings are saved on the SD card

- Recordings are saved on the access point’s SD card in folders based on the recording date, in the following path.
  /PRIVATE/PANA_GRP/AP/HN_AP
- The file naming convention is: camera number + recording type + recording start time.
  – First character: Camera number. Cameras 1-4 are indicated using 1-4.
  – Second character: Recording type. A=sensor recordings, M=manual recordings.
  – Remaining characters: Recording start time (hhmmss).
  Example: 2M123455.mp4
  This file is a manual recording (“M”) from camera 2 (“2”) that started at 12:34 PM and 55 seconds (“123455”).

HD camera setup

HD camera setup (overview)

There are 3 basic steps you need to perform in order to connect to the HD camera from your mobile device.

1 **Download the app**
Download the **[HomeHawk]** app to your mobile device.
See “Downloading the [HomeHawk] app”, Page 148.

2 **Set up the HD camera**
Use the **[HomeHawk]** app to configure the camera to connect to your wireless router, and then register your mobile device to the camera.
See “Setting up the HD camera”, Page 149.

3 **Register additional mobile devices (optional)**
You can register additional mobile devices to the camera, for a total of 8.
See “Registering additional mobile devices to the camera”, Page 150.

Downloading the [HomeHawk] app

Download information is available at the web page listed below.
{{"https://panasonic.net/cns/pcc/support/homehawk"|tolink("https://panasonic.net/cns/pcc/support/homehawk")}}

Using your device’s app store

iPhone, iPad users
Search for “Panasonic HomeHawk”. iPad users should search in the “iPhone only” category.

Android device users
Search for “Panasonic HomeHawk”.

Compatible mobile devices

Please check the latest information at the following supported page.
{{"https://panasonic.net/cns/pcc/support/homehawk"|tolink("https://panasonic.net/cns/pcc/support/homehawk")}}
– iPhone 5s and later, iPad Air and later (iOS 10.0 and later), Android devices (Android 5.0 and later) (As of October, 2019)

Note:

- The **[HomeHawk]** app may not function properly depending on the operating environment, such as the model of your mobile device, peripherals connected to your mobile device, and the apps installed on your mobile device. Bluetooth headsets are not supported by the **[HomeHawk]** app.
- Operating systems for mobile devices are continually updated. Accordingly, the versions of operating systems the **[HomeHawk]** app supports may also be updated.
- The following Android devices are not compatible with the **[HomeHawk]** app.
  – Android devices that are not supported by Google Play
  – Android devices with limited hardware features (Bluetooth, wireless LAN, and microphone support are required.)

Setting up the HD camera

Before you begin

In this procedure, the camera will enter “temporary access point mode”. In this mode, you can use your mobile device’s wireless network feature to connect directly to the camera, and then use your mobile device to change the camera’s wireless settings so that the camera can connect to your wireless router. Confirm the following before you begin.

– Make sure you have installed the **[HomeHawk]** app on your mobile device
– Make sure the camera is located within range of your wireless router
– Make sure your mobile device is connected to your wireless router
– Make sure your mobile device can connect to the Internet
– Make sure you know the wireless network name (SSID) and password assigned to your wireless router

Initial setup for iPhone, iPad

Important:

- If other HD cameras are already registered to your mobile device and you want to set up another HD camera, see “Adding another HD camera”, Page 174.

1 Plug in the camera and wait about 1 minute for the camera’s LED to light in green.
- If the LED does not light in green, or if you experience trouble during this procedure, use the camera’s reset button to reset the camera (“Using the camera’s reset button”, Page 173) and then repeat this procedure.

2 Start the **[HomeHawk]** app.
- The end-user license agreement is displayed the first time you start the app.

3 Follow the on-screen instructions.

4 Tap **[Indoor HD Camera]**.

5 Tap **[Set up the HD Camera]**.

6 When prompted, press the **SETUP** button on the back of the camera, and then tap **[Next]**.
- The LED indicator blinks in green.

7 **iOS 11.0 or later users:**
Tap **[Join]** and then continue from step 9.
iOS 10.x users:
Change your mobile device’s wireless network setting temporarily so that it connects to the camera directly.
- Open your mobile device’s **[Settings]** app, tap **[Wi-Fi]**, select “KX-HNC800_Panasonic”, enter “00000000” as the password, and then tap **[Join]**.
- If more than one item named “KX-HNC800_Panasonic” is displayed, turn off the power for the other cameras and only operate 1 camera at a time.

8 Start the **[HomeHawk]** app again.

9 If necessary, enter the password required to connect to your wireless router and then tap **[Next]**.
- The camera and your mobile device connect to your wireless router.
- If prompted, follow the on-screen instructions and connect your mobile device to your wireless router, start the app again, and then tap **[Add This Mobile Device]**.
- If you enter the wrong password, an error is displayed. Repeat the initial setup procedure from the beginning.

10 When prompted, press the **SETUP** button on the back of the camera.
- The camera registers your mobile device.

11 When prompted, set the password that will be used to connect to the camera and then tap **[Next]**.

12 When prompted, enter a name for your mobile device and then tap **[OK]**.
- This setting allows you to change the name assigned to your device. It can help you identify your mobile device when performing certain operations, such as deregistering a mobile device.
- A list of HD cameras registered to the app is displayed when initial setup is complete.

Initial setup for Android devices

Important:

- If other cameras are already registered to your mobile device and you want to set up another HD camera, see “Adding another HD camera”, Page 174.

1 Plug in the camera and wait about 1 minute for the camera’s LED to light in green.
- If the LED does not light in green, or if you experience trouble during this procedure, use the camera’s reset button to reset the camera (“Using the camera’s reset button”, Page 173) and then repeat this procedure.

2 Start the **[HomeHawk]** app.
- The end-user license agreement is displayed the first time you start the app.

3 Follow the on-screen instructions.

4 Tap **[Indoor HD Camera]**.

5 Tap **[Set up the HD Camera]**.

6 When prompted, press the **SETUP** button on the back of the camera.
- The LED indicator blinks in green.
- The app temporarily changes your mobile device’s wireless network setting so that it connects to the camera directly.

7 If necessary, enter the password required to connect to your wireless router and then tap **[Next]**.
- The camera and your mobile device connect to your wireless router.
- If you enter the wrong password, an error is displayed. Repeat the initial setup procedure from the beginning.

8 When prompted, press the **SETUP** button on the back of the camera.
- The camera registers your mobile device.

9 When prompted, set the password that will be used to connect to the camera.

10 When prompted, enter a name for your mobile device and then tap **[OK]**.
- This setting allows you to change the name assigned to your device. It can help you identify your mobile device when performing certain operations, such as deregistering a mobile device.
- A list of HD cameras registered to the app is displayed when initial setup is complete.

Registering additional mobile devices to the camera

After you set up the camera, you can register additional mobile devices. You can register up to 8 mobile devices to a camera. Each mobile device can be registered to up to 32 cameras.
Confirm the following before you begin.
– Make sure you have completed the initial setup procedure
– Make sure your mobile device can connect to the Internet
– Make sure your wireless router and the camera are turned on
– Make sure your mobile device and the camera are connected to the same wireless router

1 Using the mobile device that you want to register, download the **[HomeHawk]** app and then start the app.
- If prompted, follow the on-screen instructions and select the appropriate region/country.

2 Tap **[Indoor HD Camera]**.

3 Tap **[Add This Mobile Device]**.

4 When prompted, press the **SETUP** button on the back of the camera.
- The camera registers your mobile device.

5 When prompted, enter the password required to connect to the camera.
- This password was set during initial setup.

6 When prompted, enter a name for your mobile device and then tap **[OK]**.
- This setting allows you to change the name assigned to your device. It can help you identify your mobile device when performing certain operations, such as deregistering a mobile device.
- A list of all cameras registered to the app is displayed when registration is complete.

HD camera basics

HD camera basics (overview)

To begin, simply start the **[HomeHawk]** app on your mobile device by tapping its icon (shown below).

HD camera password

To prevent unauthorized access to the camera, you will be prompted to enter the camera's password the first time you connect to the camera.

Note:
- The password is required whether you are connecting to the camera at home or while away from home. It is set during initial setup ("Setting up the HD camera", Page 149).
- You can change the password if necessary ("Login password", Page 170).
- When entering the camera's password, you can enable the automatic login feature by turning on the **[Automatic Login]** checkbox. In this case, the password that you enter will be saved, allowing the app to log in to the camera automatically. You can turn the automatic login feature on and off later if desired. See "[Automatic Login]", Page 169.

General information
- Running the app while away from home when your mobile device is connected to a mobile network (3G, 4G, etc.) may cause your mobile device's battery to deplete faster than normal.
- If the app disconnects from the camera while away from home (such as when you turn your mobile device's screen off and then on, or you switch to another app and then return to the **[HomeHawk]** app), the app's home screen will be displayed instead of the last screen you were viewing. Also note that in this case, it may take some time for the app's screen to be displayed.

Privacy information

Certain features of the app function by accessing your mobile device's hardware, such as the microphone, or the information stored in your mobile device. While using the app, a dialog may be displayed that asks whether you want to allow the app to access these features of your mobile device. You can change this setting later if desired in the privacy section of your mobile device's **[Settings]** app.

Displaying the options menu

The method used to display the options menu varies depending on your mobile device. Note that the options menu is not available on all screens.

iPhone, iPad

Tap .

Android devices with a dedicated "menu" button

Press your device's menu button.

Android devices without a dedicated "menu" button

Tap .

Accessing the HD camera from multiple devices

There are certain limitations when multiple mobile devices are connected to the camera at the same time, as explained below.

Simultaneous access

The following restrictions apply for most operations when multiple mobile devices connect to the camera at the same time.

– Up to three mobile devices can use the camera at the same time while at home.
– Up to two mobile devices can use the camera at the same time while away from home.
– The maximum number of mobile devices that can use the camera is three. For subsequent mobile devices that try to use the camera, **[Device is in use.]** is displayed.

Note:

- Even if a mobile device is able to connect to the camera, certain features may be temporarily unavailable depending on how other mobile devices are using the camera.

Other restrictions on HD camera features

If a mobile device is viewing camera images

- Other mobile devices cannot change certain settings for that camera.

If a mobile device is playing camera recordings

- Other mobile devices cannot play recordings from that camera.

If a mobile device is accessing the recording list

- Other mobile devices cannot access that camera's recording list.

If a mobile device is talking to a camera

- Other mobile devices cannot talk to that camera.

HD camera main features

HD camera main features (overview)

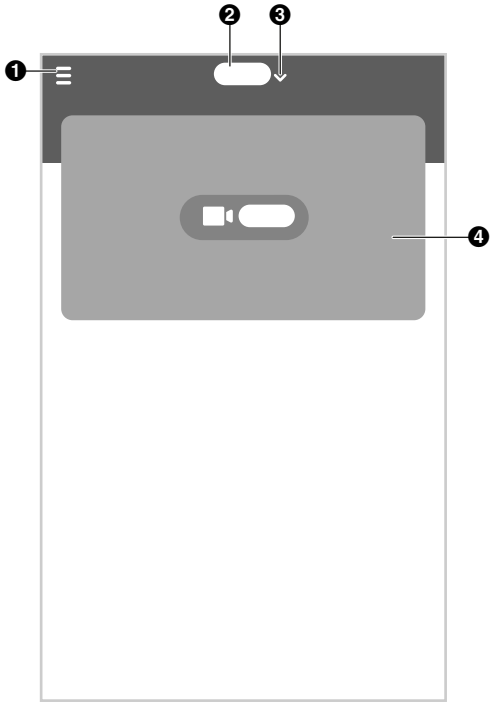
You can use HD cameras to monitor and record the sights and sounds of the surrounding area. Built-in motion detection features allow cameras to record images automatically or send a notification to your mobile device when motion is detected. Additionally, built-in speakers and microphones allow you to talk to anyone who is near the camera.

HD cameras feature a built-in temperature sensor, which allows the camera to alert you when the ambient temperature is too high or too low, and a sound sensor, which allows the camera to alert you when sound is detected.

Using the home screen

The **[HomeHawk]** app home screen is displayed when you start the app.

HD camera home screen



❶ Displays the settings menu
❷ Shows the camera's name
❸ Selects the camera to be displayed at the top of the list
❹ Shows the camera image

Viewing live HD camera images

1 From the **[HomeHawk]** app home screen, select the desired camera.

2 If prompted, enter the camera's password.
- A live image from the selected camera is displayed in single-camera display mode.

Important:

- Some mobile devices may become hot when viewing HD camera images continuously for long periods of time. If your mobile device becomes too hot, stop viewing HD camera images and wait for the mobile device to cool down.

Turning the camera audio on and off

Slide the switch to the desired position while viewing live images from a single camera.

: Camera audio will be heard

: Camera audio will not be heard

Zooming in and out

Pinch in and out on the camera image while viewing live images from a single camera. While zoomed in, you can swipe your finger on the camera image to display a different area of the image.

Using night vision

If there is not adequate light to illuminate the subject, such as at night, the camera switches to night vision mode depending on the settings (“Night vision mode”, Page 167). When night vision mode is active, colors may appear different from normal.

HD camera viewing options

The following items are available in the options menu (see “Displaying the options menu”, Page 151) while viewing live images from a single camera.

– **[Settings]**
  Allows you to adjust settings for the selected camera.
– **[Smart Recording]**
  Allows you to create and edit smart recording scenarios. See “Smart recording features (overview)”, Page 161.
– **[Camera Speaker Volume]**
  Allows you to adjust the selected camera’s speaker volume.
– **[Set Thumbnail]**
  Allows you to set the preview image for the selected camera that is displayed in the camera list. See “Thumbnail image”, Page 168.
– **[Sensor Log]**
  Displays a log of previous motion detection, sound alert, and temperature alert detections for the selected camera. See “Viewing HD camera sensor history”, Page 163.
– **[Firmware Update]**
  Allows you to update the firmware for the selected camera. See “Updating the HD camera’s firmware”, Page 172.
– **[Version]**
  Displays information about the selected camera’s firmware and about the app installed on your mobile device.

Recording HD camera images

To record camera images manually, see “Recording HD camera images (manual recording)”, Page 156.
To record images automatically according to a schedule, see “Creating a scenario that uses a schedule as the trigger”, Page 161.
To record images automatically when a sensor is triggered, see “Creating a scenario that uses a sensor as the trigger”, Page 162.

Taking snapshots

To save snapshots (i.e., still images) while viewing live camera images, see “Taking snapshots”, Page 155.

Talking to the HD camera

To use your mobile device's microphone and the camera's built-in speaker to talk to someone where the camera is installed, see "Talking to the HD camera", Page 155.

Taking snapshots

You can save snapshots (i.e., still images) while viewing live camera images. Snapshots are saved in your mobile device's default photo album app.

1 View live images from the desired camera.

2 Tap **[Photo]**.

Note:

- Snapshot sizes are scaled to fit the width of your mobile device's display.
- **iPhone, iPad**
  Snapshots are saved as JPEG files in your mobile device's "Photos" app.
- **Android devices**
  Snapshots are saved as JPEG files in your mobile device's picture directory. The file naming convention is: device name + the date and time.

Talking to the HD camera

You can use your mobile device's microphone and the camera's built-in speaker to talk to someone where the camera is installed.
This feature behaves differently depending on the **[Talk Mode]** setting ("Talk mode", Page 167).

[Half Duplex Mode]

When **[Talk Mode]** is set to **[Half Duplex Mode]**, the following icons are displayed.

The **[Talk]** feature is turned off. Your voice will not be heard at the camera.

The **[Talk]** feature is turned on. Your voice will be heard at the camera if your voice is louder than the audio captured by the camera's microphone.

1 View live images from the desired camera.

2 Tap **[Talk]**.
- Talk in turns with the other party. Only one party can be heard at a time.
- To turn the talk feature off, tap **[Talk]** again.

Temporary [Push to Talk Mode]
When **[Talk Mode]** is set to **[Half Duplex Mode]**, you can temporarily switch to "push to talk" mode. Tap and hold **[Talk]** and then select the temporary **[Push to Talk Mode]** option.

[Push to Talk Mode]

When **[Talk Mode]** is set to **[Push to Talk Mode]**, the following icons are displayed.

The **[Talk]** feature is turned off. Your voice will not be heard at the camera.

The **[Talk]** feature is turned on. Your voice will be heard at the camera.

1. View live images from the desired camera.
2. Tap and hold **[Talk]**.
3. When you are finished talking or you want to hear the other party, release **[Talk]**.

Note:

- To adjust the camera's speaker volume, open the options menu (see "Displaying the options menu", Page 151) and tap **[Camera Speaker Volume]**.

Recording HD camera images (manual recording)

You can record camera images while viewing live camera images. Recordings are saved on the camera's SD card.

1. View live images from the desired camera.
2. Tap **[Recording]** to start recording.
3. Tap **[Stop]** to stop recording.

Note:

- Recordings include both audio and video.
- You can use smart recording scenarios to record images. See "Smart recording features (overview)", Page 161.
- The maximum recording time is 15 minutes.
- If the camera's SD card is full, erase unneeded recordings (see "Erasing HD camera recordings", Page 158).
- For information about SD cards and how recordings are saved, see "HD camera SD cards", Page 158.

Viewing the HD camera recording list

You can use the recording list to play back recordings saved on the camera's SD card and to confirm details about each recording.

1. View live images from the desired camera.
2. Tap **[Videos]**.
   - A list of recording dates is displayed.
3. Select a recording date.
   - A list of all recordings recorded on the selected date is displayed.
   - The icons displayed indicate details about each recording.

The recording was recorded when a sensor was triggered.

The recording was recorded according to a timer.

The recording was recorded manually.

Note:

- If a recording was recorded with no audio, is displayed next to the recording in the recording list. To enable or disable audio recording when recording camera images, see “Recording sound”, Page 167.

HD camera recording list options

The following items are available in the options menu (see “Displaying the options menu”, Page 151) while viewing the recording list.

– **[Delete All]**
  Allows you to erase all recordings. See “Erasing HD camera recordings”, Page 158.
– **[Delete Selected Contents]**
  Allows you to erase individual recordings. See “Erasing HD camera recordings”, Page 158.

Playing back HD camera recordings

1. View live images from the desired camera.
2. Tap **[Videos]**.
   - A list of recording dates is displayed.
3. Select a recording date.
4. Tap the desired recording.
   - The recording is played back.

Playback controls

The following controls are available during playback.

Starts or resumes playback

Pauses playback

Stops playback

(iPhone, iPad)

(Android)

Allows you to quickly move to the desired area of the recording by sliding the progress bar

Erases the current recording

Erasing HD camera recordings

1 View live images from the desired camera.
2 Tap **[Videos]**.
3 **To erase recordings recorded on one specific date**
Select the desired recording date.

To erase recordings recorded on multiple dates
Continue to the next step.
4 Open the options menu (see “Displaying the options menu”, Page 151).
5 **To erase all recordings**
Tap **[Delete All]**.

To erase selected recordings
Tap **[Delete Selected Contents]**, and then select the dates or recordings that you want to erase.
6 Tap **[OK]**.

Note:

- You can also erase a recording during playback by tapping → **[OK]**.

HD camera SD cards

SD card capacity and total recording time

All times are approximate.
– 4 GB card: 4 hours
– 8 GB card: 9 hours
– 16 GB card: 18 hours
– 32 GB card: 36 hours
– 64 GB card: 72 hours
– 128 GB card: 145 hours

Note:

- The times listed here are calculated theoretically. Actual recording time may vary.
- The times listed here apply during the following conditions.
  – **[Camera Resolution]** is set to **[HD (1280x720)]** (“Image resolution”, Page 166)
  – **[Frame Rate]** is set to **[25 fps]** (“Frame rate”, Page 166)
- The file system and other information is stored on the SD card, therefore the card’s actual available capacity will be less than the card’s noted capacity.

SD card formatting

Before inserting an SD card into the camera, format the SD card using your computer and the SD formatting tool available from the web page listed below.
{{"www.sdcard.org/downloads/formatter_4/"|tolink("http://www.sdcard.org/downloads/formatter_4/")}}

Note:

- All data stored on the SD card will be erased when it is formatted.

How recordings are saved on the SD card

- Recordings are saved on the camera's SD card in folders based on the recording date, in the following path.
  \PRIVATE\PANA_GRP\PSN\HN_HDCAM
- The file naming convention is: 1 + recording type + recording start time.
  – First character: 1
  – Second character: Recording type.
  A=Recording was triggered by the camera's built-in motion sensor.
  M=Recording was started manually.
  R=Recording was started according to a schedule.
  T=Recording was triggered by the camera's built-in temperature sensor.
  V=Recording was triggered by the camera's built-in sound sensor.
  – Remaining characters: Recording start time (hhmmss).
  Example: 1A123455.mp4
  This recording was triggered by the camera's built-in motion sensor ("A") and recording started at 12:34 PM and 55 seconds ("123455").

Confirming HD camera status

Confirming HD camera status (overview)

The camera can provide information about its status in a variety of ways.
– Displaying status notifications on your mobile device using your mobile device's notifications features ("Status notifications", Page 159)
– Lighting the camera's LED indicator ("HD camera LED indicator", Page 160)
– Sounding an alert tone using your mobile device when a sensor feature is triggered

Status notifications

The camera uses status notifications to give you feedback about how it is functioning. Details vary depending on the app's settings and the type of mobile device you are using.

Enabling and disabling status notifications

See "[Notification Settings]", Page 170.

Alert tone

The app sounds an alert tone when your mobile device receives a notification from the camera. The volume is determined by your mobile device's alert volume setting.

Status notifications for iPhone, iPad

The app provides information about camera status by displaying status notifications and error messages in the iOS Notifications Center.
If your mobile device is registered to multiple cameras, your mobile device can receive notifications from any camera. When you tap a notification in the iOS Notifications Center, the app will attempt to connect to the corresponding camera.

Status notifications for Android devices

The app provides information about camera status by displaying status notifications, error messages, and the following icons in your mobile device's status bar and notifications panel.
If your mobile device is registered to multiple cameras, your mobile device can receive notifications from any camera. When you tap a notification in the notifications panel, the app will attempt to connect to the corresponding camera.

- HD camera motion sensor was triggered, or HD camera images are being recorded
- HD camera privacy shutter was opened or closed
- HD camera sound sensor was triggered
- HD camera temperature sensor was triggered
- Smart recording scenario error, or HD camera is malfunctioning

HD camera LED indicator

You can use the camera's LED indicator to confirm the camera's status.

Meaning of symbols used in this section

- Indicator off
- Indicator lit
- Indicator blinking slowly
- Indicator blinking
- Indicator blinking quickly

HD camera LED indicator

Off	○	No power, or LED indicator is turned off*1
Blue	●	Normal operation, connected to wireless router*1, privacy shutter is open
White	○	Normal operation, connected to wireless router*1, privacy shutter is closed
	◌	Camera is searching for wireless router
Green	●	Initial setup required
	◉	Initial setup is in progress with mobile device connected
	◌	Initial setup is starting
Red	●	Motion detected*1, or camera is starting up

Live images are being viewed or recorded, or camera is starting up

Device malfunction

*1 You can configure the camera so that its LED indicator does not light during normal operation or when motion is detected. See "Enabling and disabling the HD camera's LED indicator", Page 161.

Enabling and disabling the HD camera's LED indicator

1. View live images from the desired camera.
2. Open the options menu (see "Displaying the options menu", Page 151).
3. Tap **[Settings]** → **[Device Profiles]**.
4. Slide the **[Camera LED]** switch to the desired position.

Smart recording features

Smart recording features (overview)

Smart recording allows the HD camera to start recording images automatically. You can configure smart recording settings by creating "scenarios". Each scenario answers the following two questions.

1. **What is the trigger** that will make the camera start recording?
   - A schedule
   - A sensor
2. **How long** should the camera record images?
   - Maximum 15 minutes

Sensors that can be used to trigger smart recording scenarios

- Built-in motion sensor in HD camera
- Built-in sound sensor in HD camera
- Built-in temperature sensor in HD camera

Creating smart recording scenarios

Smart recording scenarios can be executed on a schedule and when a sensor is triggered.

Note:

- 10 smart recording scenarios can be created for each camera.

Creating a scenario that uses a schedule as the trigger

1. View live images from the desired camera.
2. Open the options menu (see "Displaying the options menu", Page 151).
3. Tap **[Smart Recording]**.
   - A list of existing scenarios is displayed.
4. Tap .

5 Tap **[Schedule]**.

6 Under **[Timer]**, set each item.
- **[Start Time]**: Determines when camera recording starts.
- **[Recording Duration]**: Determines the length of the recording. The maximum setting is 15 minutes.

7 Under **[Repeat]**, set each item.
- **[Days]**: Determines the days on which the scenario can record images.

8 When finished, tap **[OK]**.

Note:

- If the conditions of this scenario (day and time) overlap with another scenario that is configured to record images from the same camera, an error is displayed. The nature of the error is also displayed on the scenario's configuration screen.

Creating a scenario that uses a sensor as the trigger

1 View live images from the desired camera.

2 Open the options menu (see "Displaying the options menu", Page 151).

3 Tap **[Smart Recording]**.
- A list of existing scenarios is displayed.

4 Tap .

5 Select the sensor that you want to use to trigger the smart recording scenario.

6 Under **[Timer]**, set each item.
- **[Recording Duration]**: Determines the length of the recording. The maximum setting is 15 minutes.

7 Under **[Trigger Period]**, set each item.
- **[All Day]**: Enables the scenario for all day, i.e., images will be recorded whenever the sensor is triggered.
- **[Start Time]**: Determines the start time of the scenario. If the sensor is triggered before this time, images will not be recorded.
- **[End Time]**: Determines the end time of the scenario. If the sensor is triggered after this time, images will not be recorded.

8 Under **[Repeat]**, set each item.
- **[Days]**: Determines the days on which the scenario can record images.

9 When finished, tap **[OK]**.

Note:

- If the conditions of this scenario (day and time) overlap with another scenario that is configured to record images from the same camera, an error is displayed. The nature of the error is also displayed on the scenario's configuration screen.

Turning smart recording scenarios on and off

1 View live images from the desired camera.

2 Open the options menu (see "Displaying the options menu", Page 151).

3 Tap **[Smart Recording]**.
- A list of existing scenarios is displayed.

4 Turn the checkbox for the desired scenario on or off.

Editing smart recording scenarios

1 View live images from the desired camera.

2 Open the options menu (see "Displaying the options menu", Page 151).

3 Tap **[Smart Recording]**.
- A list of existing scenarios is displayed.

4 Select the desired scenario.

5 Edit the scenario as desired.

6 When finished, tap **[OK]**.

Erasing smart recording scenarios

1 View live images from the desired camera.

2 Open the options menu (see "Displaying the options menu", Page 151).

3 Tap **[Smart Recording]**.
- A list of existing scenarios is displayed.

4 **iPhone, iPad**
Swipe the desired scenario to the left and then tap **[Delete]** → **[OK]**.
Android devices
Tap and hold the desired scenario and then tap **[OK]**.

HD camera sensor features

HD camera sensor features (overview)

The camera provides three sensor features.
– **Built-in motion sensor:** Detects visual differences in the camera image over time.
– **Built-in sound sensor:** Detects ambient sound.
– **Built-in temperature sensor:** Detects ambient temperature.
When these sensors are triggered, the camera can send a notification or record images. When you receive a notification, you can connect to the camera and view live images, view camera recordings, view the sensor log (sensor history), etc.

Viewing HD camera sensor history

You can view a log of previous sensor detections, including the date and time when sensors were triggered and which type of sensor was triggered.

1 View live images from the desired camera.

2 Open the options menu (see "Displaying the options menu", Page 151).

3 Tap **[Sensor Log]**.
- The following icons are displayed for each sensor type.

Built-in motion sensor

Built-in sound sensor

Built-in temperature sensor

Sensor history options

The following items are available in the options menu (see “Displaying the options menu”, Page 151).

– **[Filter]**
  Allows you to choose which sensors are displayed in the sensor history.
– **[Delete All]**
  Allows you to erase all events in the sensor history.

Temperature sensor

You can configure the camera to send notifications if the camera’s ambient temperature is too cold or too hot.

1. View live images from the desired camera.
2. Open the options menu (see “Displaying the options menu”, Page 151).
3. Tap **[Settings]** → **[Sensor Settings]** → **[Temperature Sensor]**.
4. Slide the **[Temperature Sensor]** switch to the “on” position to enable the temperature sensor.
5. Slide the **[Units]** switch to select whether the temperature is displayed and specified in Fahrenheit or Celsius.
6. Tap the upper threshold of the acceptable temperature range, select the desired temperature, and then tap **[OK]**.
7. Repeat the previous step for the lower threshold of the acceptable temperature range.

Note:

- In order to receive temperature alert notifications, make sure the **[Temperature Alert]** notification setting is enabled. See “[Notification Settings]”, Page 170.

Sound sensor

You can configure the camera to send notifications if the camera’s microphone detects sound.

1. View live images from the desired camera.
2. Open the options menu (see “Displaying the options menu”, Page 151).
3. Tap **[Settings]** → **[Sensor Settings]** → **[Sound Sensor]**.
4. Slide the **[Sound Sensor]** switch to the “on” position to enable the sound sensor.
5. Select the desired setting.
   – **[High]**: The microphone is very sensitive to sound, i.e., even a small sound will trigger the notification.
   – **[Normal]**: The microphone is moderately sensitive to sound.

– **[Low]**: The microphone is only slightly sensitive to sound, i.e., a large sound is required to trigger the notification.

Note:

- The camera's microphone will not detect sound while a mobile device user is talking to the camera ("Talking to the HD camera", Page 155).
- In order to receive sound alert notifications, make sure the **[Sound Detection Alert]** notification setting is enabled. See "[Notification Settings]", Page 170.

Motion detection

The camera can detect motion by recognizing changes in the brightness of areas that are visible to the camera. You can adjust the settings that determine how the camera detects motion.

Image sensor sensitivity

You can adjust the sensitivity of the camera's motion detection features.

1. View live images from the desired camera.
2. Open the options menu (see "Displaying the options menu", Page 151).
3. Tap **[Settings]** → **[Sensor Settings]** → **[Motion Sensitivity]**.
4. Select the desired setting.
   – **[High]**: The image sensor is very sensitive to changes, i.e., even a small change will trigger the sensor.
   – **[Normal]**: The image sensor is moderately sensitive to changes.
   – **[Low]**: The image sensor is somewhat sensitive to changes.
   – **[Very Low]**: The image sensor is only slightly sensitive to changes, i.e., a large change is required to trigger the sensor.
   – **[OFF]**: The image sensor is disabled.
5. Tap **[OK]**.

Detection area

You can select which areas of the camera image are monitored for motion detection. This allows you to ignore motion in certain areas of the camera's image.

1. View live images from the desired camera.
2. Open the options menu (see "Displaying the options menu", Page 151).
3. Tap **[Settings]** → **[Sensor Settings]** → **[Set Detection Area]**.
4. Tap the desired areas of the camera image.
   - Gray areas of the camera image indicate areas for which image detection is disabled.
   - Tap **[Reset]** to enable image detection for all areas of the camera image.
5. Tap **[OK]**.

Image, sound, and recording settings

HD camera speaker volume

Allows you to adjust the camera's speaker volume.

1 View live images from the desired camera.
2 Open the options menu (see “Displaying the options menu”, Page 151).
3 Tap **[Camera Speaker Volume]**.
4 Adjust the volume as desired and then tap **[OK]**.

Image brightness

You can adjust the overall brightness of the camera image.

1 View live images from the desired camera.
2 Open the options menu (see “Displaying the options menu”, Page 151).
3 Tap **[Settings]** → **[Video Settings]**.
4 Tap **[Brightness]**.
5 Tap or to decrease or increase the image brightness.

Image resolution

You can adjust the resolution (size) of camera images. This setting affects both live images and recorded images.

1 View live images from the desired camera.
2 Open the options menu (see “Displaying the options menu”, Page 151).
3 Tap **[Settings]** → **[Video Settings]**.
4 Tap **[Camera Resolution]**.
5 Select the desired setting and then tap **[OK]**.

Frame rate

You can adjust the speed at which images from the camera are refreshed.

1 View live images from the desired camera.
2 Open the options menu (see “Displaying the options menu”, Page 151).
3 Tap **[Settings]** → **[Video Settings]**.
4 Tap **[Frame Rate]**.
5 Select the desired setting and then tap **[OK]**.

Note:

- Higher frame rates mean images are refreshed faster and moving subjects are displayed more smoothly, however, images displayed on your mobile device may be delayed and sound may cut out or be delayed when talking to the camera, especially over a slow or congested network connection.
- Lower frame rates mean images are refreshed less often and moving subjects may appear “choppy”, however, images displayed on your mobile device will be less delayed and sound may be more consistent when talking to the camera over a slow or congested network connection.

Recording overwrite

You can choose whether recorded camera images are erased automatically by new images when the camera's SD card is full.

1. View live images from the desired camera.
2. Open the options menu (see "Displaying the options menu", Page 151).
3. Tap **[Settings]** → **[Video Settings]**.
4. Slide the **[Overwrite Recordings]** switch to the desired position.

Talk mode

You can select the desired talk mode.

1. View live images from the desired camera.
2. Open the options menu (see "Displaying the options menu", Page 151).
3. Tap **[Settings]** → **[Video Settings]**.
4. Tap **[Talk Mode]**.
5. Select the desired setting and then tap **[OK]**.
   - **[Push to Talk Mode]**: You can turn the talk feature on by tapping and holding **[Talk]**. The talk feature is turned off when you release your finger.
   - **[Half Duplex Mode]**: You can turn the talk feature on and off by tapping **[Talk]**.

Recording sound

Important:

- This feature may not be available in certain regions.

You can select whether audio is recorded when recording camera images.

1. View live images from the desired camera.
2. Open the options menu (see "Displaying the options menu", Page 151).
3. Tap **[Settings]** → **[Video Settings]**.
4. Slide the **[Recording with Sound]** switch to the desired position.
   - When this switch is turned off, audio is not recorded when recording camera images.

Night vision mode

If there is not adequate light to illuminate the subject, such as at night, the camera can be configured to switch to night vision mode and turn on infrared LEDs.
You can select whether night vision mode is enabled or disabled.

1. View live images from the desired camera.
2. Open the options menu (see "Displaying the options menu", Page 151).
3. Tap **[Settings]** → **[Video Settings]**.
4. Slide the **[Night Vision LED]** switch to the desired position.
   - When this switch is turned on, night vision mode is enabled and lights infrared LEDs so that images can be seen in the dark.
   - When this switch is turned off, night vision mode is disabled and the infrared LEDs are turned off.

- Disabling night vision mode will reduce the visibility of images at night.

Thumbnail image

You can capture a still image from the camera and use it as its thumbnail, i.e., a small preview image. The thumbnail is displayed in the camera list.

1. View live images from the desired camera.
2. Open the options menu (see "Displaying the options menu", Page 151).
3. Tap **[Set Thumbnail]**.
4. Tap .
   - A still image is displayed.
5. Tap **[Save]**.

Other image settings

Displaying images upside down

You can display the camera image upside down.

1. View live images from the desired camera.
2. Open the options menu (see "Displaying the options menu", Page 151).
3. Tap **[Settings]** → **[Video Settings]** → **[Other Settings]**.
4. Tap **[Upside Down]**.
5. Tap .

Adjusting the time stamp

You can change the time format and position of the time stamp that is displayed when viewing camera images or recording. You can also turn the time stamp off.

1. View live images from the desired camera.
2. Open the options menu (see "Displaying the options menu", Page 151).
3. Tap **[Settings]** → **[Video Settings]** → **[Other Settings]**.
4. Tap **[Time Stamp]**.
5. Select the desired setting and then tap **[OK]**.
   - **[Position]**: Determines the position of the time stamp. To turn the time stamp off, select **[OFF]**.
   - **[24-Hour Format]**: Determines whether the time stamp is displayed in 24-hour format or 12-hour format.

Note:

- To adjust the camera's date and time setting, see "HD camera device profiles", Page 171.

Confirming the bit rate

While viewing camera images, the camera can display an icon that corresponds to the current bit rate. Bit rate is a measure of how much data is being transmitted; if bit rate decreases when viewing camera images, image quality may also be reduced. Bit rate may vary depending on network conditions,

however, if it is consistently low, confirm the network conditions (network traffic, camera and wireless router placement or obstacles, etc.) for possible causes.

1 View live images from the desired camera.
2 Open the options menu (see “Displaying the options menu”, Page 151).
3 Tap **[Settings]** → **[Video Settings]** → **[Other Settings]**.
4 Slide the **[Bit Rate Level Icon]** switch to the desired position.
- When the switch is turned on, the bit rate is displayed while viewing HD camera images as follows.
  (((●))) Highest bit rate
  (((●))) High bit rate
  (((●))) Moderate bit rate
  (((●))) Lowest bit rate

Using WDR and HLS

These settings can produce a more pleasing image effect.

1 View live images from the desired camera.
2 Open the options menu (see “Displaying the options menu”, Page 151).
3 Tap **[Settings]** → **[Video Settings]** → **[Other Settings]**.
4 Slide the **[WDR]** and **[HLS]** switches to the desired position.
- WDR brightens the darker areas of the image and provides increased contrast and picture detail.
- HLS reduces the brightness in areas of the image that are too bright.

HD camera settings

General settings

You can customize general camera settings to suit your needs.

1 View live images from the desired camera.
2 Open the options menu (see “Displaying the options menu”, Page 151).
3 Tap **[Settings]**.
4 Change the settings as desired.
- Each setting is explained in this section.

[Automatic Login]

This setting determines whether or not you must enter a password each time you connect to the camera.

Important:

- Turning this feature on could allow unauthorized parties to access the camera if they are using your mobile device.

[Change Login Password]

See “Login password”, Page 170.

[Deregister the Mobile Device]

See “Using one mobile device to deregister another mobile device”, Page 174.

[Device Profiles]

See “HD camera device profiles”, Page 171.

[Notification Settings]

You can select which types of status notifications are displayed, and which are not.

– **[Motion Detect]**
  This setting determines whether a notification is displayed when the camera detects motion.
– **[Camera Recording]**
  This setting determines whether a notification is displayed when camera images are being recorded.
– **[Temperature Alert]**
  This setting determines whether a notification is displayed when the camera’s temperature sensor is triggered.
– **[Sound Detection Alert]**
  This setting determines whether a notification is displayed when the camera’s sound sensor is triggered.
– **[Shutter Open/Close]**
  This setting determines whether a notification is displayed when the camera’s privacy shutter is opened or closed.
– **[Device Error]**
  This setting determines whether a notification is displayed when a device error is detected.

[Wireless Settings]

See “Network features”, Page 171.

[Wireless Access Point]

See “Deleting wireless access points”, Page 172.

[Reset HD Camera]

See “Resetting the HD camera’s settings”, Page 173.

Login password

You can change the password that is used to connect to the camera.

1 View live images from the desired camera.

2 Open the options menu (see “Displaying the options menu”, Page 151).

3 Tap **[Settings]**.

4 Tap **[Change Login Password]**.

5 Enter the desired password and then tap **[OK]**.
- To display the characters that you have entered, turn on the **[Show Password]** checkbox.

Note:

- If you forget the login password, reset the camera (“Resetting the HD camera’s settings”, Page 173), and then set up the camera again by following the initial setup procedure (see “Setting up the HD camera”, Page 149).

HD camera device profiles

The camera's device profile allows you to assign a name and location to the camera. These settings are especially convenient when you have multiple cameras. You can also change the camera's date and time setting.

1. View live images from the desired camera.
2. Open the options menu (see "Displaying the options menu", Page 151).
3. Tap **[Settings]**.
4. Tap **[Device Profiles]**.
5. Change the settings as desired, and then tap **[OK]**.
   - **[Location]**: This setting determines the location name assigned to the camera.
   - **[Name]**: This setting determines the name assigned to the camera.
   - **[Camera LED]**: This setting determines whether the camera's LED indicator lights or is disabled.
   - **[Time Adjustment]**: This setting allows you to synchronize the camera's date and time setting with the date and time setting of your mobile device.
     To synchronize the date and time setting of the mobile device displayed on this screen, tap **[Update Time]**.
     To change the mobile device used for time synchronization, tap the name of the mobile device displayed on this screen, select the desired mobile device, and then tap **[OK]**.

Network features

Confirming network information

1. View live images from the desired camera.
2. Open the options menu (see "Displaying the options menu", Page 151).
3. Tap **[Settings]** → **[Wireless Settings]**.
4. Tap **[Current Status]**.

Changing IP settings

Typically these settings should not be changed.

1. View live images from the desired camera.
2. Open the options menu (see "Displaying the options menu", Page 151).
3. Tap **[Settings]** → **[Wireless Settings]**.
4. Tap **[IP Settings]**.
5. Select the desired IP address mode.
   - In most cases **[Auto (DHCP)]** is preferred. In this case, no other settings are available on this screen.
   - If you select **[Manual (Static)]**, other settings on this screen become available. If these settings are not configured to match your wireless router's requirements, the camera will not be able to connect to your wireless router and all app features will become unavailable.
6. Configure the settings as needed and then tap **[OK]**.

Note:

- If you make a mistake while configuring the camera to use a static IP address and you can no longer connect to the camera, reset the camera ("Resetting the HD camera's settings", Page 173), and then set up the camera again by following the initial setup procedure (see "Setting up the HD camera", Page 149).

[Port Forwarding] settings

These settings are only required if you need to configure your wireless router's port forwarding feature in order to connect to the camera while away from home.

Important:

- In order to use this feature, you must first configure the camera to use a static IP address ("Changing IP settings", Page 171).

1. View live images from the desired camera.
2. Open the options menu (see "Displaying the options menu", Page 151).
3. Tap **[Settings]** → **[Wireless Settings]**.
4. Tap **[Port Forwarding]**.
5. Turn on the **[Enable]** radio button.
6. Tap field number 1 and enter the desired port number.
   - A value must be assigned to each port.
   - Only port numbers 62000–63000 can be assigned.
   - Configure your wireless router's port forwarding feature to forward these ports to the static IP address that you have assigned to the camera.
7. When finished, tap **[OK]**.

[MTU Settings] (maximum data size setting)

This setting affects how data is sent over the network. Typically this setting does not need to be changed.

1. View live images from the desired camera.
2. Open the options menu (see "Displaying the options menu", Page 151).
3. Tap **[Settings]** → **[Wireless Settings]**.
4. Tap **[MTU Settings]**.
5. Select the desired value and then tap **[OK]**.

Deleting wireless access points

The app remembers the SSIDs of wireless routers that you use at home to connect to the camera; it can remember 10 SSIDs, and saves them in the wireless access point list. If the list is full and you try to connect to the camera using a new SSID while at home, the app may connect to the camera over the Internet even though you are at home. In this case, we recommend deleting unused SSIDs from the wireless access point list.

1. View live images from the desired camera.
2. Open the options menu (see "Displaying the options menu", Page 151).
3. Tap **[Settings]**.
4. Tap **[Wireless Access Point]**.
5. Select the wireless access point that you want to delete and then tap **[Delete]**.

Note:

- You cannot delete the wireless access point that your mobile device is currently connected to.

Updating the HD camera's firmware

You can use this feature to check for a newer version of the camera firmware (i.e., system software). If a newer version is found, you can update the firmware.

1. View live images from the desired camera.

2 Open the options menu (see “Displaying the options menu”, Page 151).
3 Tap **[Firmware Update]**.
- The camera will connect to the Internet and check for a newer version of its firmware.

4 Follow the on-screen instructions.

Resetting the HD camera’s settings

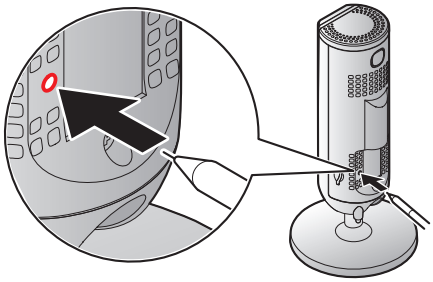
1 View live images from the desired camera.
2 Open the options menu (see “Displaying the options menu”, Page 151).
3 Tap **[Settings]**.
4 Tap **[Reset HD Camera]**.
5 Select the desired feature.
– **[Reset All Settings]**: Resets all camera settings, including wireless settings.
– **[Reset HD Camera Settings]**: Resets all camera settings except wireless settings.
– **[Reset Wireless Settings]**: Resets wireless settings only.

6 Follow the on-screen instructions.
7 **If you selected [Reset HD Camera Settings]**
The procedure is complete. In order to use the camera again, set up the camera again by following the initial setup procedure (see “Setting up the HD camera”, Page 149).
If you selected [Reset All Settings] or [Reset Wireless Settings]
Wait for the camera’s LED indicator to light in green, then set up the camera again by following the initial setup procedure (see “Setting up the HD camera”, Page 149).

Using the camera’s reset button

You can use the camera’s reset button to reset the camera’s wireless settings. Use this procedure if you have trouble setting up the camera.

1 Plug in the camera.
2 Using an object with a thin tip, press and hold the reset button on the back of the camera for about 10 seconds, then release the button when the camera beeps.



- The camera’s settings are reset.

3 Wait for the camera’s LED to light in green.

Note:

- After resetting the camera, you cannot use the camera again until it is set up. You can set up the camera again by following the initial setup procedure (see “Setting up the HD camera”, Page 149).

System expansion

Registering other mobile devices to the HD camera

To register a mobile device to the camera, use the procedure described in “Registering additional mobile devices to the camera”, Page 150.

Adding another HD camera

You can register your mobile device to multiple HD cameras and monitor each of them from your mobile device. Use the following procedure to add another HD camera.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Add Camera(s)]**.

2 Tap **[Indoor HD Camera]**.

3 **iPhone, iPad users**
Continue from step 5 of the initial setup procedure (“Initial setup for iPhone, iPad”, Page 149).

Android device users
Continue from step 5 of the initial setup procedure (“Initial setup for Android devices”, Page 150).

Deregistering your mobile device

You can use this procedure to make the app “forget” its registration to the camera.

1 From the **[HomeHawk]** app home screen, tap ☰ → **[Settings]**.

2 Tap **[Deregistration]** → **[Indoor HD Camera]**.

3 Select the device that you want to deregister.
- A dialog is displayed asking whether you want to deregister the device.

4 Tap **[OK]**.

Note:

- If the app cannot connect to the selected camera, you will be prompted to try again later (**[Try Later]**) or continue with deregistration (**[Forget Camera]**).
  If you select **[Forget Camera]**, the camera will be removed from your app’s list of available cameras, but your mobile device will remain registered to the camera. In this case, you can use another mobile device to deregister your mobile device from the camera using the procedure described in “Using one mobile device to deregister another mobile device”, Page 174.

Using one mobile device to deregister another mobile device

You can use this procedure to make the camera “forget” its registration to another mobile device.

1 View live images from the desired camera.

2 Open the options menu (see “Displaying the options menu”, Page 151).

3 Tap **[Settings]**.

4 Tap **[Deregister the Mobile Device]**.

5 Select the desired mobile device, and then tap **[OK]**.

Note:

- If you use this procedure to deregister the mobile device you are using to perform the procedure, and if there are no other cameras or access points that the app can connect to, the initial setup screen is displayed.

General information

If you experience any trouble while using this product, the following information will solve most problems. If the trouble persists, refer to the appropriate section in this chapter according to the trouble you are experiencing.

For the latest troubleshooting information, visit {{"https://panasonic.net/cns/pcc/support/homehawk"|tolink("https://panasonic.net/cns/pcc/support/homehawk")}}.

Power

Use these steps to make sure that all devices are receiving power.

1 Make sure the following devices are turned on. Check all AC adaptor connections and that all power switches are switched on.
Refer to the operating instructions included with the device for more information.
– Access point
– Cameras
– Wireless router
– Cable or DSL modem
– Network switch

2 Make sure the electric outlets used to power the devices are functioning. If an electric outlet can be turned on and off by a switch, make sure the switch is turned on.

3 Make sure the batteries installed in all devices have adequate charge remaining.
Check the camera battery level (“Camera battery level”, Page 135). Refer to the Installation Guide included with your device for information about charging batteries.

Network devices

Use these steps to make sure that each of your network devices and your Internet connection are working properly.

1 Make sure all cables connected between your wireless router and any other network devices are functioning and connected properly.

2 Make sure that devices connected to your wireless router can connect to the Internet.
→Refer to the operating instructions included with your wireless router for troubleshooting information if necessary. For some Internet connection issues, you may need to contact your Internet service provider.

System connection

Use these steps to make sure that your mobile device can connect to your devices.

1 Make sure that the shelf camera, floor camera, or window camera is connected to your wireless router.
→Disconnect the camera’s AC adaptor, connect it again, and wait for the camera to start up. If the camera’s LED indicator does not light in blue after a few minutes, check if DHCP (Dynamic Host Configuration Protocol) is operating for the wireless router.

2 Make sure that the access point is connected to your wireless router.
→Disconnect the access point’s AC adaptor, connect it again, and wait for the access point to start up. If the access point’s LED indicator remains blinking in green after a few minutes, check if DHCP (Dynamic Host Configuration Protocol) is operating for the wireless router.

3 Make sure your HD camera can connect to your wireless router.
→Disconnect the HD camera's AC adaptor, connect it again, and wait for the camera to start up. If the camera's LED indicator remains blinking in white after a few minutes, the camera is not connected to your wireless router.
In this case, set up the HD camera again by following the initial setup procedure (see "Setting up the HD camera", Page 149).
In this case, deregister the HD camera from your mobile device ("Deregistering HD cameras", Page 42), and then register it again ("Registering HD cameras", Page 34).

4 Make sure your mobile device can connect to your shelf camera, floor camera, or window camera while you are at home.
→Check your mobile device's wireless network settings and confirm that it is connected to your wireless router.

Next, use the **[HomeHawk]** app to connect to the camera, and confirm that or are not displayed in the live camera image screen (shelf camera: "Viewing the live camera image screen", Page 50, floor camera: "Viewing the live camera image screen", Page 72, window camera: "Viewing the live camera image screen", Page 95), camera image/recording list screen (shelf camera: "Viewing the camera image/recording list screen", Page 49, floor camera: "Viewing the camera image/recording list screen", Page 71, window camera: "Viewing the camera image/recording list screen", Page 94), or playback screen (shelf camera: "Playing back recordings", Page 56, floor camera: "Playing back recordings", Page 78, window camera: "Playing back recordings", Page 100).

5 Make sure your mobile device can connect to your access point while you are at home.
→Check your mobile device's wireless network settings and confirm that it is connected to your wireless router.

Next, use the **[HomeHawk]** app to connect to the access point, and confirm that or are not displayed in the live camera image screen ("Viewing the live camera image screen", Page 125), camera image/recording list screen ("Viewing the camera image/recording list screen", Page 123), or playback screen ("Playing back recordings", Page 130).

6 Make sure your mobile device can connect to your HD camera while you are at home.
→Check your mobile device's wireless network settings and confirm that it is connected to your wireless router.
Next, use the **[HomeHawk]** app to connect to the camera.

7 Make sure your front door camera or outdoor camera is registered to the access point. Register them if they are not ("Registering front door cameras and outdoor cameras", Page 34).
→Check the home screen ("Front door camera and outdoor camera home screen", Page 24) or camera image/recording screen ("Viewing the camera image/recording list screen", Page 123). If a camera is displayed, it is registered; if it is not displayed, it is not registered.

8 Make sure your shelf camera, floor camera, or window camera have adequate signal strength.
→Check the signal strength ("Camera signal strength", Page 109) and move cameras closer to the wireless router if necessary.

9 Make sure your front door camera or outdoor camera has adequate signal strength.
→Check the signal strength ("Camera signal strength", Page 136) and move devices closer to the access point if necessary.

Date and time settings

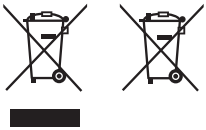
Make sure the date and time settings for the devices are correct.
If the time is incorrect, adjust the time with **[Time Adjustment]**. Reselect the mobile device used to match the time to as necessary.

Note:

- Mobile devices must be turned on in order to match the time.

→**Shelf cameras, floor cameras, and window cameras:**
"Time adjustment", Page 115
→**Access points, shelf cameras, and floor cameras:**
"Time adjustment", Page 143
→**HD cameras:**
"HD camera device profiles", Page 171

Information on Disposal in other Countries outside the European Union



These symbols are only valid in the European Union. If you wish to discard these items, please contact your local authorities or dealer and ask for the correct method of disposal.

Note for the battery removal procedure (front door cameras and outdoor cameras only)

Refer to the "Battery removal procedure" in the Installation Guide supplied with the product.

Messages

The following messages may be displayed in the Notifications Center (for iPhone, iPad) and the status bar (for Android devices).

[Recording Error (No SD Card)] is displayed

- There is no SD card inserted in the access point, shelf camera, or floor camera.
  →Insert a memory card in the device.

[Recording Error (Memory full)] is displayed

- There is no space in the SD card.
  →**Shelf cameras, floor cameras, and window cameras:**
  Insert a new SD memory card into the camera or enable overwrite recording ("Recording settings", Page 110).
  →**Access points:**
  Insert a new SD memory card into the access point or enable overwrite recording ("Recording settings", Page 137).

[Recording Error (SD card error)] is displayed

- There is a problem with the SD card.
  →Check the SD card.

[Access Point update failed] is displayed

- An error occurred while updating the access point.
  →Check all connections to the access point and try again.

[Fan error] is displayed (window cameras only)

- A problem occurred with the fan in the window camera.
  →Unplug the camera and then plug it in again.
  If the message is still displayed, contact an authorized service center.

Initial setup

I cannot perform initial setup

- Your mobile device is connecting to a different wireless router during the initial setup procedure.
  →If your mobile device can connect to other nearby wireless routers, we recommend you turn them off or “forget” their settings while performing initial setup.

Connecting from your mobile device

Refer to the following after checking the general troubleshooting information described in “General information”, Page 176.

The connection is slow or disconnects while away from home

- There is too much traffic on your home network or on the mobile device’s network.
  →Wait for network traffic to decrease.

My mobile device is remotely connected to my devices (or is displayed) even while at home

- Your mobile device's location information feature is disabled, or access to the location information is denied to the **[HomeHawk]** app.
  →To obtain the SSID of your home's wireless network, access to your mobile device's location information is required. On your mobile device, enable the location information feature and allow access to the location information for the **[HomeHawk]** app.

I cannot connect to my devices

- You replaced your wireless router with a new router, or changed your wireless router’s SSID (i.e., wireless network name) or password.
  →Your mobile device may have old SSID information. Delete the SSID information in **[Home Wireless Network SSID]** (shelf cameras/floor cameras/window cameras: “Home wireless network SSID features”, Page 117, HD cameras: “Deleting wireless access points”, Page 172).
  →Deregister the shelf camera, floor camera, or window camera from your mobile device (“Deregistering devices”, Page 41), and then register it again (“Registering devices”, Page 33).
  →Deregister the HD camera from your mobile device (“Deregistering devices”, Page 41), and then register it again (“Registering devices”, Page 33).
- Your wireless router at home is connected to another router.
  →If your wireless router is connected to another router, make sure your network is configured so that your mobile device and your device can communicate over your home network. We recommend making sure the DHCP feature of only one router is enabled and setting the other routers to “access point mode” or “bridge mode”.

I cannot connect while away from home

- You are using a public wireless network.
  →Network traffic, network conditions, and the network provider’s settings or policies may prevent the connection. Use a private wireless network or your mobile network service provider’s wireless network (3G, 4G, etc.).

Sometimes I cannot connect while at home

- There is too much traffic on your home network.
  →Wait for network traffic to decrease.
  →Refer to the operating instructions included with your wireless router for other possible solutions.
- Your mobile device is discovering too many nearby wireless networks.

→Move your mobile device closer to your wireless router.

- Your mobile device has too many wireless networks stored in its wireless network list.
  →Use your mobile device's "forget this wireless network" feature and delete any unnecessary/unused wireless networks from the list. Refer to your mobile device's operating instructions or support site for details.

I cannot connect to the HD camera while at home ([Connection unsuccessful] is displayed)

- Your wireless router uses the 2.4 GHz band and the 5 GHz band (this is sometimes called a "dual band" configuration), and your mobile device and HD camera cannot communicate.
  →Dual band configurations are acceptable as long as devices that connect via the 2.4 GHz band are able to communicate with devices that connect via the 5 GHz band. For example, if you have configured your wireless router to use the 5 GHz band for normal use and the 2.4 GHz band for a "guest network", devices that connect using the 2.4 GHz band cannot connect to devices that connect using the 5 GHz band. Refer to the operating instructions included with your wireless router for details.
  →Make sure your mobile device and HD camera are using the same band (2.4 GHz or 5 GHz) to connect to the wireless router. One way to do this is to make sure your wireless router uses different SSIDs (i.e., wireless network names) for each band, and then make sure that your mobile device and HD camera are connecting via the same SSID.
  To change the SSID that your mobile device is using for wireless communication, change your mobile device's wireless network settings.
  To change the SSID that the HD camera is using for wireless communication, reset the HD camera's wireless settings ("Using the camera's reset button", Page 173) and then set up the camera again.

I forgot the login password for the shelf camera, floor camera, or window camera

→Connect to the shelf camera, floor camera, or window camera while at home and change the password. (The password is not required when your mobile device is connected to the same wireless router as the shelf camera, floor camera, or window camera.)

→If for some reason you cannot connect to the shelf camera, floor camera, or window camera while at home and change the password, force the shelf camera, floor camera, or window camera to reset its settings ("Resetting camera settings", Page 114) and then configure the shelf camera, floor camera, or window camera again.

I forgot the login password for the access point

→Connect to the access point while at home and change the password. (The password is not required when your mobile device is connected to the same wireless router as the access point.)

→If for some reason you cannot connect to the access point while at home and change the password, force the access point to reset its settings ("Resetting camera settings", Page 141) and then configure the access point again.

I forgot the login password for the HD camera

→Set up the HD camera again by deregistering the camera from your mobile device ("Deregistering devices", Page 41), and then registering it again ("Registering devices", Page 33).

→Set up the HD camera again by following the initial setup procedure (see "Setting up the HD camera", Page 149).

Notification features

Refer to the following after checking the general troubleshooting information described in "General information", Page 176.

Status notifications are not received

- Status notification features are disabled.

→Make sure the desired types of notifications are enabled.
For notifications sent from the shelf camera, floor camera, or window camera, see “Notification settings”, Page 115.
For notifications sent from the access point, see “Notification settings”, Page 144.
For notifications sent from the HD camera, see “[Notification Settings]”, Page 170.

- Your mobile device’s notifications feature is disabled for the **[HomeHawk]** app.
  →Enable your mobile device’s notifications feature.
- Too many notifications were sent during this calendar month.
  →If an excessive number of notifications (i.e., thousands of notifications) were sent during this calendar month, an error message is displayed and no additional notifications can be received this calendar month. Notifications will be received again when the new month starts.
- **iPhone, iPad**
  Too many notifications were sent in a short amount of time.
  →If many notifications are sent in a short time, in some cases only the last notification may be received. This is a characteristic your mobile device’s notifications service.

Status notifications are received late

- Notifications are not received in real time; it may take some time for notifications to be received. This is not a malfunction.
- Too many notifications were sent in a short amount of time.
  →If many notifications are sent in a short time, notifications may be received late. This is a characteristic your mobile device’s notifications service.

Shelf camera features

General issues

Refer to the following after checking the general troubleshooting information described in “General information”, Page 176.

The camera’s LED indicator is blinking in red.

- The camera is out of range of your wireless router.
  →Confirm that your wireless router is powered on and wired correctly, and then move the camera closer to your wireless router.

No sound is heard in camera recordings

- If is displayed next to the recording in the recording list, the system is configured to not record audio when recording camera images.
  →Change the **[Recording with Sound]** setting (“Recording with sound (shelf cameras and floor cameras only)”, Page 110).
- The volume is turned down on your mobile device.
  →Adjust the volume of your mobile device.

Colors in camera images appear different from normal

- The camera is aimed at a dark location, or it is nighttime.
  →If there is not adequate light to illuminate the subject, such as at night, the camera switches to night vision mode depending on the settings (“Using night vision (shelf cameras and floor cameras only)”, Page 111). In this case, colors may appear different from normal.

There is a long delay when talking to the camera while away from home

- Your mobile device's network connection is slow or congested.
  →Wait for network traffic to decrease.
  →Lower the **[Frame Rate]** setting ("Changing the frame rate", Page 112).

Images are poor at night when the camera is installed in front of a window

- Night vision mode is causing images to have poor quality.
  →Turn off night vision mode ("Using night vision (shelf cameras and floor cameras only)", Page 111).

Camera images are not displayed at first while away from home, and are displayed after some time passes

- Your mobile device's network connection is slow or congested.
  →Wait for network traffic to decrease.
  →Lower the **[Frame Rate]** setting ("Changing the frame rate", Page 112).

I have to wait a long time before camera images are displayed while away from home

- There is too much traffic on your home network or on the mobile device's network.
  →Wait for network traffic to decrease.

Camera images are not displayed, and [Loading...] is displayed for a long period when I try to view camera images while away from home

- The protocol used for communication is not compatible with your network.
  →Set the **[Remote Access Mode]** setting to **[TCP]** ("Remote access mode settings", Page 35).

The Automatic Mode Switching feature does not work even though the geo-fencing feature is enabled.

- Your mobile device may have failed to communicate with your camera. The mode may not switch automatically in the following situations.
  – your mobile device and/or your camera do not have good network conditions
  – your mobile device's battery does not have adequate charge remaining to use the Automatic Mode Switching feature

  →Start the **[HomeHawk]** app on your mobile device.

The camera's sensor is triggered too easily

- The camera's motion detection features are too sensitive.
  →Reduce the sensitivity of the camera's sensors, see "Motion sensitivity", Page 59.
- The camera's detection area is too large.
  →Limit the detection area so that the camera ignores motion in unneeded areas of the camera's image, i.e., reduce the camera's detection area ("Detection area", Page 59).

[Ambient temperature is (too high) or (too low), camera operation will be interrupted.] is displayed

- The camera is used in an environment with a temperature that exceeds 40 °C (104 °F). Features such as viewing images and recording images will not be available if the temperature exceeds 45 °C (113 °F).
  →Use the camera in an environment with temperatures below 40 °C (104 °F).

Initial setup by WPS

WPS

WPS is a function of wireless routers that is used to easily connect wireless devices to wireless routers. A WPS button on a wireless router indicates that it has the WPS function. (Depending on the type of wireless router, the WPS function may be disabled on the wireless router even if there is a WPS button.)

Initial setup can't be completed

The camera's LED indicator is blinking in red.

If you have trouble during the initial setup check the following causes/solutions first and then turn off the camera and restart it.

- The WPS function on your wireless router may be disabled.
  Some Internet Service Provider wireless routers may have WPS disabled.
  →Try initial setup without using a WPS button on your wireless router ("Basic Setup", Page 47).
- The camera and wireless router are too far away.
  →Move the camera and wireless router closer together.
- The wireless router is not in WPS mode.
  →Press the WPS button on the wireless router for long enough until the LED indicator on the router starts blinking.
- Several cameras are in WPS mode.
  Only 1 camera can be operated in WPS mode at a time.
  →Turn off all other cameras and only operate 1 camera at a time.
- The DHCP function of your wireless router may be disabled.
  →Enable the wireless router's DHCP settings. For details, refer to your wireless router's manual.
- The address filter function of your wireless router may be enabled.
  →Register the MAC address of the camera to the address filter setting of the wireless router. Refer to your wireless router's manual.

The camera's LED indicator is lit in blue.

- The WPS button was pressed on another router which is different from the router your mobile device is connected with.
  →Perform one of the following.
  - **If you want to connect your mobile device to the wireless router which the camera is connected with:**
    Reconnect your mobile device to the router whose WPS button was pressed, restart the **[HomeHawk]** app, and then follow the on-screen instructions.
  - **If you want to connect your camera to the wireless router which the mobile device is connected with:**
    Press and hold the **RESET** button until you hear a beep (about 10 seconds) using an object with a thin tip ("Resetting camera settings", Page 114) and restart the **[HomeHawk]** app. Then press the WPS button on the router which your mobile device is connected with.
- The "Isolation" function on the wireless router is enabled.
  Sometimes when the "Isolation" function is enabled, the camera will not be able to communicate with your mobile device via your wireless router.
  →Disable the "Isolation" function on your wireless router. For details, refer to your wireless router's manual.

The camera's LED indicator is lit in yellow.

- The camera is not in WPS mode because the **SETUP** button was not pressed for long enough.
  →Follow the on-screen instructions, and press and hold the **SETUP** button on the camera until it beeps (about 5 seconds).

The camera's LED indicator is blinking quickly in green.

The camera is searching for your wireless router. Check the following causes/solutions first and wait until the LED indicator is lit in blue. Then restart the **[HomeHawk]** app.

- The camera and wireless router are too far away.
  →Move the camera and wireless router closer together.
- A network clash has occurred because you have 2 wireless routers at home that are using the same channel or channels of a close frequency.
  →Unplug all the wireless routers and plug them in again.

If the situation still does not improve, refer to your wireless router's manual for information on how to change the router channel of your wireless network.

Initial setup by Basic Setup

Initial setup can't be completed

The camera's LED indicator is blinking in red.
If you have trouble during the initial setup check the following causes/solutions first and then turn off the camera and restart it.

- The wireless network password may be incorrect.
  →Enter the correct password for the wireless network.
- The DHCP function of your wireless router may be disabled.
  →Enable the wireless router's DHCP settings. For details, refer to your wireless router's manual.
- Your mobile device's location information feature is disabled, or access to the location information is denied to the **[HomeHawk]** app.
  →To obtain the SSID of your home's wireless network, access to your mobile device's location information is required. On your mobile device, enable the location information feature and allow access to the location information for the **[HomeHawk]** app.
- The address filter function of your wireless router may be enabled.
  →Register the MAC address of the camera to the address filter setting of the wireless router. Refer to your wireless router's manual.

The camera's LED indicator is lit in blue.

- Your mobile device is connected to another network.
  →Connect your mobile device to the same wireless network that was used to set up the camera and try to add the mobile device again.
- A network clash has occurred because you have 2 wireless routers at home that are using the same channel or channels of a close frequency.
  →Unplug all the wireless routers and plug them in again.
  If the situation still does not improve, refer to your wireless router's manual for information on how to change the router channel of your wireless network.
- The "Isolation" function on the wireless router is enabled.
  Sometimes when the "Isolation" function is enabled, the camera will not be able to communicate with your mobile device via your wireless router.
  →Disable the "Isolation" function on your wireless router. For details, refer to your wireless router's manual.

The camera's LED indicator is blinking quickly in green.
The camera is searching for your wireless router. Check the following causes/solutions first and wait until the LED indicator is lit in blue. Then restart the **[HomeHawk]** app.

- The camera and wireless router are too far away.
  →Move the camera and wireless router closer together.
- A network clash has occurred because you have 2 wireless routers at home that are using the same channel or channels of a close frequency.
  →Unplug all the wireless routers and plug them in again.
  If the situation still does not improve, refer to your wireless router's manual for information on how to change the router channel of your wireless network.

Floor camera features

General issues

Refer to the following after checking the general troubleshooting information described in “General information”, Page 176.

The camera’s LED indicator is blinking in red.

- The camera is out of range of your wireless router.
  →Confirm that your wireless router is powered on and wired correctly, and then move the camera closer to your wireless router.

No sound is heard in camera recordings

- If is displayed next to the recording in the recording list, the system is configured to not record audio when recording camera images.
  →Change the **[Recording with Sound]** setting (“Recording with sound (shelf cameras and floor cameras only)”, Page 110).
- The volume is turned down on your mobile device.
  →Adjust the volume of your mobile device.

Colors in camera images appear different from normal

- The camera is aimed at a dark location, or it is nighttime.
  →If there is not adequate light to illuminate the subject, such as at night, the camera switches to night vision mode depending on the settings (“Using night vision (shelf cameras and floor cameras only)”, Page 111). In this case, colors may appear different from normal.

There is a long delay when talking to the camera while away from home

- Your mobile device’s network connection is slow or congested.
  →Wait for network traffic to decrease.
  →Lower the **[Frame Rate]** setting (“Changing the frame rate”, Page 112).

Images are poor at night when the camera is installed in front of a window

- Night vision mode is causing images to have poor quality.
  →Turn off night vision mode (“Using night vision (shelf cameras and floor cameras only)”, Page 111).

The light turns on at night by itself

- The light will automatically turn on at night if **[Color]** is selected for the night vision mode and you view or record images with the camera.
  →Turn off night vision mode or set it to **[Monochrome]** (“Using night vision (shelf cameras and floor cameras only)”, Page 111).

Note:

- Turning off night vision mode will reduce the visibility of images at night.

Camera images are not displayed at first while away from home, and are displayed after some time passes

- Your mobile device’s network connection is slow or congested.
  →Wait for network traffic to decrease.
  →Lower the **[Frame Rate]** setting (“Changing the frame rate”, Page 112).

I have to wait a long time before camera images are displayed while away from home

- There is too much traffic on your home network or on the mobile device’s network.
  →Wait for network traffic to decrease.

Camera images are not displayed, and [Loading...] is displayed for a long period when I try to view camera images while away from home

- The protocol used for communication is not compatible with your network.
  →Set the **[Remote Access Mode]** setting to **[TCP]** (“Remote access mode settings”, Page 35).

The Automatic Mode Switching feature does not work even though the geo-fencing feature is enabled.

- Your mobile device may have failed to communicate with your camera. The mode may not switch automatically in the following situations.
  – your mobile device and/or your camera do not have good network conditions
  – your mobile device’s battery does not have adequate charge remaining to use the Automatic Mode Switching feature

  →Start the **[HomeHawk]** app on your mobile device.

The camera’s sensor is triggered too easily

- The camera’s motion detection features are too sensitive.
  →Reduce the sensitivity of the camera’s sensors, see “Motion sensitivity”, Page 82.
- The camera’s detection area is too large.
  →Limit the detection area so that the camera ignores motion in unneeded areas of the camera’s image, i.e., reduce the camera’s detection area (“Detection area”, Page 82).

[Ambient temperature is (too high) or (too low), camera operation will be interrupted.] is displayed

- The camera is used in an environment with a temperature that exceeds 40 °C (104 °F). Features such as viewing images and recording images will not be available if the temperature exceeds 45 °C (113 °F).
  →Use the camera in an environment with temperatures below 40 °C (104 °F).

The light will not turn on or [Ambient temperature is too high, the lighting will be turned off.] is displayed

- The temperature of the light has exceeded 105 °C (221 °F).
  →Turn off the light using the app (“Viewing the camera image/recording list screen”, Page 71) or on the camera unit and wait for the light to cool down. The light will be able to be used once its temperature goes below 95 °C (203 °F).

The displayed battery status is not updated or is incorrect

- The batteries were inserted or replaced with the AC adaptor connected to a wall outlet.
  →Disconnect the AC adaptor from the wall outlet and then reconnect it again.

Note:

- When inserting or replacing batteries, disconnect the AC adaptor from the wall outlet before inserting or replacing the batteries.

Initial setup by WPS

WPS

WPS is a function of wireless routers that is used to easily connect wireless devices to wireless routers. A WPS button on a wireless router indicates that it has the WPS function. (Depending on the type of wireless router, the WPS function may be disabled on the wireless router even if there is a WPS button.)

Initial setup can't be completed

The camera's LED indicator is blinking in red.
If you have trouble during the initial setup check the following causes/solutions first and then turn off the camera and restart it.
- The WPS function on your wireless router may be disabled.
  Some Internet Service Provider wireless routers may have WPS disabled.
  →Try initial setup without using a WPS button on your wireless router ("Basic Setup", Page 47).
- The camera and wireless router are too far away.
  →Move the camera and wireless router closer together.
- The wireless router is not in WPS mode.
  →Press the WPS button on the wireless router for long enough until the LED indicator on the router starts blinking.
- Several cameras are in WPS mode.
  Only 1 camera can be operated in WPS mode at a time.
  →Turn off all other cameras and only operate 1 camera at a time.
- The DHCP function of your wireless router may be disabled.
  →Enable the wireless router's DHCP settings. For details, refer to your wireless router's manual.
- The address filter function of your wireless router may be enabled.
  →Register the MAC address of the camera to the address filter setting of the wireless router. Refer to your wireless router's manual.

The camera's LED indicator is lit in blue.
- The WPS button was pressed on another router which is different from the router your mobile device is connected with.
  →Perform one of the following.
  – **If you want to connect your mobile device to the wireless router which the camera is connected with:**
    Reconnect your mobile device to the router whose WPS button was pressed, restart the **[HomeHawk]** app, and then follow the on-screen instructions.
  – **If you want to connect your camera to the wireless router which the mobile device is connected with:**
    Press and hold the **RESET** button until you hear a beep (about 10 seconds) using an object with a thin tip ("Resetting camera settings", Page 114) and restart the **[HomeHawk]** app. Then press the WPS button on the router which your mobile device is connected with.
- The "Isolation" function on the wireless router is enabled.
  Sometimes when the "Isolation" function is enabled, the camera will not be able to communicate with your mobile device via your wireless router.
  →Disable the "Isolation" function on your wireless router. For details, refer to your wireless router's manual.

The camera's LED indicator is lit in yellow.
- The camera is not in WPS mode because the **SETUP** button was not pressed for long enough.
  →Follow the on-screen instructions, and press and hold the **SETUP** button on the camera until it beeps (about 5 seconds).

The camera's LED indicator is blinking quickly in green.
The camera is searching for your wireless router. Check the following causes/solutions first and wait until the LED indicator is lit in blue. Then restart the **[HomeHawk]** app.
- The camera and wireless router are too far away.
  →Move the camera and wireless router closer together.
- A network clash has occurred because you have 2 wireless routers at home that are using the same channel or channels of a close frequency.
  →Unplug all the wireless routers and plug them in again.
  If the situation still does not improve, refer to your wireless router's manual for information on how to change the router channel of your wireless network.

Initial setup by Basic Setup

Initial setup can't be completed

The camera’s LED indicator is blinking in red.
If you have trouble during the initial setup check the following causes/solutions first and then turn off the camera and restart it.

- The wireless network password may be incorrect.
  →Enter the correct password for the wireless network.
- The DHCP function of your wireless router may be disabled.
  →Enable the wireless router’s DHCP settings. For details, refer to your wireless router’s manual.
- Your mobile device's location information feature is disabled, or access to the location information is denied to the **[HomeHawk]** app.
  →To obtain the SSID of your home's wireless network, access to your mobile device's location information is required. On your mobile device, enable the location information feature and allow access to the location information for the **[HomeHawk]** app.
- The address filter function of your wireless router may be enabled.
  →Register the MAC address of the camera to the address filter setting of the wireless router. Refer to your wireless router’s manual.

The camera’s LED indicator is lit in blue.

- Your mobile device is connected to another network.
  →Connect your mobile device to the same wireless network that was used to set up the camera and try to add the mobile device again.
- A network clash has occurred because you have 2 wireless routers at home that are using the same channel or channels of a close frequency.
  →Unplug all the wireless routers and plug them in again.
  If the situation still does not improve, refer to your wireless router’s manual for information on how to change the router channel of your wireless network.
- The "Isolation" function on the wireless router is enabled.
  Sometimes when the "Isolation" function is enabled, the camera will not be able to communicate with your mobile device via your wireless router.
  →Disable the "Isolation" function on your wireless router. For details, refer to your wireless router’s manual.

The camera’s LED indicator is blinking quickly in green.
The camera is searching for your wireless router. Check the following causes/solutions first and wait until the LED indicator is lit in blue. Then restart the **[HomeHawk]** app.

- The camera and wireless router are too far away.
  →Move the camera and wireless router closer together.
- A network clash has occurred because you have 2 wireless routers at home that are using the same channel or channels of a close frequency.
  →Unplug all the wireless routers and plug them in again.
  If the situation still does not improve, refer to your wireless router’s manual for information on how to change the router channel of your wireless network.

Window camera features

General issues

Refer to the following after checking the general troubleshooting information described in “General information”, Page 176.

The camera’s LED indicator is blinking in red.

- The camera is out of range of your wireless router.
  →Confirm that your wireless router is powered on and wired correctly, and then move the camera closer to your wireless router.
- A fan error occurred.
  →Unplug the camera and then plug it in again.
  If the problem is not resolved, contact an authorized service center.

Colors in camera images appear different from normal

- The camera is aimed at a dark location, or it is nighttime.
  →If there is not adequate light to illuminate the subject, such as at night, the camera switches to night vision mode. In this case, colors may appear different from normal.

Camera images are not displayed at first while away from home, and are displayed after some time passes

- Your mobile device’s network connection is slow or congested.
  →Wait for network traffic to decrease.
  →Lower the **[Frame Rate]** setting (“Changing the frame rate”, Page 112).

I have to wait a long time before camera images are displayed while away from home

- There is too much traffic on your home network or on the mobile device’s network.
  →Wait for network traffic to decrease.

Camera images are not displayed, and [Loading...] is displayed for a long period when I try to view camera images while away from home

- The protocol used for communication is not compatible with your network.
  →Set the **[Remote Access Mode]** setting to **[TCP]** (“Remote access mode settings”, Page 35).

The camera’s sensor is triggered too easily

- The camera’s motion detection features are too sensitive.
  →Reduce the sensitivity of the camera’s sensors, see “Motion sensitivity”, Page 104.
- The camera’s detection area is too large.
  →Limit the detection area so that the camera ignores motion in unneeded areas of the camera’s image, i.e., reduce the camera’s detection area (“Detection area”, Page 103).
- Unwanted detections are made (from cars, etc.)
  →Set the mode **[Send Notifications]** setting to **[Person Only]** (“Once motion is detected”, Page 107).

A watermark is displayed on images

- A watermark is displayed on live and recorded images. It cannot be turned off.

Initial setup by WPS

WPS

WPS is a function of wireless routers that is used to easily connect wireless devices to wireless routers. A WPS button on a wireless router indicates that it has the WPS function. (Depending on the type of wireless router, the WPS function may be disabled on the wireless router even if there is a WPS button.)

Initial setup can't be completed

The camera's LED indicator is blinking in red.

If you have trouble during the initial setup check the following causes/solutions first and then turn off the camera and restart it.

- The WPS function on your wireless router may be disabled.
  Some Internet Service Provider wireless routers may have WPS disabled.
  →Try initial setup using Bluetooth ("Initial setup by Bluetooth", Page 191).
- The camera and wireless router are too far away.
  →Move the camera and wireless router closer together.
- The wireless router is not in WPS mode.
  →Press the WPS button on the wireless router for long enough until the LED indicator on the router starts blinking.
- Several cameras are in WPS mode.
  Only 1 camera can be operated in WPS mode at a time.
  →Turn off all other cameras and only operate 1 camera at a time.
- The DHCP function of your wireless router may be disabled.
  →Enable the wireless router's DHCP settings. For details, refer to your wireless router's manual.
- The address filter function of your wireless router may be enabled.
  →Register the MAC address of the camera to the address filter setting of the wireless router. Refer to your wireless router's manual.

The camera's LED indicator is lit in blue.

- The WPS button was pressed on another router which is different from the router your mobile device is connected with.
  →Perform one of the following.
  – **If you want to connect your mobile device to the wireless router which the camera is connected with:**
    Reconnect your mobile device to the router whose WPS button was pressed, restart the **[HomeHawk]** app, and then follow the on-screen instructions.
  – **If you want to connect your camera to the wireless router which the mobile device is connected with:**
    Press and hold the **RESET** button for about 10 seconds using an object with a thin tip ("Resetting camera settings", Page 114) and restart the **[HomeHawk]** app. Then press the WPS button on the router which your mobile device is connected with.
- A network clash has occurred because you have 2 wireless routers at home that are using the same channel or channels of a close frequency.
  →Unplug all the wireless routers and plug them in again.
  If the situation still does not improve, refer to your wireless router's manual for information on how to change the router channel of your wireless network.
- The "Isolation" function on the wireless router is enabled.
  Sometimes when the "Isolation" function is enabled, the camera will not be able to communicate with your mobile device via your wireless router.
  →Disable the "Isolation" function on your wireless router. For details, refer to your wireless router's manual.

The camera's LED indicator is lit in yellow.

- The camera is not in WPS mode because the **SETUP** button was not pressed for long enough.
  →Follow the on-screen instructions, and press and hold the **SETUP** button on the camera until the LED indicator starts blinking (about 5 seconds).

Initial setup by Bluetooth

Initial setup can't be completed

The camera's LED indicator is blinking in red.

If you have trouble during the initial setup check the following causes/solutions first and then turn off the camera and restart it.

- The wireless network password may be incorrect.
  →Enter the correct password for the wireless network.
- The DHCP function of your wireless router may be disabled.
  →Enable the wireless router's DHCP settings. For details, refer to your wireless router's manual.
- The address filter function of your wireless router may be enabled.
  →Register the MAC address of the camera to the address filter setting of the wireless router. Refer to your wireless router's manual.

The camera's LED indicator is lit in blue.

- A network clash has occurred because you have 2 wireless routers at home that are using the same channel or channels of a close frequency.
  →Unplug all the wireless routers and plug them in again.
  If the situation still does not improve, refer to your wireless router's manual for information on how to change the router channel of your wireless network.
- The "Isolation" function on the wireless router is enabled.
  Sometimes when the "Isolation" function is enabled, the camera will not be able to communicate with your mobile device via your wireless router.
  →Disable the "Isolation" function on your wireless router. For details, refer to your wireless router's manual.

Front door camera and outdoor camera features

Refer to the following after checking the general troubleshooting information described in "General information", Page 176.

[Camera update failed] is displayed

- An error occurred while updating the camera.
  →Fully charge the camera and try again.

I fully charged the camera (the charging LED indicator is lit in red), but its operation time seems to be shorter than usual

- The temperature of the location where the camera is being used is too low.
  →Use the camera in a location with a higher temperature.

The camera will not charge (the charging LED indicator blinks quickly in red)

- You are charging the camera in a location outside of the camera's specified charging temperatures.
  →Charge the camera in a location with a temperature between 5 °C and 40 °C (41 °F and 104 °F).

No sound is heard in camera recordings

- If is displayed next to the recording in the recording list, the system is configured to not record audio when recording camera images.
  →Change the **[Recording with Sound]** setting (“Recording with sound”, Page 137).
- The volume is turned down on your mobile device.
  →Adjust the volume of your mobile device.

Colors in camera images appear different from normal

- The camera is aimed at a dark location, or it is nighttime.
  →If there is not adequate light to illuminate the subject, such as at night, the camera switches to night vision mode depending on the settings (“Using night vision”, Page 137). In this case, colors may appear different from normal.

Colors in front door camera images appear washed out

- Lighting conditions are poor or inconsistent.
  →Adjust the camera’s brightness (“Changing the brightness”, Page 138).
  →Place the camera in a different location or position.

Condensation forms on the camera

- Extreme temperature changes are causing condensation to form.
  →Wipe the outer surface of the camera with a soft dry cloth.
  →Use the camera in a location that does not have extreme temperature changes.

There is a long delay when talking to the camera while away from home

- Your mobile device’s network connection is slow or congested.
  →Wait for network traffic to decrease.
  →Lower the **[Frame Rate]** setting (“Changing the frame rate”, Page 138).

Images are poor at night when the camera is installed in front of a window

- Night vision mode is causing images to have poor quality.
  →Turn off night vision mode (“Using night vision”, Page 137).

LEDs light at night

- Night vision mode is enabled and automatically turns on LEDs at night.
  →Turn off night vision mode or set it to **[Monochrome]** (“Using night vision”, Page 137).

Note:

- Turning off night vision mode will reduce the visibility of images at night.

Camera images are not displayed at first while away from home, and are displayed after some time passes

- Your mobile device’s network connection is slow or congested.
  →Wait for network traffic to decrease.
  →Lower the **[Frame Rate]** setting (“Changing the frame rate”, Page 138).

I have to wait a long time before camera images are displayed while away from home

- There is too much traffic on your home network or on the mobile device’s network.
  →Wait for network traffic to decrease.

Camera images are not displayed, and [Loading...] is displayed for a long period when I try to view camera images while away from home

- The protocol used for communication is not compatible with your network.
  →Set the **[Remote Access Mode]** setting to **[TCP]** (“Remote access mode settings”, Page 35).

The camera’s sensor is triggered too easily

- The camera’s motion detection features are too sensitive.

→Reduce the sensitivity of the camera's sensors, see "Motion sensitivity", Page 139.

- The camera's detection area is too large.
  →Limit the detection area so that the camera ignores motion in unneeded areas of the camera's image, i.e., reduce the camera's detection area ("Detection area", Page 139).
- The camera's settings are not suited to the environment.
  →Review the information in the Installation Guide included with your camera about sensor features and installation environment.
  →Front door cameras and outdoor cameras can detect motion visually (i.e., when an area of the camera's image changes brightness). For this reason, false detections may occur in the following locations.
  False detections caused by predictable movement in a specific area of the camera image
  – Areas where fixed objects move in the wind, such as tree branches or hanging laundry
  – Areas where animals move in a limited area, such as birds in a nest or small animals close to the ground
  – Areas where brightness significantly, such as when shadows form in the afternoon, lights turn on at night, or vehicles pass by at night with their headlights or brake lights on
  You can prevent these false detections by adjusting the position of the camera, by limiting the detection area so that the camera ignores motion in unneeded areas of the camera's image ("Detection area", Page 139) or lowering the sensitivity of sensors ("Motion sensitivity", Page 139).
  False detections caused by unpredictable movement in any area of the camera image
  – Areas where birds or flying insects move in front of the camera
  – Areas where rain, snow, hail, or tree leaves fall in front of the camera
  You can prevent these false detections by adjusting the position of the camera or lowering the sensitivity of sensors ("Motion sensitivity", Page 139).

[Ambient temperature is (too high) or (too low), camera operation will be interrupted.] is displayed

- The camera is used in an environment with a temperature that exceeds -20 °C or 50 °C (-4 °F to 122 °F).
  →Use the camera in an environment with temperatures within -20 °C to 50 °C (-4 °F to 122 °F).

HD camera sensor features

Refer to the following after checking the general troubleshooting information described in "General information", Page 176.

Notifications are not received

- The desired notification type is not enabled.
  →Enable the desired notification type ("[Notification Settings]", Page 170).
- The camera's date and time setting is incorrect.
  →Adjust the date and time setting ("HD camera device profiles", Page 171).

Sensor detections are not displayed in the sensor history

- The desired feature is not enabled.
  →Make sure the desired feature is enabled and configured as desired ("Temperature sensor", Page 164, "Sound sensor", Page 164).
- The camera's date and time setting is incorrect.
  →Adjust the date and time setting ("HD camera device profiles", Page 171).

Colors in camera images appear different from normal

- The camera is aimed at a dark location, or it is nighttime.
  →If there is not adequate light to illuminate the subject, such as at night, the camera switches to night vision mode depending on the settings ("Night vision mode", Page 167). In this case, colors may appear different from normal.

Images are poor at night when the camera is installed in front of a window

- Night vision mode is causing images to have poor quality.
  →Turn off night vision mode (“Night vision mode”, Page 167).

Infrared LEDs light at night

- Night vision mode is enabled and automatically turns on infrared LEDs at night.
  →Turn off night vision mode (“Night vision mode”, Page 167).

Note:

- Turning off night vision mode will reduce the visibility of images at night.

Amazon Alexa features

Refer to the following after checking the general troubleshooting information described in “General information”, Page 176.

My Amazon Alexa device does not respond to my voice commands

- You have not set up your Amazon Alexa device for use with the **[HomeHawk]** app.
  →Set up your Amazon Alexa device for use with the **[HomeHawk]** app (“Linking with your Amazon Echo Show”, Page 36).
- You said an incorrect voice command.
  →Say the correct voice commands (“Using Amazon Alexa to control devices”, Page 37).

Images are not displayed or not displayed smoothly on Amazon Echo Show

- The bit rate setting is too high.
  →Lower the bit rate setting (shelf cameras/floor cameras: “Bit rate settings for Amazon Echo Show and Google Home”, Page 114, front door cameras/outdoor cameras: “Bit rate settings for Amazon Echo Show and Google Home”, Page 143).

Google Home features

Refer to the following after checking the general troubleshooting information described in “General information”, Page 176.

My Google Home device does not respond to my voice commands

- You have not set up your Google Home device for use with the **[HomeHawk]** app.
  →Set up your Google Home device for use with the **[HomeHawk]** app (“Linking with your Google Home”, Page 38).
- You said an incorrect voice command.
  →Say the correct voice commands (“Using Google Home to control devices”, Page 39).

Images are not displayed or not displayed smoothly on my TV via Chromecast

- The bit rate setting is too high.
  →Lower the bit rate setting (shelf cameras/floor cameras: “Bit rate settings for Amazon Echo Show and Google Home”, Page 114, front door cameras/outdoor cameras: “Bit rate settings for Amazon Echo Show and Google Home”, Page 143).

Limited Warranty (ONLY FOR U.S.A.)

Panasonic Products Limited Warranty

Limited Warranty Coverage (For USA Only)

If your product does not work properly because of a defect in materials or workmanship, Panasonic Corporation of North America (referred to as “the warrantor”) will, for the length of the period indicated on the chart below, which starts with the date of original purchase (“warranty period”), at its option either (a) repair your product with new or refurbished parts, (b) replace it with a new or a refurbished equivalent value product, or (c) refund your purchase price. The decision to repair, replace or refund will be made by the warrantor.

Product or Part Name	Parts	Labor
Home Network System Products	One (1) Year	One (1) Year
microSD card (Included model only)	90 days	N/A

During the “Labor” warranty period there will be no charge for labor. During the “Parts” warranty period, there will be no charge for parts. This Limited Warranty excludes both parts and labor for non-rechargeable batteries, antennas, and cosmetic parts (cabinet). This warranty only applies to products purchased and serviced in the United States. This warranty is extended only to the original purchaser of a new product which was not sold “as is”.

Mail-In Service--Online Repair Request

Online Repair Request

To submit a new repair request and for quick repair status visit our Web Site at http://shop.panasonic.com/support

When shipping the unit, carefully pack, include all supplied accessories listed in the Owner’s Manual, and send it prepaid, adequately insured and packed well in a carton box. When shipping Lithium Ion batteries please visit our Web Site at http://shop.panasonic.com/support as Panasonic is committed to providing the most up to date information. Include a letter detailing the complaint, a return address and provide a daytime phone number where you can be reached. A valid registered receipt is required under the Limited Warranty.

IF REPAIR IS NEEDED DURING THE WARRANTY PERIOD, THE PURCHASER WILL BE REQUIRED TO FURNISH A SALES RECEIPT/PROOF OF PURCHASE INDICATING DATE OF PURCHASE, AMOUNT PAID AND PLACE OF PURCHASE. CUSTOMER WILL BE CHARGED FOR THE REPAIR OF ANY UNIT RECEIVED WITHOUT SUCH PROOF OF PURCHASE.

Limited Warranty Limits and Exclusions

This warranty ONLY COVERS failures due to defects in materials or workmanship, and DOES NOT COVER normal wear and tear or cosmetic damage. The warranty ALSO DOES NOT COVER damages which occurred in shipment, or failures which are caused by products not supplied by the warrantor, or failures which result from accidents, misuse, abuse, neglect, mishandling, misapplication, alteration, faulty installation, set-up adjustments, misadjustment of consumer controls, improper maintenance, power line surge, lightning damage, modification, introduction of sand, humidity or liquids, commercial use such as hotel, office, restaurant, or other business or rental use of the product, or service by anyone other than a Factory Service Center or other Authorized Servicer, or damage that is attributable to acts of God.

THERE ARE NO EXPRESS WARRANTIES EXCEPT AS LISTED UNDER "LIMITED WARRANTY COVERAGE".

THE WARRANTOR IS NOT LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THIS PRODUCT, OR ARISING OUT OF ANY BREACH OF THIS WARRANTY.

(As examples, this excludes damages for lost time, travel to and from the servicer, loss of or damage to media or images, data or other memory or recorded content. The items listed are not exclusive, but for illustration only.)

ALL EXPRESS AND IMPLIED WARRANTIES, INCLUDING THE WARRANTY OF MERCHANTABILITY, ARE LIMITED TO THE PERIOD OF THE LIMITED WARRANTY.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the exclusions may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state. If a problem with this product develops during or after the warranty period, you may contact your dealer or Service Center. If the problem is not handled to your satisfaction, then write to:

Panasonic Corporation of North America
Consumer Affairs Department 8th Fl.
Two Riverfront Plaza
Newark NJ 07102-5490

PARTS AND SERVICE, WHICH ARE NOT COVERED BY THIS LIMITED WARRANTY, ARE YOUR RESPONSIBILITY.

As of June 2015

Compatible environments

For best results when viewing this document, we recommend the following environments.

When using a computer

– Microsoft Windows Internet Explorer 9 or later
– Firefox, latest version
– Google Chrome, latest version
– Safari 5.0 or later

When using a mobile device

– iOS 10.0 and later
– Android 5.0 and later

Note:

- Internet Explorer 8 and earlier versions are not supported.
- Some content may not be displayed properly when using Android 4.0.

Terms used in this document

- The access point supports microSD, microSDHC, and microSDXC memory cards. In this document, the term “SD card” is used as a generic term for any of the supported cards.

Trademarks

- Apple, iPad, iPad Air, iPhone, and Safari are registered trademarks of Apple Inc.
- Amazon, Echo Show, Alexa, Echo Spot, Fire and all related logos are trademarks of Amazon.com, Inc. or its affiliates.
- Android, Google Play, and Google Home are trademarks of Google LLC.
- The Bluetooth word mark and logos are registered trademarks owned by Bluetooth SIG, Inc., and any use of such marks by Panasonic Corporation is under license.
- Firefox is a trademark of the Mozilla Foundation in the US and other countries.
- microSDHC and microSDXC Logos are trademarks of SD-3C, LLC.
- Microsoft, Windows, and Internet Explorer are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.
- All other trademarks identified herein are the property of their respective owners.

Other information

- The suffix is omitted from most model numbers listed in this document. It is included only when relevant.
- Screen shots and icons that appear in this document are for reference only. Actual appearance varies depending on your mobile device, its operating system and display language, the devices that are registered to the access point, the current status of the access point and its connected devices, etc.
- Illustrations in this document may vary from the appearance of the actual product.
- Design and specifications are subject to change without notice.

PNQP1406QA/eng CC1803YK9100