

GlassProtect User manual

Updated October 18, 2019



GlassProtect is a wireless detector detecting glass break at a distance up to 9 meters. It is used inside premises, can operate up to 7 years from a pre-installed battery and is furnished with a socket for connecting an additional detector.

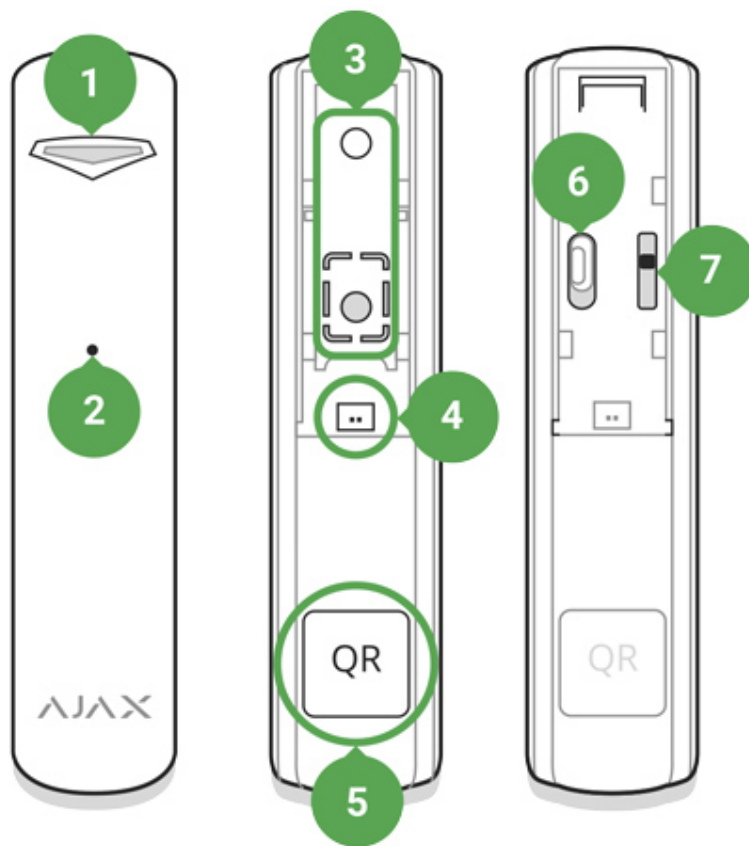
GlassProtect operates within the Ajax security system, by connecting via the protected Jeweller protocol to the hub. Communication range – up to 1,000 m, absent any obstacles. In addition, the detector can be used as part of third-party security central units due to the uartBridge or ocBridge Plus integration module.

The detector is set up via a mobile application for iOS and Android-based smartphones. The user is notified of all events through push notifications, SMS messages and calls (if activated).

The Ajax security system is self-sustaining, but the user can connect it to the central monitoring station of a private security company.

[Buy breakage detector GlassProtect](#)

Functional elements



1. Light indicator
2. Microphone hole
3. SmartBracket attachment panel (perforated part is required for actuating the tamper in case of any attempt to tear off the detector from the surface. Don't break it off!)
4. External detector connection socket
5. QR code
6. Device switch
7. Tamper button

GlassProtect Operating Principle

GlassProtect is furnished with a sensitive electret microphone and set up to detect the distinctive sound of broken glass, consisting of a low-frequency hit and high-frequency tinkle of chips. Due to the two-stage glass break detection, the risk of false actuation is minimal.

GlassProtect detector will not react to breaking if a film has been applied the glass: shockproof, sunscreen, decorative or other. In order to detect the breaking of this type glass, we recommend using a [DoorProtect Plus](#) wireless opening detector with shock and tilt sensor.

After actuation, the GlassProtect detector set in the intrusion detection mode immediately transmits an alarm signal to the [hub](#), activating the [sirens](#) connected to the hub and notifying the user and private security company.

Connecting the Detector to the Ajax Security System

Detector Connection to hub

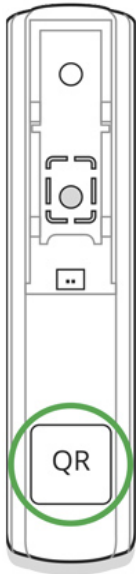
Before starting connection:

1. Following the hub instruction recommendations, install the [Ajax application](#) on your smartphone. Create an account, add the hub to the application, and create at least one room.
2. Go to the Ajax application.
3. Switch on the hub and check the internet connection (via Ethernet cable and/or GSM network).
4. Ensure that the hub is disarmed and does not start updates by checking its status in the mobile application.

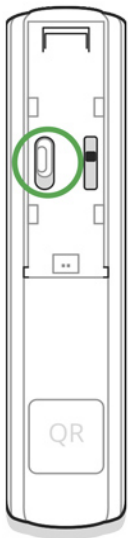
Only users with administrative privileges can add the device to the hub

How to connect the GlassProtect to the hub:

1. Select the **Add Device** option in the Ajax application.
2. Name the device, scan/write manually the **QR Code** (located on the body and packaging), and select the location room.



3. Select **Add** — the countdown will begin. Switch on the device.



For the detection and interfacing to occur, the detector should be located within the coverage area of the wireless network of the hub (at a single protected object).

Request for connection to the hub is transmitted for a short time at the time of switching on the device.

If the connection to the Ajax hub failed (LED blinks once per second), switch off the detector for 5 seconds and repeat the attempt. The detector connected to the hub will appear in the list of devices of the hub in the application. Update of the detector statuses in the list depends on the device inquiry time set in the hub settings, with the default value – 36 seconds.

Connecting the Detector to Third Party Security Systems

To connect the detector to a third party security central unit using the uartBridge or ocBridge Plus integration module, follow the recommendations in the manual of the respective device.

States

1. Devices
2. GlassProtect

< Back

Glass



T	Temperature	~27 °C
	Signal Strength	
🔋	Battery Charge	100%
🔒	Lid	Closed
🕒	Delay When Entering, sec	Disabled
🕒	Delay When Leaving, sec	10 sec
📶	Connection	Online

< Back

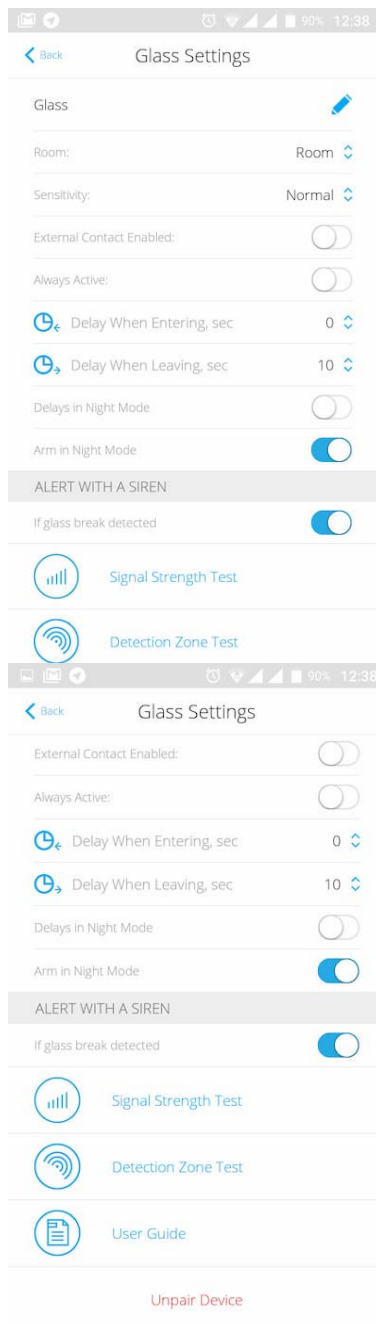
Glass

	Signal Strength	
🔋	Battery Charge	100%
🔒	Lid	Closed
🕒	Delay When Entering, sec	Disabled
🕒	Delay When Leaving, sec	10 sec
📶	Connection	Online
📶	Sensitivity	Normal
🔊	Secondary Detector	Disabled
🕒	Always Active	No

Parameter	Value
Temperature	Temperature of the Detector. Measured on the processor and changes gradually
Signal Strength	Signal strength between the hub and the detector
Battery Charge	Battery level of the detector, displayed in increments of 25%
Lid	The tamper mode of the detector, which reacts to the detachment of or damage to the body
Delay when entering, sec	Delay time when entering. The option is available only with a connected wired detector.
Delay when leaving, sec	Delay time when exiting. The option is available only with a connected wired detector.
Connection	Connection status between the hub and the detector
Sensitivity	Sensitivity level of the sensor
Secondary detector	Status of the external detector connected to GlassProtect
Always Active	If active, the detector is always in the armed mode
Firmware	Detector firmware version
Device ID	Device identifier

Setting Up the Detector

1. Devices
2. GlassProtect
3. Settings



Setting	Value
First field	Detector name, can be edited
Room	Selecting the virtual room to which the device is assigned
Sensitivity	Choosing the sensitivity level of glass break detector: High Normal Low
External contact enabled	If active, the detector registers external detector alarms
Always active	If active, the detector always registers glass breakage
Delay when entering, sec	Selecting delay time when entering. The option is available only with a connected wired detector.
Delay when leaving, sec	Selecting delay time on exit. The option is available only with a connected wired detector.
Delays in night mode	Delay turned on when using night mode
Arm in night mode	If active, the detector will switch to armed mode when using night mode
Alert with a siren if glass break detected	If active, <u>HomeSiren</u> and <u>StreetSiren</u> are activated when the glass break detected
Activate the siren if an additional contact is open	If active, HomeSiren and StreetSiren are activated during an external detector alarm
Signal Strength Test	Switches the detector to the signal strength test mode
Detection Zone Test	Switches the detector to the detection area test
Attenuation Test	Switches the detector to the signal fade test mode (available in detectors with firmware version 3.50 and later)
User Guide	Opens the detector User Guide
Unpair Device	Disconnects the detector from the hub and deletes its settings

Indication

Event	Indication	Note
Turning on the detector	Lights up green for about one second	
Detector connection to the <u>hub</u> , <u>ocBridge</u> and <u>uartBridge</u>	Lights up continuously for a few seconds	
Alarm / tamper activation	Lights up green for about one second	Alarm is sent once in 5 seconds
Battery needs replacing	During the alarm, it slowly lights up green and slowly goes out	Replacement of the detector battery is described in the Battery Replacement paragraph

Functionality testing

The Ajax security 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 scanning period (the paragraph on “**Jeweller**” settings in hub settings).

Signal Strength Test

Detection Zone Test

Attenuation Test

Detector functionality testing

Having defined the location of the detector and having fixed the device with a bundled adhesive tape, test the detection zone.

The GlassProtect detector is not sensitive to any pops!

Glass break sensor testing

Hit hard on the glass by your fist without breaking it! If the detector microphone catches a low-frequency sound, the LED will blink. Simulate a high-frequency glass break sound during 1.5 seconds after the first hit – by a special instrument or by hitting on a glass with a metal object. After reading out the sound, the detector will extinguish the LED for a second.

In armed mode, to be actuated, the detector needs to catch sounds in the following sequence: low-frequency sound (hit), then high-frequency sound (glass break, chips). Otherwise, the alarm will not be actuated.

Switch on/off all the equipment usually operating within the room: generators, air conditioning units, etc. If the detector is actuated, it means that too high sensitivity is set or the location of the GlassProtect needs to be changed.

Use the sensitivity level, at which the detector properly passes both test stages and does not respond to any equipment operating within the room.

After setting the system in the armed mode, conduct a checkup operational test of the GlassProtect.

Installing the device

Selecting an installation location

In some cases, the household activity can cause false alarms

Location of the GlassProtect detector determines its remoteness from the hub and presence of any obstacles between the devices hindering the radio signal transmission: walls, inserted floors, large-size objects located within the room.

Check the signal level at the installation location

If the signal level is one division, we cannot guarantee stable operation of the security system. Take possible measures to improve the quality of the signal!

As a minimum, move the device – even 20 cm shift can significantly improve the quality of reception.

If, after moving, the device still has a low or unstable signal strength, use a radio signal range extender ReX.

Do not install the detector:

1. outside the premises (outdoors)
2. nearby sirens and annunciators
3. nearby any metal objects or mirrors causing attenuation and screening of the signal
4. at any places with fast air circulation (air fans, open windows or doors)
5. within any premises with the temperature and humidity beyond the range of permissible limits
6. closer than 1 m from the hub.

The GlassProtect detector detects glass break at a distance up to 9 meters. Its microphone should be positioned at the angle no more than 90 degrees relative to the window(s).

Make sure that any curtains, plants, furniture or other objects do not overcover the microphone opening.

If the window is covered by thick curtains, place the detector between them and the window. For example, at the window jamb. Otherwise, the curtains may drown glass break sound and the detector will not be actuated.

Detector installation process

Before installing the detector, make sure that you have selected the optimal location and it is in compliance with the guidelines contained in this manual!

1. Fix the SmartBracket attachment panel of the detector using bundled screws. If using any other attachment hardware, make sure that they do not damage or deform the panel.

The double-sided adhesive tape may be only used for temporary attachment of the detector. The tape will run dry in course of time, which may result in falling of DoorProtect and actuation of the security system. Furthermore, the device may fall from a hit.

2. Put the detector on the attachment panel. As soon as the detector is fixed in SmartBracket, it will blink with a LED – this will be a signal that the tamper on the detector is closed.

If the light indicator of the detector is not actuated after installation in SmartBracket, check the status of the tamper in the Ajax Security System application and then the fixing tightness of the panel.

If the detector is torn off from the surface or removed from the attachment panel, you will receive the notification.

Connecting a Wire Detector

A wire detector with an NC type contact may be connected to the GlassProtect using an outside-mounted terminal clamp.



We recommend to install the wire detector at a distance not exceeding 1 meter – increasing the wire length will increase the risk of its damage and reduce the quality of communication between the detectors.

To lead out the wire from the detector body, break out the plug:



If the external detector is actuated, you will receive the notification.

Detector Maintenance and Battery Replacement

Check the operational capability of the GlassProtect detector on a regular basis.

Clean the detector body from dust, spider web and other contaminations as they appear. Use soft dry napkin suitable for equipment maintenance.

Do not use for cleaning the detector any substances containing alcohol, acetone, gasoline and other active solvents

The battery installed in the detector ensures up to 7 years of autonomous operation (with the inquiry frequency by the hub of 5 minutes). If the detector battery is discharged, the user will receive a notice, and the LED will smoothly light up and go down if glass breakage is detected or tamper is actuated.

As soon as the battery charge reaches 10 % level, the application will immediately inform you of the need to replace the batteries.

Battery Replacement

Tech specs

Sensitive element	Electret microphone
Glass break detection distance	Up to 9 m
Microphone coverage angle	180°
Tamper protection	Yes
Frequency band	868.0 – 868.6 MHz or 868.7 – 869.2 MHz depending on the region of sale
Compatibility	Operates with Hub , Hub Plus , Hub 2 , ReX , ocBridge Plus , uartBridge
Maximum RF output power	Up to 20 mW
Radio signal modulation	GFSK

Radio signal range	Up to 1,000 m (any obstacles absent)
Socket for connecting wire detectors	Yes, NC
Power supply	1 battery CR123A, 3 V
Battery life	Up to 7 years
Operating temperature range	From -10°C to +40°C
Operating humidity	Up to 75%
Overall dimensions	Ø 20 x 90 mm
Weight	30 g
Certification	Security Grade 2, Environmental Class I in conformity with the requirements of EN 50131

Complete Set

1. GlassProtect
2. SmartBracket mounting panel
3. Battery CR123A (pre-installed)
4. Outside-mounted terminal clamp
5. Installation kit
6. Quick Start Guide

Warranty

Warranty for the “AJAX SYSTEMS MANUFACTURING” LIMITED LIABILITY COMPANY 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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