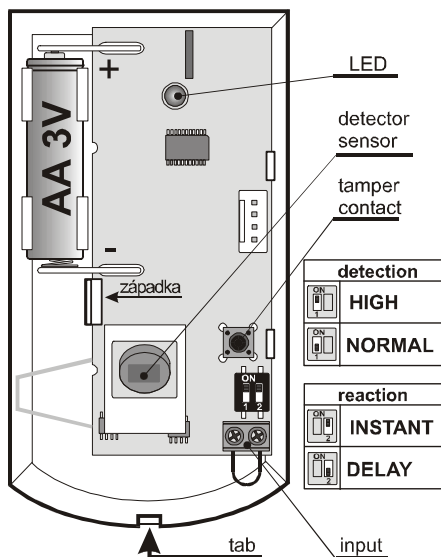# The JA-80P wireless PIR motion detector

The JA-80P is a component of Jablotron's Oasis 80 alarm system. It is designed to detect human body movement inside buildings. The detection pattern can be modified by optional lenses. Detector immunity has two selectable levels. The battery-powered detector communicates via OASIS radio protocol.

Installation

Installation shall only be undertaken by technicians holding a certificate issued by an authorized distributor. The detector can be installed on a flat wall or in the corner of a room. Avoid objects rapidly changing in temperature, such as electrical heaters, gas appliances etc. being positioned within its detection area. Moving objects with a temperature close to that of humans such as curtains moving above a radiator, and pets should also be avoided. Detectors should not face windows or spotlights or be near fast-moving air e.g. near ventilation fans or open windows or doors. There should also be no obstacles blocking the detector's "view" of the protected area. Keep the detector away from metal objects which could interfere with radio communication.

1. **Open the detector cover** by pressing the tab. Avoid touching the internal PIR element or damaging the antenna.
2. **Remove the PCB** which is held by an internal tab.
3. **Punch screw holes through the rear plastic cover.** At least one screw should penetrate the tamper-sensitive section.
4. **Screw the rear cover to the wall,** about 2 metres above the floor (vertically, with the tab down).
5. **Return the PCB** to its original place.
6. **Leave the battery disconnected and the cover open** and then follow the control panel or receiver manual. The basics of enrollment are:
   a. Enter enrollment mode on the control panel by keying in "1" in Service mode.
   b. Install a battery into the detector to activate enrollment.
   c. Exit enrollment mode by pressing "#"

To enroll a detector after having already connected a battery, first disconnect the battery, and press and release the tamper sensor to discharge any remaining charge to ready the device for enrollment. After installing a battery into the detector, allow one minute for stabilisation. During this minute the LED is continuously lit.

DIP switches

NORM / HIGH: selection of **immunity to false alarms**. The NORM position combines very good immunity with fast sensor reactions. The HIGH position gives increased immunity with a slower reaction time and is only used for problematic installations.
Warning: The most frequent cause of false alarms is bad detector positioning.
DEL / INS: DEL provides entrance & exit delays for detectors installed in a building entrance. INS allows the detector to instantly trigger alarm activation if the control panel is armed. This DIP switch (DEL/INS) only has an effect if the **detector has a natural reaction** assigned to it in the Oasis control panel. It also has no effect when used with a UC-8x or AC-8x receiver.

Testing the detector

15 minutes after closing the detector cover, the indicator shows detector activation. The strength and quality of detector signals can be measured by the control panel in Service mode.

5 minutes / 1 minute sleep time

To save battery energy, the detector switches to battery-save mode 15 minutes after its cover is closed. During battery-save mode the detector still always watches out for movement. The first movement detected is then signalled to the control panel instantly, and **for the next 5 minutes the detector ignores** any further **movement**. After these 5 minutes, the detector then returns to watching out for movement until re-triggered. The sleep time can be shortened to 1 minute by pressing the tamper switch during battery installation. Not pressing the tamper switch gives a sleep time of 5 minutes.

Battery replacement

The detector monitors its battery voltage and if too low, a transmission is sent to the control panel to inform the installer or user. The detector continues to function and shows each detected movement with a flash of its LED. Battery replacement should not be delayed by more than two weeks. This should be done by a qualified technician with the control panel in Service mode.
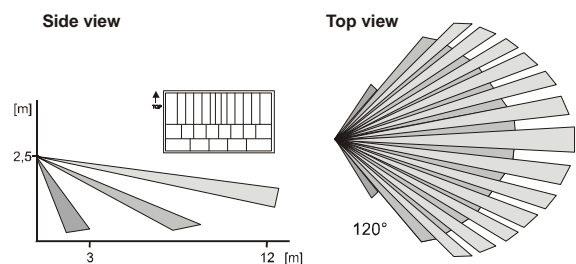*After battery replacement, the detector needs about 60 secs to stabilise during which its LED lights continuously. After the LED has stopped indicating, test the detector's functioning. Expired batteries should not be thrown into the garbage, but disposed of according to local regulations.*

Removing the detector from the system

If a detector is removed, the control panel announces the removal. The detector has to be deleted in the control panel before intentional removal.

Detection characteristics

The default lens supplied covers an angle of 120° and a distance of 12 metres. The area is covered by three beams as shown in the following picture.
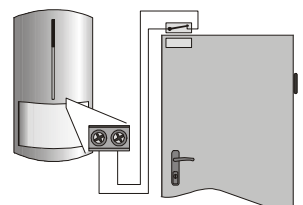

The characteristics can be changed by using optional lenses:

JS-7904	Suitable for long corridors. The middle beam covers 20 meters**.**
JS-7906	Only employs an upper beam with a 120° angle and a 12 metre range. Ignoring the floor eliminates the effect of the movement of small pets.
JS-7901	Has a vertical beam forming a wall-like detection barrier which triggers the detector if someone walks through it.

Note: After changing the lens, test that the desired area is protected. Incorrect installation of the lens can disable detection.

Auxiliary alarm input

There is an input terminal in the detector which, among other things, can be used to detect open doors or windows. Open circuiting the input has the same effect as movement in front of the detector
The maximum allowable cable length to connect a normally-closed sensor to the terminal is 3 metres. Short circuit these terminals if the input is not used.

Technical parameters

Voltage:	*Lithium battery type CR14505 (AA 3.0V)*
Typical battery lifetime:	*approx. 3 years (5 min. sleep mode)*
Communication band:	*868 MHz, Oasis protocol*
Communication range:	*approx. 300m –(open area)*
Recommended installation height:	*2.0 to 2.5 m above floor level*
Detection angle/detection range:	*120°/ 12 m (with basic lens)*
Operational environment according to EN 50131-1	*II.indoor general*
Operational temperature range	*-10 to +40 ℃*
Dimensions	*110 x 60 x 55 mm*

EN 50131-1,CLC/TS 50131-2-2, EN 50131-5-3 classification: grade 2
Complies with ETSI EN 300220, EN 50130-4,EN 55022, EN 60950-1, ANSI C63.4
Can be operated according to ERC REC 70-03, FCC Part 15
FCC ID VL6JA80P

Note: Although this product does not contain any harmful materials we suggest you return the product to the dealer or directly to the producer after use.