



SmartParking

SmartSpot Lite 915-US User Manual (Internal Use Only)

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Author:

David Calder

Version:

1.2

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1. Document Details

1.1. Sign-Off

John Heard	Chief Technical Officer		
Roly Rogers	Head of R&D		

1.2. Document Reviewers

Name	Title	Version
Don Lokuge	Developer - SmartInstaller	0.1
Kin Chan	Developer – SmartSpots & IGS	0.1

1.3. Distribution List

Name	Title	Version
TBD		

1.4. Version Information

Version	Date	Description
1.0	30/10/2017	Initial Publication
1.1 and 1.2	28/12/2017	Include updated FCC Statement

1.5. Document Contact

Name:	David Calder
Title:	Technical Writer
Department:	Research & Development
Organisation:	SmartParking Ltd.
Contact:	David.Calder@smartparking.com

1.6. Support Contacts

NZ & Australia

Department:	SmartParking Helpdesk
Email:	Helpdesk@smartparking.com
Phone:	+64 9 869 3006

UK & elsewhere

Department:	SmartParking Helpdesk
Email:	UKSupport@smartparking.com
Phone:	+44 (0)845 230 3081

2. Federal Communications Commission (FCC) Statement:

Rule 15.105(b): This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- 1) this device may not cause harmful interference and
- 2) this device must accept any interference received, including interference that may cause undesired operation of the device.

You are cautioned that changes or modifications not expressly approved by Smart Parking Technology Ltd could void the user's authority to operate the equipment.

Radio Characteristics:

The operating frequency range is 902MHz to 928MHz, factory default is 915MHz. Oscillating frequency is 32MHz, GFSK modulation. Texas Instruments CC1310 chipset.

3. Introduction

3.1. Document Purpose

The purpose of this document is to provide the step-by step-instructions for using the SmartInstaller to program V3 SmartSpots. No other User operations are possible as operation the V3 SmartSpot is entirely automatic once programmed.

3.2. Background

This document was created as part of the documentation of V3 of the SmartParking System, which includes the on-site SmartSpot and IGS VDS equipment, the 3G network connecting it to the SmartParking Cloud components, the SmartRep reporting user interface, and in this case; the system configuration capability.

3.3. SmartInstaller Overview

SmartInstaller is a [SmartParking Limited](#) application that runs on a device running both the Android Operating system and OTG ([USB On The Go.](#)), (i.e. a Samsung Galaxy 3 or later Smartphone, Galaxy Note Tablet, etc.).

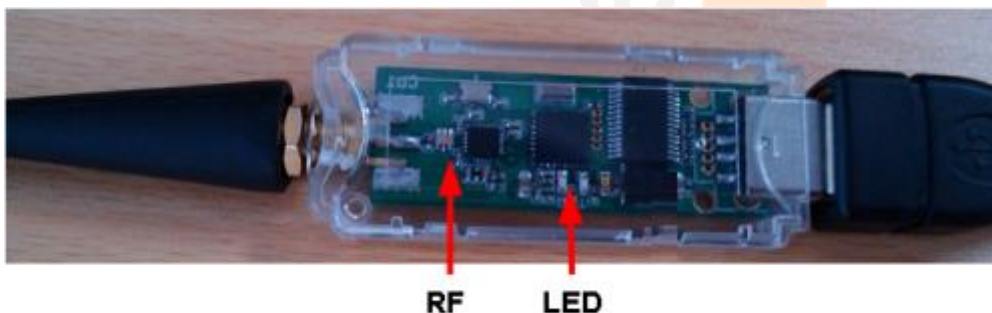
Also required is a [SmartParking Limited](#) proprietary dongle capable of rf communication with the firmware on the SmartSpots.

An example using a Samsung Galaxy Smartphone is shown below:



The dongle connects to the Smartphone via the mini-USB port. Once connected, the LED on the dongle should flash and the Smartphone will state a USB device is connected.

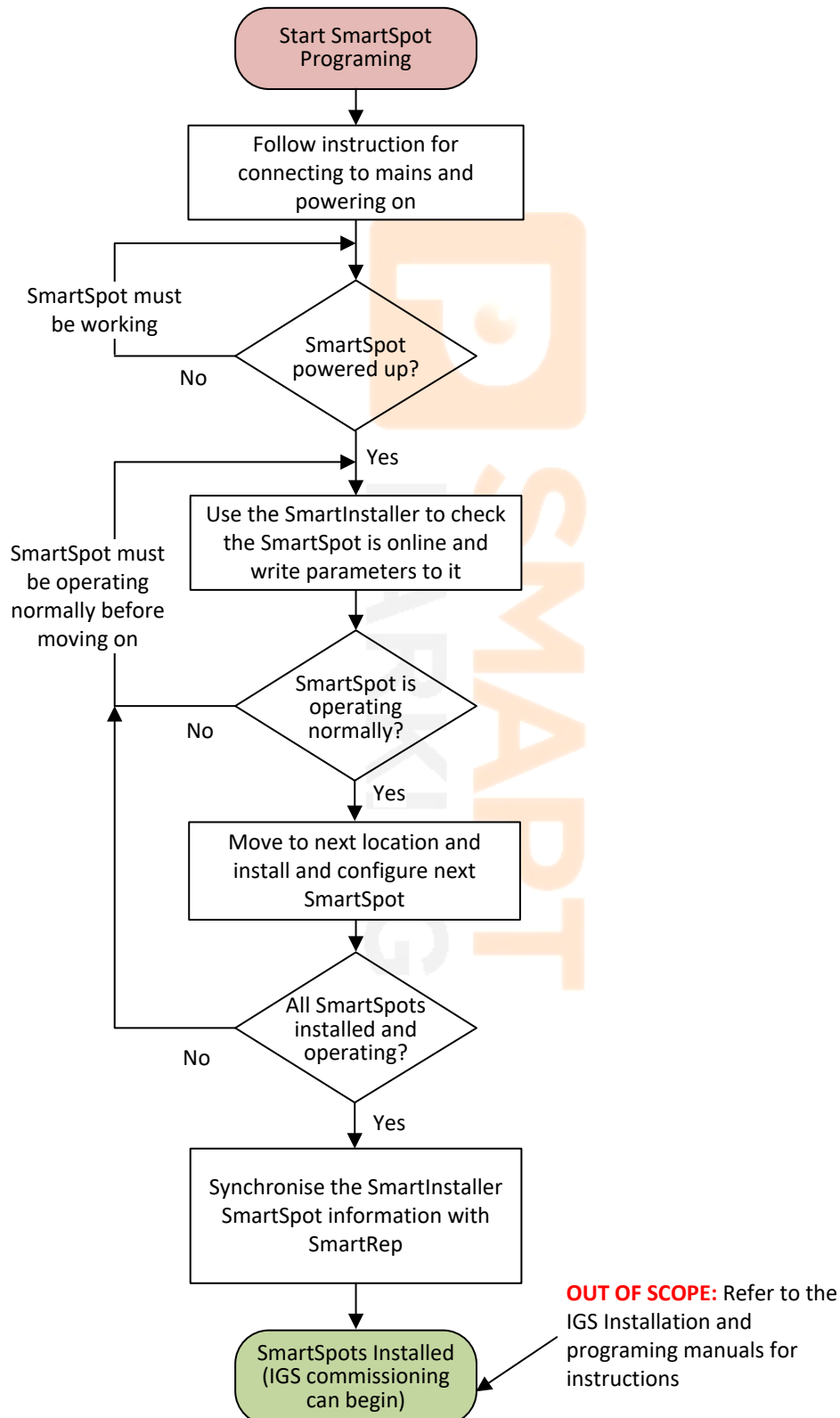
Dongle Functionality



- **RF** – This is the same 915MHz radio equipment and protocol as used in the IGS
- **LED** – These are the TX/RX indicators for the RF

4. SmartSpot Programing

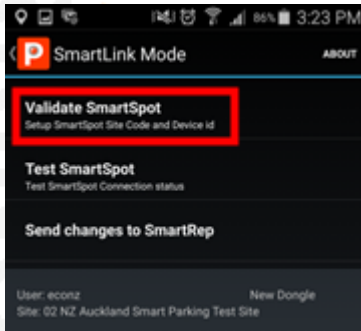
4.1. Flowchart


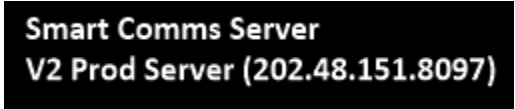
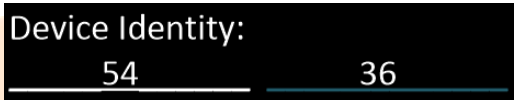

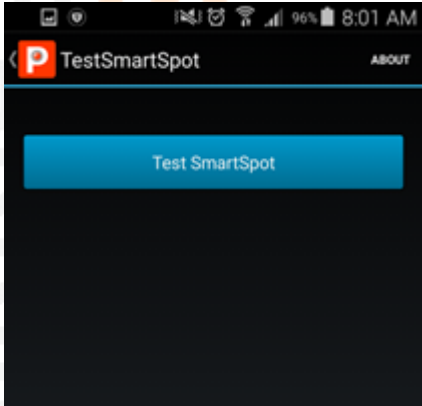


4.2. Programming SmartSpots

This is done at the SmartSpot immediately after it is first powered up.

The SmartInstaller V2.3.4 application configures each SmartSpot and connects it to the site network.

Step	Instructions	Example
1.	On the Select Mode screen, choose SmartSpot:	 The screenshot shows the 'Select Mode' screen of the SmartInstaller application. It features two large, rounded rectangular buttons: 'Smart-eye' with a camera icon and 'SmartSpot' with a parking spot icon. The 'SmartSpot' button is highlighted with an orange border. At the bottom, it displays 'User: econz', 'Site: 01 NZ Dev SmartParking Auckland', and 'New Dongle'.
2.	On the SmartLink Mode screen, choose Validate SmartSpot:	 The screenshot shows the 'SmartLink Mode' screen. It lists three options: 'Validate SmartSpot' (highlighted with a red box), 'Test SmartSpot', and 'Send changes to SmartRep'. The 'Validate SmartSpot' option includes the subtext 'Setup SmartSpot Site Code and Device Id'. At the bottom, it displays 'User: econz', 'Site: 02 NZ Auckland Smart Parking Test Site', and 'New Dongle'.
3.	The SmartSpot Validate screen will open:	 The screenshot shows the 'SmartSpot Validate' screen. It displays the following information: 'Site: 01 NZ Dev SmartParking Auckland', 'Site Code: NZAKLSPDV1', 'Smart Comms Server: v2 Dev Server (202.49.141.2:8097)', and 'Device Identity: 54 36'. A large blue 'Validate' button is at the bottom. At the bottom of the screen, it displays 'User: econz', 'Site: 01 NZ Dev SmartParking Auckland', and 'New Dongle'.

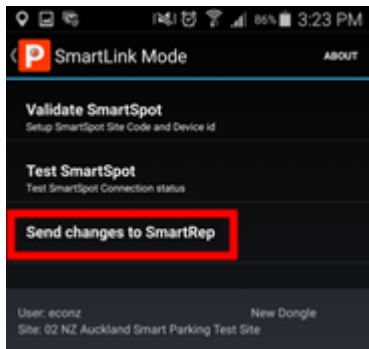

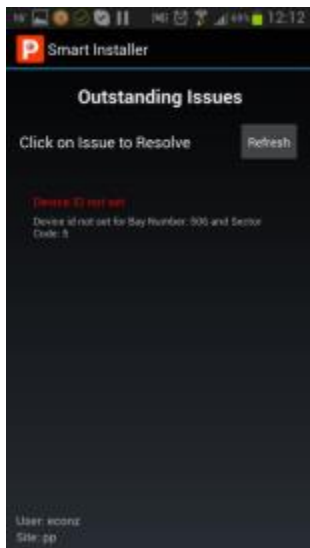
Step	Instructions	Example
4.	Make sure the site and site code are present and correct:	
5.	Make sure the handheld is connected to the server:	
6.	Enter the SmartSpot id found in the case (e.g. 54-36) into the two Device Identity Fields	
7.	Press Validate and Reset (magnet or power) the SmartSpot, then wait for SmartSpot validate success message (process will take up to 5min to finish.)	
8.	On the SmartLink Mode screen, open the Test SmartSpot screen.	
9.	Press Test SmartSpot and reset the SmartSpot. The SmartInstaller will keep requesting SmartSpot Connection status (minimum 5min) until it gets a result.	<p>If the installer returns FAIL:</p> <ul style="list-style-type: none"> At least one of the connection modules failed to connect to SmartRep servers
10.	If the process failed, repeat step 9 until successful.	<p>When the installer returns SUCCESS:</p> <ul style="list-style-type: none"> All Connection modules (SIM, Ethernet if any) are connected to SmartRep Servers

4.3. Synchronizing with SmartRep

Once at least one SmartSpot has been correctly installed, SmartInstaller will be storing the information to be uploaded to or synchronized with SmartRep. This can be done as often as you like; any new parameters will override the old ones each, but **MUST** be done when all SmartSpots on site have been validated and tested.

IMPORTANT:

- Synchronisation cannot be reversed, only redone as many times as required to populate SmartRep with complete and accurate information

Step	Description	Picture
1.	On the SmartLink Mode screen, choose Send Changes to SmartRep:	
2.	On the next screen choose Sync with SmartRep:	
3.	<p>When you press the 'Sync with SmartRep' button you will be asked to confirm you wish to send all data to SmartRep.</p> <p>If confident in your programming work, choose 'Yes.'</p> <p>SmartRep will be updated with all the data of the SmartSpots validated and tested during this session.</p> <p>If SmartRep detects any issues, you will see the following screen:</p> <p>You must remedy these issues right away, and then re-attempt synchronising with SmartRep.</p>	

5. Appendix A – Glossary

This section contains a full list of all the terms and abbreviations used throughout this document.

Term	Description
Dongle	A small device that plugs into a computer and serves as an adapter or as a security measure to enable the use of certain software
OTG	USB On-The-Go allows USB devices such as digital audio players or mobile phones to act as hosts, so other USB devices like a USB flash drive, digital camera, mouse, or keyboard can be attached to them
SmartDongle	See Dongle
SmartSpot	Version 3.0 of the previous Zone controller – the sensor-to-internet gateway..
V3 IGS	Version 3.0 of the parking bay vehicle sensor.
WIFI	A means allowing computers, smartphones, or other devices to connect to the Internet or communicate with one another wirelessly within a particular area.

6. Appendix B – Amendment History

This section contains a full listing of all amendments made to previous versions of this document

Version	Section	Description
0.1		Initial Draft.
1.0		Published
1.1	2.	Federal Communications Commission (FCC) Statement
1.2	2	Add 15.21 to FCC Statement

