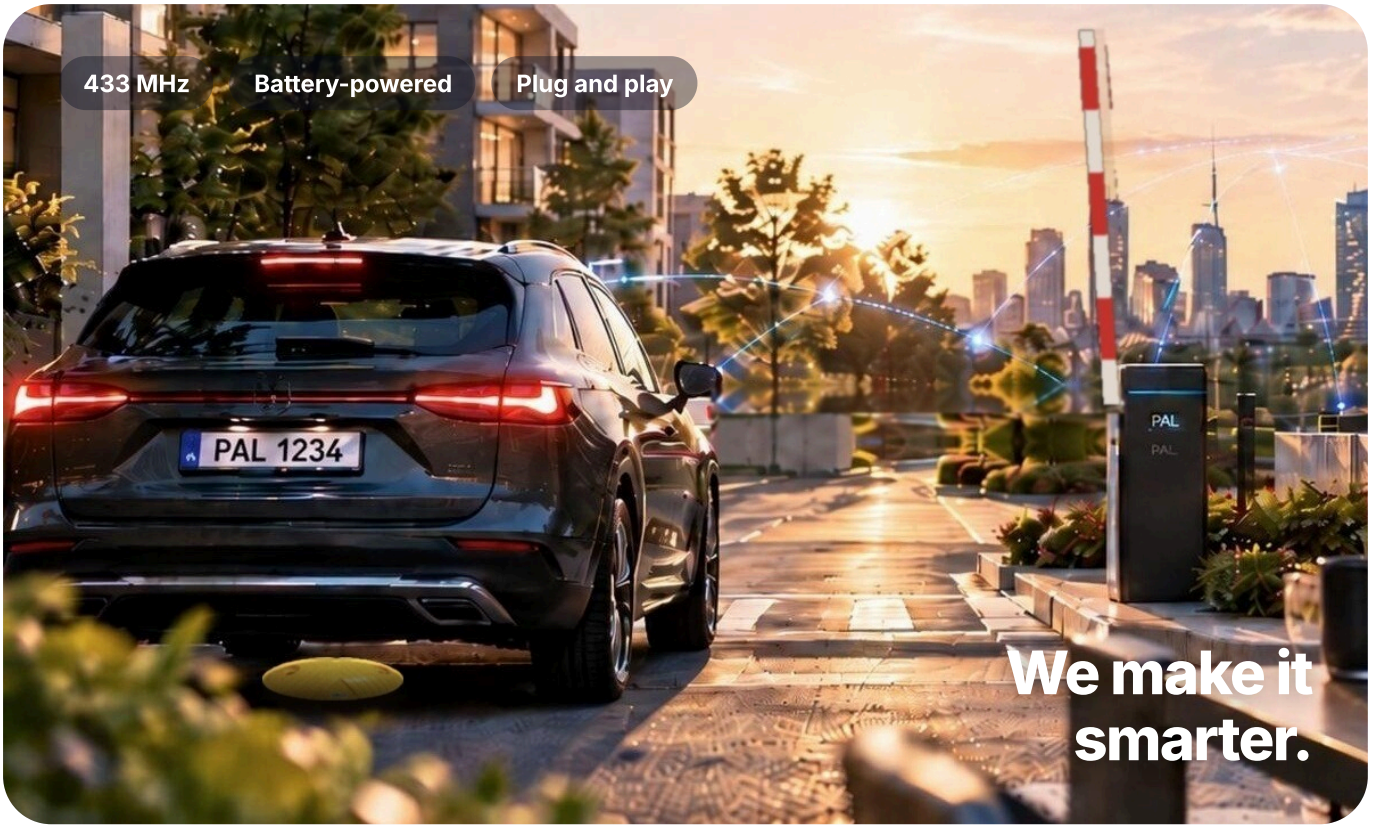
PAL ELECTRONIC SYSTEMS

VERSION 8.1

INSTALLATION & USER GUIDE

VD900-433

A smart wireless vehicle detector for car parks and vehicle access control.



IN THIS GUIDE

Product overview
Technical specifications
Installation
Positioning
Activation
Adding the detector

CHAPTER 1

Product overview

The VD900-433 is a compact, all-in-one wireless vehicle detector. It is plug and play, operates at 433 MHz and is ideal for detecting vehicles leaving public or office car parks. The PAL Web Portal makes installation and everyday use simple.



Figure 1 · VD900-433 vehicle detector with mounting screws

1.1 Technical specifications

PARAMETER	VALUE
Operating frequency	433 MHz
Power supply	Battery, DC 3.6 V
Dimensions	215 × 125 mm (8.5 × 4.9 in)
Battery life	Approx. 5 years (1,000 entries per day)
Load capacity	Approx. 1,000 kg (2,205 lb)*
Operating temperature	−20 °C to +70 °C (−4 °F to +158 °F)

* Load capacity refers to vehicles with air-filled tires.

1.2 Applications

- Car park management: detects vehicles at the exit and opens the gate automatically
- Vehicle access control
- Detecting vehicles leaving public or office car parks, for a fast exit

1.3 Highlights

- Wireless, plug-and-play installation
- Battery life of approx. 5 years
- Load capacity of approx. 1,000 kg (2,205 lb)*

1.4 Compatible PAL units

The detector works with PAL units that have a 433 MHz remote-control receiver:

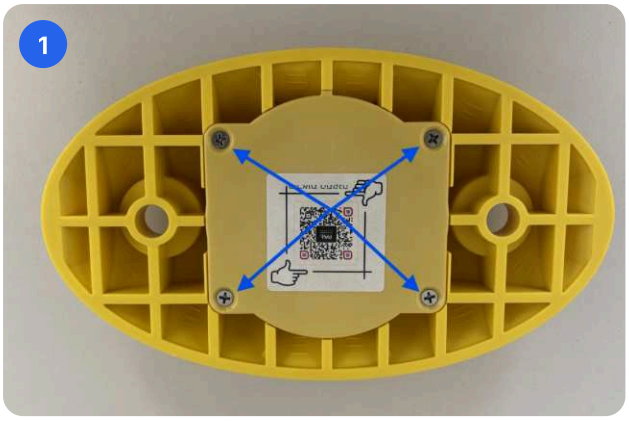
Spider i-WRL | **Spider i-WR** | **Spider B-WR** | **Spider-Wiegand 26** | **WiBee**

Warning
Do not use this detector as a security or safety device.

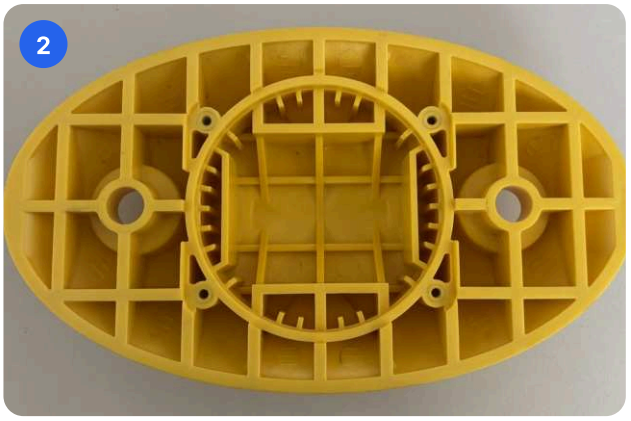
CHAPTER 2

Installation

2.1 Before installation



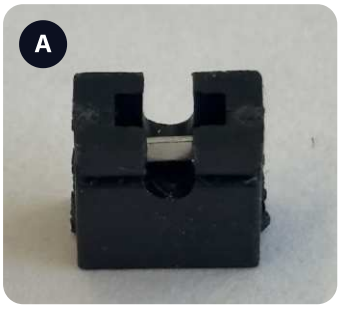
1 **Remove the four screws from the bottom cover**



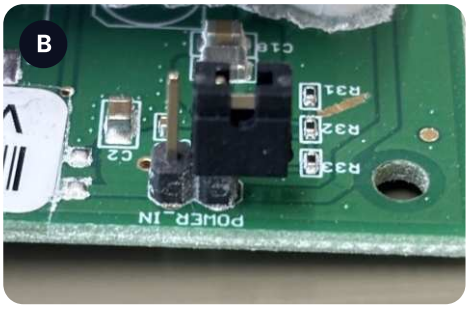
2 **Open the cover**

3 **Connect the jumper**

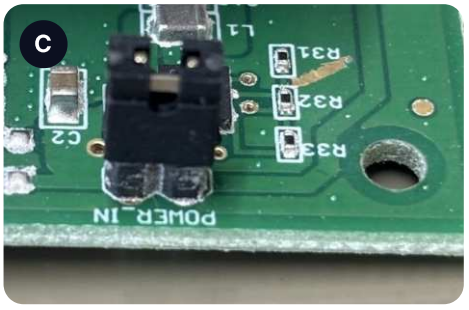
The jumper is a small connector that fits on the two POWER_IN pins on the board. The detector is supplied with the jumper fitted on one pin only. Move it so that it covers both pins.



A · The jumper



B · As supplied: fitted on one pin



C · Connected: fitted on both pins



4 **Close the cover**

Before closing, make sure the seal (arrow) is correctly seated in its groove.

2.1 Before installation: detector ID



Figure 2 · Detector board. The label shows the detector ID.

> **Note**
> Before closing the cover, write down the detector ID printed on the label. You will need it to add the detector to the PAL unit (Chapter 3).



Figure 3 · The VD900-433 installed on the lane surface

2.2 Positioning the detector

Place the detector on a clean surface at the center of the lane, 5 m (16 ft) from the gate, so that vehicles pass directly over it (see Figure 4).

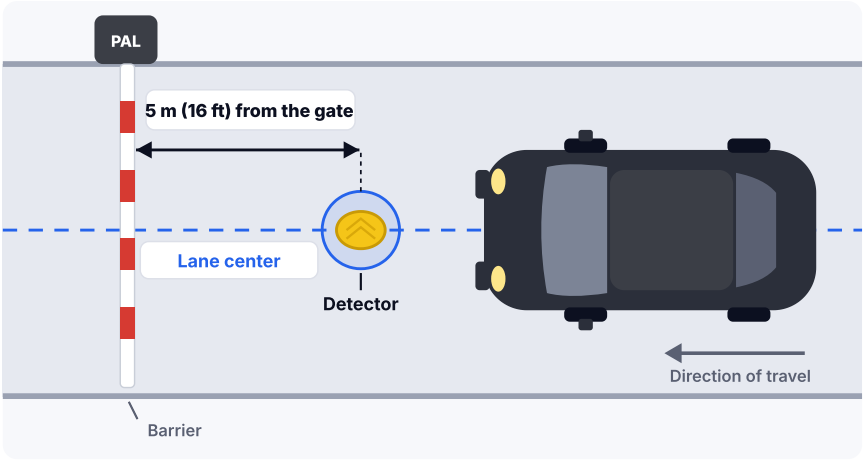


Figure 4 · Detector position: lane center, 5 m (16 ft) from the gate

2.3 Activating the detector

1. **Place the magnet on the set-up point**
   Use the magnet supplied with the detector.
2. **Wait for the beeps**
   The detector gives three slow beeps, followed by one long beep.
3. **Remove the magnet**
   After the long beep, move the magnet at least 1 m (3.3 ft) away from the detector.

> **Note**
> Before you activate the detector, make sure that all equipment is at least 1 m (3.3 ft) away from it. Otherwise, the equipment may be included in the automatic calibration.

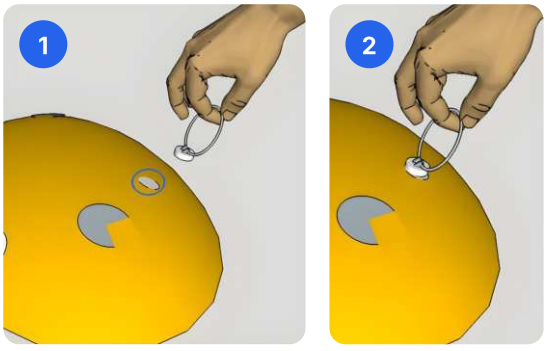


Figure 5 · Activating the detector: (1) the set-up point, (2) the magnet in position

CHAPTER 3

Adding the detector

Add the detector to a PAL unit with a remote-control receiver: Spider i-WRL, Spider i-WR, Spider B-WR, Spider-Wiegand 26 or WiBee. The detector is registered as a user, and its ID is entered as the remote-control serial number.

1. **Open the “Add user” screen**
   In the user list of the PAL unit, add a new user.
2. **Enter a name**
   For example, “DETECTOR”.
3. **Enter the detector ID**
   Type it in the “Remote control serial number” field.
4. **Select “No phone number”**
   The detector is not linked to a phone number.
5. **Tap “Save”**
   The detector now appears in the user list.

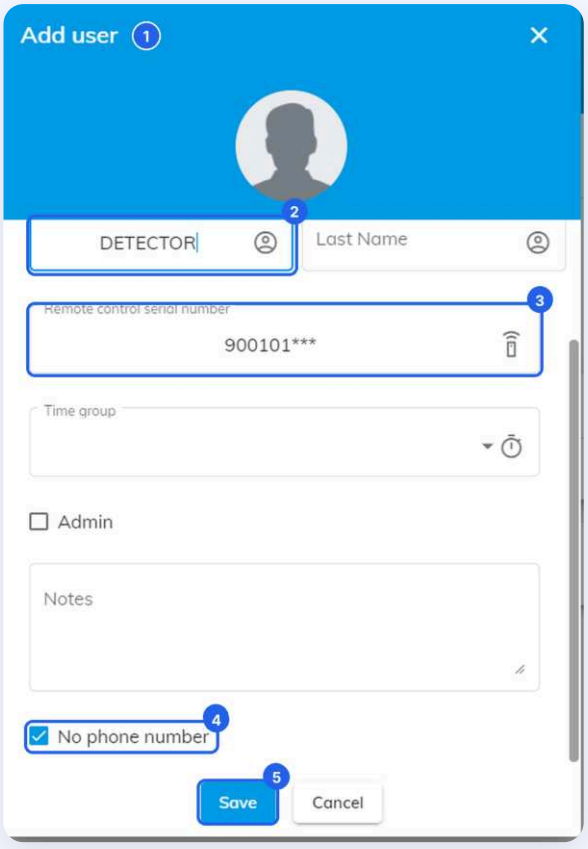


Figure 6 · Adding the detector as a user

Tip
After saving, drive a vehicle over the detector to confirm that the gate opens.

Warning
Do not use this detector as a security or safety device.

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