

StreetSiren User manual

Updated December 14, 2023



StreetSiren is a wireless outdoor alerting device with a sound volume of up to 113 dB. Equipped with a bright LED frame and pre-installed battery, StreetSiren can be quickly installed, set up, and operate autonomously up to 5 years.

Connecting to the Ajax system via the secured [Jeweller](#) radio protocol, StreetSiren communicates with the [hub](#) at a distance of up to 1,500 m in line of sight.

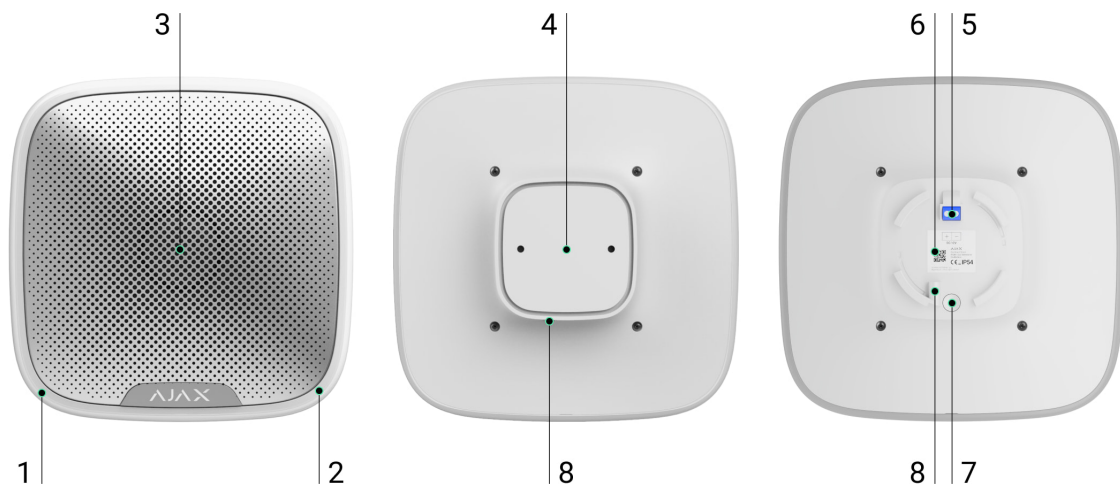
The device is set up via the [Ajax apps](#) for iOS, Android, macOS, and Windows. The system notifies users of all events through push notifications, SMS, and calls (if activated).



StreetSiren operates with [Ajax hubs](#) only and does not support connecting via [uartBridge](#) or [ocBridge Plus](#) integration modules.

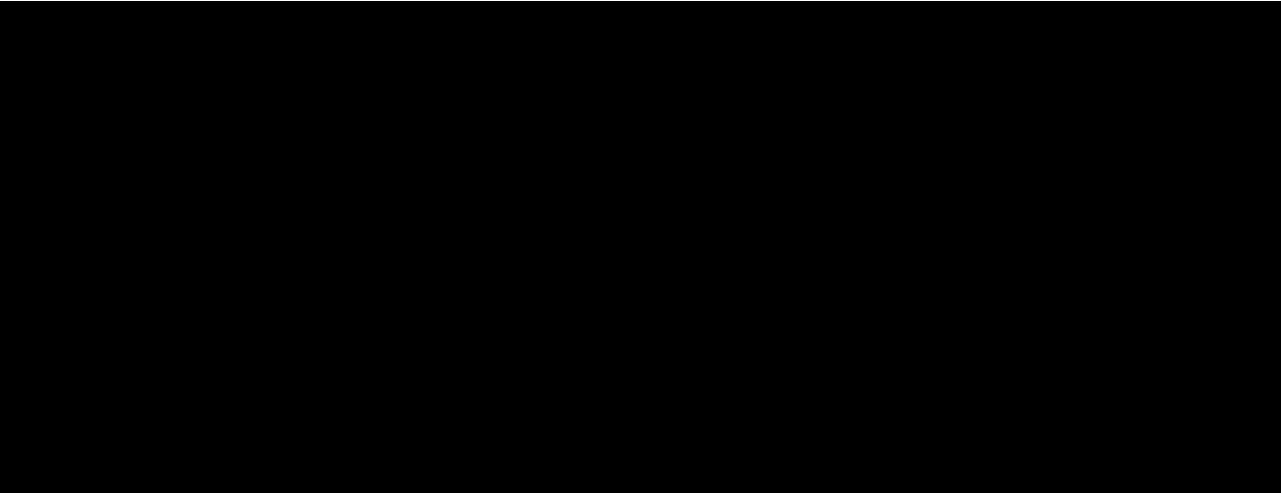
The Ajax system can be connected to a central monitoring station of a security company.

Functional elements



1. LED frame
2. Light indicator
3. Siren buzzer behind the metal net
4. SmartBracket attachment panel
5. External power supply connection terminals
6. QR code
7. On/off button
8. Place of fixing the SmartBracket panel with a screw

Operating Principle



button is blocked, preventing the siren from being turned off.

StreetSiren is equipped with a tamper button and an accelerometer. The tamper button is triggered when the device body is opened, and the accelerometer is activated when someone's try to move or dismount the device.

Connecting

Before starting the connection:

1. Following the hub user guide, install the [Ajax app](#). Create an account, add the hub, and create at least one room.
2. Switch on the hub and check the internet connection (via Ethernet cable and/or GSM network).
3. Make sure that the hub is disarmed and does not update by checking its status in the Ajax app.



Only users with administrator rights can pair the device with the hub

Pairing the device with the hub:

1. Select **Add Device** in the Ajax app.
2. Name the device, scan or type the **QR code** (located on the device body and packaging), and select the location room.



3. Tap **Add** – the countdown will start.

4. Switch on the device by holding the power button for 3 seconds.



The on/off button is recessed into the body of the siren and quite tight, you can use a thin solid object to press it.

For detecting and pairing to occur, the device should be located within the coverage of the wireless network of the hub (at the same protected object). The connection request is transmitted briefly: at the moment of switching on the device.


StreetSiren switches off automatically after failing to connect to the hub. To retry the connection, you do not need to switch it off. If the device has already been assigned to another hub, switch it off and follow the standard pairing procedure.








The device connected to the hub appears in the list of devices in the app. The update of the siren statuses in the list depends on the device ping interval set in the hub settings (the default value is 36 seconds).



Please note that only 10 sirens or keypads with a built-in siren can be connected to one hub.


Icons

Icons display some of the StreetSiren states. You can view them in the Ajax app, in the **Devices**  menu.

Icon	Value
	Shows Jeweller signal strength between the hub/range extender and StreetSiren The recommended value is 2-3 bars
	Battery charge level How battery charge is displayed in Ajax apps
	Displayed if the device is working via a radio signal range extender
	StreetSiren is off Learn more
	StreetSiren tamper triggering events are disabled Learn more
	Siren notifies about the opening
	The detector was not transferred to the new hub. Learn more

States

Siren states can be found in the Ajax app:

1. Go to the **Devices**  tab.
2. Select StreetSiren from the list.

Parameter	Value
Temperature	<p>The temperature of the device which is measured on the processor and changes gradually.</p> <p>Acceptable error between the value in the app and temperature at the installation site is 2°C.</p> <p>When the device detects a temperature change at least for 2°C, the value is updated.</p> <p>You can set up a scenario by temperature change to control automation devices</p>
Jeweller Signal Strength	<p>Signal strength between the hub/range extender and siren.</p> <p>We recommend installing the siren in places with the signal strength of 2-3 bars</p>
Connection via Jeweller	<p>Connection status between the hub/range extender and StreetSiren:</p> <ul style="list-style-type: none">• Online – the siren is connected to the hub/range extender• Offline – the siren is not connected to the hub/range extender
Transmitter power	<p>Signal strength levels during the test (available in siren with firmware version 3.50 and later):</p> <ul style="list-style-type: none">• Auto – the device adjusts the power level of the transmitter automatically (default mode)• Attenuation – artificially reduces the signal strength of the device by 6 dB



	<ul style="list-style-type: none"> • Max – sets the maximum power level of the transmitter <p><u>What is Attenuation Test</u></p>
ReX	<p>Displayed if the siren is working via a <u>radio signal range extender</u></p>
Battery Charge	<p>Battery level of the device. Two states available:</p> <ul style="list-style-type: none"> • OK • Low <p><u>How battery charge is displayed in Ajax apps</u></p>
Lid	<p>The status of the tamper that responds to demount or opening of the body:</p> <ul style="list-style-type: none"> • Open – the siren is removed from its SmartBracket mounting plate • Closed – the siren is mounted <p><u>Learn more</u></p>
External Power	<p>External power supply status of the siren:</p> <ul style="list-style-type: none"> • Connected – external 12 V power supply is connected to the siren • Disconnected – siren powered by pre-installed batteries
Alarm Volume	<p>Volume level in case of alarm</p> <ul style="list-style-type: none"> • Muted – the siren does not sound when the alarm is raised • Quiet – 85 dB volume • Loud – 100 dB volume • Very loud – 113 dB volume

	The volume level is measured 1 m away from the siren
Alarm Duration	Duration of the audible alarm: from 3 seconds to 3 minutes. The duration is set in 3-second intervals
Alert if Moved	The state of the accelerometer alarm
LED indication	<ul style="list-style-type: none"> • Disabled – LED indication is off • Armed – LED blinks once every 3 seconds only when the system is armed • Always – LED blinks once every 3 seconds regardless of the mode state
Beeps Settings	
Arming/Disarming	If enabled, the siren alerts you by backlighting the LED frame and a short beep when arming and disarming
Night Mode Activation/Deactivation	If enabled, the siren alerts you by backlighting the LED frame and a short beep when arming and disarming the system from the Night mode
Entry Delays	If this option is enabled, the siren signals about a delay when entering/leaving (available with firmware version 3.51.0 or later)
Exit Delays	If this option is enabled, the siren signals about a delay when entering/leaving (available with firmware version 3.51.0 or later)
Entry Delays in Night mode	If this option is enabled, the siren beeps to signal about an entry delay in the Night mode
Exit Delays in Night mode	If this option is enabled, the siren beeps to signal about an exit delay in the Night mode
Chime on opening	When enabled, a siren notifies about opening detectors triggering in the Disarmed system mode <u>What is Chime</u>

Beep Volume	<p>Volume of the audible notification signal about arming/disarming, entry/exit delay, opening detector triggering:</p> <ul style="list-style-type: none"> • Quiet – 85 dB volume • Loud – 100 dB volume • Very loud – 113 dB volume <p>The volume level was measured 1 m away from the siren</p>
Permanent Deactivation	<p>Shows the status of the device: active, completely disabled by the user, or only notifications about triggering of the device tamper button are disabled.</p> <p>The option is available for StreetSiren with firmware version 3.71 and later.</p>
Firmware	Siren firmware version
Device ID	Device identifier
Device No.	Number of the device loop (zone)

Settings

To change the StreetSiren settings in the Ajax app:

1. Select the hub if you have several of them or if you are using the PRO app.
2. Go to the **Devices**  tab.
3. Select **StreetSiren** in the list.
4. Go to **Settings** by clicking on the .
5. Set the required parameters.
6. Click **Back** to save the new settings.

Setting	Value
Name	<p>Siren name that can be edited. The name of device you can see at notifications in the event feed.</p> <p>The name can contain up to 12 Cyrillic characters or up to 24 Latin symbols</p>
Room	<p>Selecting the virtual room to which StreetSiren DoubleDeck is assigned. The room name you can see at notifications in the event feed</p>
Alarms in Group Mode	<p>Selecting the group to which the siren is assigned. You can select one or all groups:</p> <ul style="list-style-type: none"> • When assigned to a group, the siren and its indication are related to alarms and events of this group • When attached to all groups, the siren and its indication are related to alarms and events of all groups in the system <p>Regardless of the group selected, the siren will respond to Night Mode activation and alarms</p> <p><u>Learn more</u></p>
Alarm Volume	<p>The siren responds to system alarms with the selected volume:</p> <ul style="list-style-type: none"> • Muted – the siren does not sound when the alarm is raised • Quiet – 85 dB volume • Loud – 100 dB volume • Very loud – 113 dB volume <p>The volume level is measured 1 m away from the siren</p>
Alarm Duration	<p>Duration of the audible alarm: from 3 seconds to 3 minutes.</p>

	The duration is set in 3-second intervals
Alert if Moved	<p>Alarm when the accelerometer is triggered: the siren is triggered if you turn the body or detach the device from the mount.</p> <p>The built-in accelerometer takes 60 seconds to remember the normal position. Do not rush to check the performance of the function before this time expires</p>
LED indication	<p>LED indication of the siren settings:</p> <ul style="list-style-type: none"> • Disabled – LED indication is off • Armed – LED blinks once every 3 seconds only when the system is armed • Always – LED blinks once every 3 seconds regardless of the mode state <p><u>More about indication</u></p>
Beeps Settings	<p>Opens the siren notification settings. A detailed description of the settings is <u>available below</u></p>
Jeweller Signal Strength Test	<p>Switching the siren to the Jeweller signal strength test mode. The test allows you to check the signal level between the hub and StreetSiren and determine the optimal installation location</p> <p><u>What is Jeweller Signal Strength Test</u></p>
Volume Test	<p>Switches the device to the volume test mode</p> <p><u>What is Volume Level Test</u></p>
Signal Attenuation Test	<p>Switching the StreetSiren to the signal fade test mode (available in siren with firmware version 3.50 and later)</p>

	<u>What is Attenuation Test</u>
User Guide	Opens the StreetSiren User Guide
Permanent Deactivation	<p>Allows the user to disconnect the device without removing it from the system.</p> <p>Three options are available:</p> <ul style="list-style-type: none"> • No – the device operates normally and transmits all events • Entirely – the device will not execute system commands or participate in automation scenarios, and the system will ignore device alarms and other notifications • Lid only – the system will ignore only notifications about the triggering of the device tamper button <p>StreetSiren with firmware version 3.71 and later supports this function</p> <p><u>Learn more about permanent deactivation of devices</u></p>
Unpair Device	Disconnects the siren from the hub and deletes its settings

Siren beep settings

Arming/Disarming	When this option is enabled, the siren warns of arming and disarming by lighting of the LED frame and by a short beep
Night Mode Activation/Deactivation	<p>If enabled, the siren alerts you by backlighting the LED frame and a short beep when arming and disarming the system from the Night mode</p> <p><u>What is Night mode</u></p>



Entry Delays	<p>If this option is enabled, the siren beeps to signal about an entry delay</p> <p><u>What is Delay When Entering/Leaving</u></p>
Exit Delays	<p>If this option is enabled, the siren beeps to signal about an exit delay</p> <p><u>What is Delay When Entering/Leaving</u></p>
Entry Delays in Night Mode	<p>If this option is enabled, the siren beeps to signal about an entry delay in the Night mode</p> <p><u>What is Night mode</u> <u>What is Delay When Entering/Leaving</u></p>
Exit Delays in Night Mode	<p>If this option is enabled, the siren beeps to signal about an exit delay in the Night mode</p> <p><u>What is Night mode</u> <u>What is Delay When Entering/Leaving</u></p>
Chime on opening	<p>When enabled, the siren beeps 1 to 4 times to indicate that opening detectors in the Disarmed system mode were triggered.</p> <p>The feature is available for StreetSiren with firmware version 3.73.1.0 and later</p> <p><u>What is Chime</u> <u>How to set up Chime</u></p>
Beep volume	<p>Selecting the volume level of the siren at the time of notification on arming/disarming or delay when entering/leaving and opening:</p> <ul style="list-style-type: none"> • Quiet – 85 dB volume • Loud – 100 dB volume

- **Very loud** – 113 dB volume

The volume level was measured 1 m away from the siren

Setting up the processing of detector alarms

Through the Ajax app, you can configure which detector alarms can activate the siren. This can help to avoid situations when the security system notifies of LeaksProtect detector alarm or any other device alarm. The parameter is adjusted in the detector or device settings:



1. Sign in to the Ajax app.
2. Go to the **Devices**  menu.
3. Select the detector or device.
4. Go to its settings  and set the necessary parameters for activating the siren.

Setting the tamper alarm response

The siren can respond to the tamper alarm of devices and detectors. The option is disabled by default. Note that the tamper reacts to the opening and closing of the body even if the system is not armed!

What is a tamper



For the siren to respond to tamper triggering, in Ajax app:

1. Go to the **Devices**  menu.
2. Select the hub and go to its settings .
3. Select the **Service** menu.
4. Go to **Siren Settings**.
5. Enable the **Alert with a siren if the hub or detector lid is open** option.

Setting the response to pressing the panic button in the Ajax app

The siren can respond to pressing the panic button in Ajax apps. Note that the panic button can be pressed even if the system is disarmed!

For the siren to respond to pressing the panic button:

1. Go to the **Devices**  menu.
2. Select the hub and go to its settings .
3. Select the **Service** menu.
4. Go to **Siren Settings**.
5. Enable the **Alert with a siren if in-app panic button is pressed** option.

Setting the siren after-alarm indication



The siren can inform about triggerings in armed system by means of LED indication.

The option functions as follows:

1. The system registers the alarm.
2. The siren plays an alarm (duration and volume depend on settings).
3. The lower right corner of the siren LED frame blinks twice (about once every 3 seconds) until the system is disarmed.


Thanks to this feature, system users and security companies patrols can understand that the alarm has occurred.



The siren after-alarm indication does not work for always active detectors, if the detector was triggered when the system was disarmed.

To enable the siren after-alarm indication, in [Ajax PRO app](#):

1. Go to siren settings:

- Hub → Settings  → Service → Siren Settings

2. Specify what events the sirens will inform about by double blinking before the security system is disarmed:

- Confirmed intrusion/hold-up alarm
- Single intrusion/hold-up alarm
- Lid opening

3. Select the sirens needed. Go back to **Siren Settings**. The set parameters will be saved.

4. Click **Back**. All values will be applied.



StreetSiren with firmware version 3.72 and later supports this function.

How to set Chime

Chime is a sound signal that indicates the triggering of the opening detectors when the system is disarmed. The feature is used, for example, in stores, to notify employees that someone has entered the building.



Notifications are configured in two stages: setting up sirens and setting up opening detectors.

[Learn more about Chime](#)



Chime is supported by StreetSiren with firmware version 3.73.1.0 and later.

Siren settings



1. Go to the **Devices**  menu.
2. Select the siren.
3. Go to its settings by clicking the gear icon  in the upper right corner.
4. Go to the **Beeps Settings** menu.
5. Scroll down and enable the **Chime on opening** option in the **Beep when disarmed** category.
6. Set the volume of the notifications. 3 options are available:
 - Quiet (85 dB at a distance of 1 m).
 - Loud (100 dB at a distance of 1 m).
 - Very loud (113 dB at a distance of 1 m).



The specified **Beep volume** also applies to the volume of siren notifications when arming/disarming and for the entry/exit delays.

7. Click **Back** to save the settings.
8. Repeat steps 2–7 for other sirens on which you want to enable the notifications.

Detectors settings

1. Go to the **Devices**  menu.
2. Select the detector.
3. Go to its settings by clicking the gear icon  in the upper right corner.
4. Go to the **Chime Settings** menu.

5. Select the events to be notified by the siren:

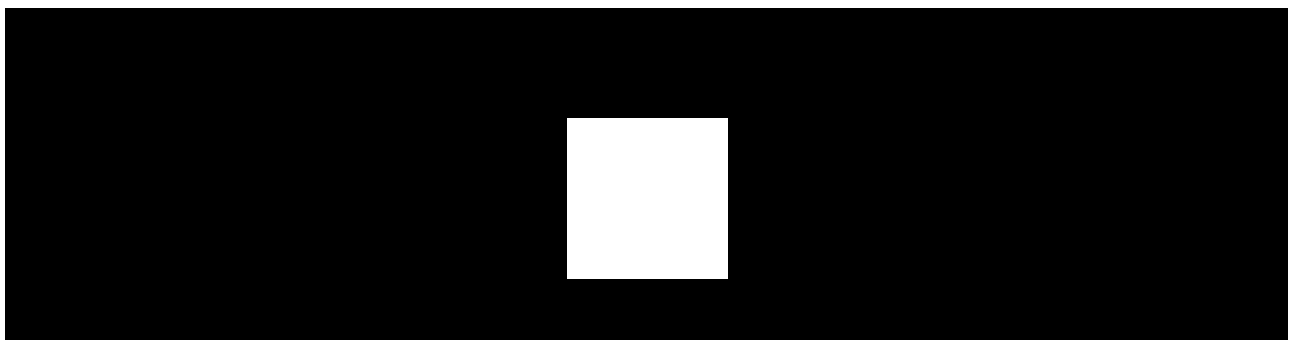
- If a door or a window is open.
- If an external contact is open (available if the External Contact option is enabled).

6. Select the chime sound (siren tone): 1 to 4 short beeps. Once selected, the Ajax app will play the sound.

7. Click **Back** to save the settings.

8. Repeat steps 2–7 for other detectors on which you need to enable the notifications.

Indication



00:00

00:06

Event	Indication
Alarm	Emits an acoustic signal (the duration depends on the settings) and the LED frame blinks red
An alarm was detected in the armed system (if after-alarm indication is enabled)	The siren LED frame blinks red twice in the lower right corner about every 3 seconds until the system is disarmed. The indication turns on after the siren has completely played the alarm signal configured in settings
Switching on	The LED frame blinks once
Switching off	The LED frame lights up for 1 second, then blinks three times

Registration failed	The LED frame blinks 6 times in the corner then full frame blinks 3 times and the siren switches off
Security system is armed (if indication activated)	The LED frame blinks one time and the siren emits a short sound signal
Security system is disarmed (if the indication is activated)	The LED frame blinks two times and the siren emits two short sound signals
The system is armed (if the indication is on)	<p>No external power supply</p> <ul style="list-style-type: none"> The LED in the lower right corner lights up with a pause of 3 seconds <p>External power connected</p> <ul style="list-style-type: none"> If the firmware version is 3.41.0 or higher: the LED in the lower right corner is on continuously If the firmware version is lower than 3.41.0: the LED in the lower right corner lights up with a pause of 3 seconds
Low battery	The LED frame corner lights up and goes out when the system is armed/disarmed, the alarm goes off, in case of dismantling or unauthorized opening

Performance Testing

The Ajax system allows conducting tests for checking the functionality of connected devices.

The tests do not start straight away but within a period of 36 seconds when using the standard settings. The test time start depends on the settings of the detector polling period (the **Jeweller** menu settings in hub settings).

Volume Level Test

Jeweller Signal Strength Test

Attenuation Test

Installing



The location of the siren depends on its remoteness from the hub, and obstacles hindering the radio signal transmission: walls, floors, large objects.



Check the Jeweller signal strength at the installation location

If the signal level is low (one bar), we cannot guarantee stable operation of the device. Take all possible measures to improve the quality of the signal. At least, move the siren: even a 20 cm shift can significantly improve the quality of signal reception.

If the device has low or unstable signal strength even after moving, use a [radio signal range extender](#).

StreetSiren is protected from dust/moisture (IP54 class), which means it can be placed outdoors. The recommended installation height is 2.5 meters and higher. Such a height hinders access to the device for intruders.

When installing and using the device, follow the general electrical safety rules for electrical appliances, as well as the requirements of regulatory legal acts on electrical safety.



It is strictly prohibited to disassemble the device under voltage! Do not use the device with a damaged power cord.

Mounting

Before mounting StreetSiren, make sure that you have selected the optimal location and it is in compliance with the guidelines of this manual!



Installation process

1. If you are going to use an external power supply (12 V), drill a hole for the wire in SmartBracket. Before installation, make sure that the wire insulation is not damaged.



You need to drill a hole in the mounting panel to lead out the external power supply wire.

2. Fix SmartBracket to the surface with bundled screws. If using any other attaching hardware, make sure that they do not damage or deform the panel.



Using the double-sided adhesive tape is not recommended either for a temporary nor permanent fixing.

3. Put StreetSiren on the SmartBracket panel and turn it clockwise. Fix the device with a screw. Fixing the siren to the panel with a screw makes it difficult for intruders to remove the device quickly.

Do not install the siren:

1. near metal objects and mirrors (they can interfere with the RF signal and cause it to fade);
2. in the places where its sound can be muffled;
3. closer than 1 m from the hub.

Maintenance

Check the operational capability of StreetSiren regularly. Clean the siren body from dust, spider web, and other contaminants as they appear. Use a soft dry napkin suitable for tech equipment.

Do not use any substances containing alcohol, acetone, gasoline, and other active solvents to clean the device.

StreetSiren can operate up to 5 years from pre-installed batteries (with the detector ping interval of 1 minute) or approximately 5 hours of constant signaling with buzzer. When the battery is low, the security system notifies the user, and the LED frame corner smoothly lights up and goes out when arming/disarming or when the alarm goes off, including dismounting or unauthorized opening.

How long Ajax devices operate on batteries, and what affects this

Battery Replacement

What affects battery life in StreetSiren and how to extend it

Tech specs

Type of notification	Sound and light (LEDs)
Sound notification volume	85 dB to 113 dB at a distance of 1 m (adjustable)
Operating frequency of the piezo annunciator	3.5 ± 0.5 kHz
Protection against dismounting	Accelerometer
Radio communication protocol	Jeweller Learn more
Radio frequency band	866.0 – 866.5 MHz 868.0 – 868.6 MHz 868.7 – 869.2 MHz 905.0 – 926.5 MHz 915.85 – 926.5 MHz 921.0 – 922.0 MHz Depends on the region of sale.
Compatibility	Operates with all Ajax hubs , and radio signal range extenders
Maximum RF output power	Up to 25 mW
Modulation of the signal	GFSK
Radio signal range	Up to 1,500 m (any obstacles absent) Learn more
Power supply	4 × CR123A, 3 V
Battery life	Up to 5 years
External supply	12 V, 1.5 A DC
Body protection level	IP54
Installation method	Indoors/outdoors
Operating temperature range	From -25°C to +50°C
Operating humidity	Up to 95%
Overall dimensions	200 × 200 × 51 mm
Weight	528 g
Service life	10 years

Compliance with standards

Complete Set

1. StreetSiren
2. SmartBracket mounting panel
3. Battery CR123A (pre-installed) – 4 pcs
4. Installation kit
5. Quick start guide

Warranty

Warranty for the Limited Liability Company “Ajax Systems Manufacturing” products is valid for 2 years after the purchase and does not apply to the pre-installed battery.

If the device does not work correctly, you should first contact the support service – in half of the cases, technical issues can be solved remotely!

[The full text of the warranty](#)

[User Agreement](#)

Technical support: support@ajax.systems

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