MotionProtect / MotionProtect Plus User Manual

MotionProtect is a wireless motion detector designed for indoor use. It can operate for up to 5 years from the pre-installed batteries. It detects intruders within 12 meters radius. MotionProtect ignores pets weighing up to 38 kilograms and small fast flying objects.

MotionProtect Plus uses radio frequency scanning along with a thermal sensor, filtering interference from thermal radiation. It can operate up to 8 years from our batteries.

Buy motion detector with dimmer sensor MotionProtect Plus

MotionProtect / MotionProtect Plus operates within the Ajax security system, connected to the hub via secure wireless communication. The maximum range of communication is 1,700 meters (MotionProtect Plus) or 1,200 meters (the rest of Ajax devices) on the open area. Jamming and spoofing protection ensure the Ajax jeweller or Ajax jeweller Plus integration modules.

The detector can be set to the Ajax security hub, hubs with Ajax security hub and Ajax security hub plus, and Ajax PRO series devices. The system supports up to 100 detectors.

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

Buy motion detector MotionProtect

Functional Elements

1. LED indicator
2. Motion detector lens
3. Anti-sabotage attachment panel (pre-broken) part is required for uninstalling the tamper in case of any attempt to dismantle the detector.
4. Fixing holes
5. Sensor switch
6. QR code

Operating Principle

Once the PIR sensor of MotionProtect detects intrusion (no protection from by detecting moving objects whose temperature is close to the temperature of the human body), Frequency the detector can ignore domestic animals if the suitable sensitivity has been chosen in the settings.

When the MotionProtect Plus detects motion, it will additionally carry out radio frequency scanning of the room, processing the collected information. MotionProtect or MotionProtect Plus can ignore small fast flying objects, such as insects, flying less than 12 cm per second.

After activation, the period detector immediately transmits an alarm signal to the hub, activating the sirens and notifying user and security company.

If jamming is detected, operate, the detector has detected motion, it will send an immediately, but during the next hub polling the hub.

Connecting the Detector to the Ajax Security System

Connecting the Detector to the hub

Before starting connection:

- If disabling the hub manual accommodations, install the Ajax application. Create an account, add the hub to the application, and create at least one room.
- Switch on the hub and check the Internet connection (via Ethernet or cellular GSM network).
- Make sure that the hub is deactivated and does not update by checking its status in the app.

⚠ Only qualified installers can add a security system to the network.

How to connect the detector to the hub:

1. Select the **Add Device** option in the Ajax application.
2. Name the detector, scan or enter manually the **QR Code** located on the body and packaging and select the location room.

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

If a detection and pairing is successful, the detector should be installed within the coverage of the wireless network of the hub (in a single protected object).

Request for connection to the hub is considered failed if at the time of connection of pairing on the device.

If the detector failed to connect to the hub, switch off the detector for 5 seconds and retry.

The connected detector will appear in the devices list in the application. Update of the detector status in the list depends on the device frequency time and the hub configuration (default is 36 seconds).

Connecting the Detector to Third Party security systems

To connect the detector to a third party security central unit with the **jeweller** or **jeweller Plus** integration module, follow the recommendations in the manuals of these devices.

States

1. Devices
2. Select device **MotionProtect Plus**

Parameter	Value
Temperature	Temperature of the detector. Measured by the temperature sensor integrated into the detector.
Jeweller Signal Strength	Signal strength between the hub and the detector
Jeweller Firmware	Current firmware version of the detector
Battery Charge	Battery level of the detector. Displayed in increments of 5 percent
Lid	The status of the tamper button, which reacts to the detachment of a detector or damage to its body.
Delay When Entering, sec	Time of the entry delay of the detector
Delay When Leaving, sec	Time of the exit delay of the detector
Motion	Displays the status of using the PIR sensor and motion detection
Temperature	Switching the sensor temperature
Video edition	If active, the detector detection is changed to the alarm mode
Jeweller Signal Strength	Jeweller Signal Strength
Jeweller Firmware	Jeweller Firmware
Battery Charge	Battery Charge

Settings

1. Devices
2. Select device **MotionProtect Plus**
3. Settings ⚙

Setting	Value
Room	Selection of the room to which the device is assigned
Delay When Entering, sec	Selection of the entry delay time. The delay is scheduled when the security system is armed in the stay mode
Delay When Leaving, sec	Selection of the exit delay time
Video edition	Delay is scheduled when alarm signal is sent
Alarm LED indication	If active, the detector LED indicator will indicate the alarm. The LED will blink three times every 3 seconds
Sensitivity	Choosing the sensitivity level of the motion sensor. **Low Motion** **High** – the sensitivity with a minimum amount of detections. Suitable for a large room with pets. **Medium** – the standard and recommended sensitivity. Suitable for most indoor conditions. **Low** – the sensitivity with a maximum amount of detections. Suitable for a small room with demanding conditions.
Anti-masking	Enabling/disabling the anti-masking function.
Jeweller Settings	Choosing the Jeweller signal sensitivity and transmission pulses.
Jeweller Signal Strength Test	Switching the device to the Jeweller signal strength test mode
Attenuation Test	Switching the device to the attenuation test mode
Jeweller Settings	Jeweller Settings
Jeweller Signal Strength Test	Jeweller Signal Strength Test
Attenuation Test	Attenuation Test
Sensitivity	Sensitivity
Anti-masking	Anti-masking
Jeweller Settings	Jeweller Settings
Jeweller Signal Strength Test	Jeweller Signal Strength Test
Attenuation Test	Attenuation Test
Ajax Motion	Ajax Motion

Which ones the detection is such of the security system, and the detector is installed.

Control the **always active** If the detector is installed in a room supporting Ultrasonic curtains Regardless of whether the system is set to the arm mode, you will receive notices of any detected motion.

If any is detected, the detector transmits the LED for 1 second and transmits an alarm signal to the hub and notifies the user and security monitoring station (if it is connected).

Detector operation indication

Event	Indication	Note
Turning on the detector	Lights up green for about one second	
Successful connection to the hub	Lights up for about one second	
Failed to connect to the hub	Lights up red for about one second	Make sure it is within the coverage area of the hub.
Motion sensor calibrating	Flashes three times green and goes out for 30 seconds	Takes place when the detector is switched on. Not intended for installation.
Motion sensor calibrating	Flashes green	Measurement of the detector's temperature and radio frequency background is in progress. Not intended for installation.

Detector Testing

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

The tests do not start immediately but within a period of 36 seconds when using the default settings. The time of the start depends on the settings of the detector polling period (the parameter of **Jeweller** settings in the hub settings).

Jeweller Signal Strength Test

Attenuation Test

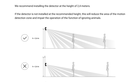
Alternative test

Device Installation

Selection of the Detector Location

The installation place and the efficiency of the security system depends on the location of the detector.

Location of MotionProtect depends on the connections from the hub and presence of any obstacles between the detector blocking the radio signal transmission: walls, inserted floors, large size objects located within the room.



⚠ Avoid the direction of the detector's view towards windows and doors, illuminated by direct sunlight. This may cause false alarms when the weather changes affects the sensor's field of view.

If after moving the device will low or or unstable signal strength, use the hub's **Jeweller signal strength**.

⚠ Recommended that the device be at a distance of at least 1 meter from the hub.

Make sure that only furniture, domestic plants, insects, decorations or glass structures do not block the field of view of the detector.

We recommend installing the detector at the height of 2.4 meters.

If the detector is not installed on the recommended height, the efficiency for area of the motion detection zone and impact the operation of the function of opening sensitivity.

Installation of the Detector

⚠ Before installing the detector, ensure that it has the maximum signal strength in the place of installation, as well as the absence of any interference in the area. If the signal is unstable, we recommend changing the installation place. The device can be installed only on solid surfaces.

The Ajax MotionProtect detector (**MotionProtect Plus**) should be attached to a vertical surface, at or the corner.

1. Attach the SmartBracket panel to the surface using bundled screws, using at least two fastening points. Make sure that the panel is fixed firmly in order to exclude any shifting. Use the bundled double-sided tape if there are any doubts in the fixing strength.

⚠ Do not damage the panel, which will be used for the detector's attachment, when drilling holes. Check the absence of any wires or cables behind the surface of installation. Do not place the detector outside the premises. Do not place the detector near any metal objects and in zones with weak signal strength.

2. Put the detector on the attachment panel. When the detector is fixed in the SmartBracket, it will flash with the LED indicator once, which is a signal of successful installation.

If the LED indicator of the detector is not lit or constantly lit after installation on the SmartBracket, check the tightness 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 fixing panel or removed from the attachment panel, you will receive a notification.

Do not install the detector:

1. Outside the premises (outdoors).
2. In the premises of the building, where the detector has to respond to direct sunlight (Ajax jeweller **MotionProtect Plus**).
3. Opposite any glass with the reflective coating (including temperate e.g., electrical wire) gas pipelines, and other metal structures.
4. Opposite any moving objects with a temperature close to that of the human body (conditioning systems (blower the radiators) (Ajax jeweller **MotionProtect Plus**).
5. In any places with high air circulation (air fans, open windows or doors) (Ajax jeweller **MotionProtect Plus**).
6. Inside any metal cabinet or mirrors (causing attenuation and screening of the signal).
7. Within any premises with the temperature and humidity beyond the range of permissible limits.
8. Closer than 1 m from the hub.

Detector Maintenance

Check the operational capability of the Ajax MotionProtect detector on a regular basis.

To remove any substances covering detector, sources, greasers and other series remains for the sensor, wipe the body of the detector with a soft dry cloth. Do not use any substances containing solvents, alcohol or other chemicals.

The pre-installed batteries ensure up to 5 years of autonomous operation (with the mostly favourable settings). If the battery is discharged, the system will send a notification and the detector will indicate a low battery level. Replace the batteries quickly as soon as it. We always recommend using motion or video verification services.

Technical Specifications

Tech specs

Operation protocol	100 protocol **MotionProtect Plus**: Ajax proprietary protocol
Motion detection distance	Up to 12 m **Up to 10 m**
Motion detection viewing angle (PIR)	85° / 58° **Up to 110° in 15 m radius**
Frequency bands	**Ajax Motion detectors (not in Lithuania and Russia in 868.0 - 868.2 MHz)**
Tamper protection	Yes
Frequency hopping	868.0 - 868.2 MHz or 868.7 - 869.2 MHz depending on the region
Compatibility	**Hub with firmware OS Malevich 2.15 or later** **Hub Plus** **Ajax jeweller or Ajax jeweller Plus integration module**
Maximum RF output power	Up to 20 mW
Modulation of the radio signal	GFSK
Radio signal range	Up to 1700 m (in a direct line of sight) **MotionProtect Plus** up to 1200 m
Power supply	1 battery CR123A, 3 V
Battery life	Up to 5 years
Operating temperature range	From -10°C to +40°C
Operating humidity	Up to 75%
Overall dimensions	110 x 65 x 50 mm
Weight	**MotionProtect**: 86 g **MotionProtect Plus**: 103 g
Complete set	Motion Protect (Black or White) / MotionProtect Plus (Black or White) SmartBracket panel (perforated), 2 CR123A batteries, installation kit, quick start guide

Complete Set

1. MotionProtect (**MotionProtect Plus**)
2. SmartBracket mounting panel
3. Battery CR123A (pre-installed)
4. Installation kit
5. Quick Start Guide

Warranty

Warranty for "LLC AJAX SYSTEMS MANUFACTURING" LIMITED LIABILITY COMPANY products is valid for 2 years after the purchase and does not apply to the pre-installed batteries.

If the device does not work correctly, you should first contact the support service - most of the technical issues can be resolved remotely! Warranty obligations are fulfilled remotely.

⚠ The full text of the warranty

⚠ User Agreement

Technical support: support@ajax.systems

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