

# PRODUCT TEST

## Ajax Professional Alarm System



Smartphone setup, management and monitoring along with extended battery life mean that the system is easy to install and use



The Ajax alarm system is a wireless based EN50131 Grade 2 range of components that can be mixed and matched to suit a variety of home and office environments. Components are available in white or black finish to suit the décor of the site. Smartphone setup, management and monitoring along with extended battery life mean that the system is easy to install and use. With a broadband primary link and cellular secondary path available the system can be personally monitored or linked to a central station monitoring service.

### Getting started

The system can be purchased in several ways. As a basic starter kit with a small number of detectors, one of a variety of medium starter kits or as individual devices. The system is based around the owner's smartphone and this is used for all installation parameters and configuration. Alternatively, the system can be configured by an installer and remotely managed if required.

Communication between devices is by wireless link and is referred to as "Jeweller" radio technology with a free-space range of up to 2000 metres for most devices, though in building use will significantly reduce this.

All devices have batteries pre-installed and these are generally stated to have an operational life of between 3 and 7 years.

The Smartphone App can be downloaded from the relevant store for Android (4.1+) or iOS (9+). Once you run the software you are requested to establish an Ajax account after accepting its end-user agreement. For security, the sign-up process sends an SMS message to the mobile number and an e-mail to the address you have provided and the two six-digit codes from these messages are used to validate your account.

Once the app is running it is used to add the various devices and additional users to the

system. For first use a "wizard" can be followed to very quickly get things up and running.

### Hardware

Seventeen devices were provided for the test and for simplicity these can be thought of as System, Intrusion detectors, Other detectors, Sirens and Control devices.

**System** – The three System components are the Hub, also known as the Intelligent Control Panel; this is the central device that communicates with all devices on the installed system. It is the only item that must be mains powered though it is supported by internal rechargeable batteries allowing up to 15 hours of operation. The hub has an ethernet connection to the local broadband router for external connection. A SIM can be installed to provide a secondary path in case of network or broadband failure.

A numeric keypad is wall mountable and used to enter keycodes and to set/unset the system.

A "Keyfob" allows for quick setting / un-setting and a panic alarm to be raised.

**Intrusion detectors** – there are two magnetic Door / Window opening detectors named "DoorProtect" and "DoorProtect Plus". The Plus variant has tilt and shock detection in addition to the basic function. Both have a large and alternative small magnet included to give a 1 or 2 cm opening threshold and a connector to take in an additional wired contact.

The motion sensors include a basic indoor PIR "MotionProtect", "Motion Protect Plus" that includes a microwave sensor, "MotionProtect Curtain" that is IP54 rated with a detection angle of 6° x 90°. "CombiProtect" is a PIR with audio glass break detection and "MotionProtect Outdoor" is an IP54 dual PIR with an option for external 12v supply. All PIRs have anti-masking and a reasonable level of pet immunity, with limits of animal height up to 50 cm and weight up to 20 kg for indoor units.

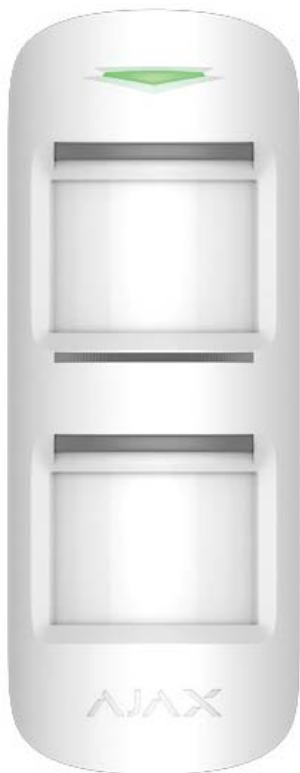
**Other detectors** – "FireProtect" is an optical and temperature sensor with built in sounder that detects smoke and temperature variations. A maximum of 60°C or any increase of more than 30° in less than 30 minutes will trigger an alert. "FireProtect Plus" includes a Carbon Monoxide sensor. Both devices can work autonomously and produce a sound level of 85dB at 3 metres when activated. These devices are produced to comply with EN14604 (Smoke detectors for



### What's in the box?

- The alarm device (see Hardware section)
- Quick Start Guide
- Wall fixings and screws

(continued from p12)



Devices include all necessary screws and fixings including double-sided tape for smaller items if appropriate. PCBs are coated and clearly laid out



**9.5 out of 10**

**NOTE: This PSI Product Test was carried out by an independent third party, not editorial staff. The manufacturer had no input in the review or the final result**

residential properties). The “LeaksProtect” device has four sets of contacts on its base to detect leaks as soon as they occur. These detectors which are always active, can be simply placed at ground level near washing machines and dishwashers or areas at risk of flooding.

**Sirens** – there are two sirens; the indoor “HomeSiren” is a small module that emits a sound from 81dB up to 105dB at 1 metre. 115.1dB was recorded when tested on its “Very Loud” setting. A connector is provided to feed an additional LED indicator if required. The “StreetSiren” is an IP54 version that has an output of up to 113dB at 1 metre, 119.9dB was recorded during testing. This external unit has an optional 12v supply input. The batteries are stated to last for 6 hours continuous alarming and this equates to 120 alarms of 3 minutes so the stated 5 years battery life should be achievable if a low number of alarms are triggered. For this unit it is recommended that the batteries are changed by a service centre.

**Control** – the “Socket” is a wireless adapter for mains powered device control up to 2.5kW. The supplied unit was based on the “Schuko” Type F standard for its plug and socket so while suitable for much of Europe is not UK compatible. It is likely that a UK version will become available. A “Wallswitch” was also provided; this misleading name is for a small mains relay device that can be used to wirelessly switch mains voltage to equipment. It is rated to 3kW but as it is connected by screw terminals should only be installed by suitably competent technicians. The smartphone app provides information on the voltage, current, power demand and use in kWh for these devices.

In addition to the above devices, Ajax also produce a low voltage relay, an audible glass break detector “GlassProtect”, a wireless ranger extender, an “ocBridge” and “uartBridge” for 3rd party system integration and a “Transmitter” for linking an alarm contact and associated tamper signal to the Hub.

Devices include all necessary screws and fixings including double-sided tape for smaller items if appropriate. PCBs are coated and clearly laid out.

The Hub and the wireless range extender are the only items that must be mains powered, and in the case of the test system a power lead with a C7 to Type “C” 2 pin mains plug was supplied. It is likely that future UK units will include a suitable Type “G” plug or adapter.

### Performance

Once installed and configured the system can be set and unset using the keypad, fob or

smartphone app.

The Hub is linked by scanning its QR code or entering its 20-hexadecimal identifier into the app and then all of the devices are simply added in sequence by naming them, entering their location and then they are identified and linked by their QR code or its 9-hex digit reference. In addition to the QR / hex code on the device, labels are also included on the box. Where required devices can be set to always alarm.

Up to 100 devices can be connected to the Hub with a Plus version allowing up to 150. Up to 10 sirens can be included in this number. Up to 50 users can be given user (non-admin) rights.

The Keyfob panic button only requires a single press so is easy to inadvertently trigger, this feature can be disabled if problematic.

The app gives great flexibility in configuration with individual entry and exit delay settings for the majority of devices, signal strength indication and battery status. Diagnostics for engineering tests include walk-testing, signal attenuation, and polling time.

The app links through the Ajax Cloud which is hosted on Amazon’s Web Services network. A Pro app is available for engineering and multi-site management. Links to Central Station Monitoring sites is supported.

All operating manuals are available on-line or via the app. While these are not in pdf downloadable format the content can be pasted into instruction sheets if required. Video clips are provided to support functions such as battery changing.

The system supports groups, for segregating areas of large sites. Geofencing alerts can be set to notify or provide reminders to set / unset alarms. The frequency hopping communication will raise an alarm from the Hub if signal jamming is detected.

Up to ten CCTV camera images can be added for verification purposes using RTSP connection stream or devices from Safire, Dahua or Hikvision.

For such a wireless system, it is essential that someone takes care of system maintenance and monitors its performance over time, but the notifications and event logging greatly simplify this task. Ajax Pro desktop software is available for the management of multiple hubs for engineering use.

### Conclusion

A wide range of detectors and simple set-up process makes for a potentially very quick installation. Good access to diagnostic information for monitoring purposes coupled with relatively straightforward battery changing should simplify system management.