Certification Exhibit

FCC ID: 2AJX7KP9000
IC: 21998-KP9000

FCC Rule Part: 15.247
IC Radio Standards Specification: RSS-247

Project Number: 16-0273

Manufacturer: QSR Automations, Inc.
Model: KP-9000

Manual

KP-9000 Wireless Keypad

User's Manual

November 2016

Contents

Product Overview

The KP-9000 is a low-power, longer life, wireless keypad that is backward compatible with QSR's other keypads. It is a Bluetooth Low Energy (BLE), twenty button, customizable keypad that does not require any cabling.
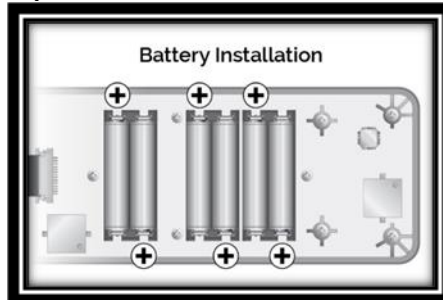
Product Specifications

Feature	Specification	
Key Rating	30 Million Pushes	
Mounting Options	Optional Bracketing Available	
Overlay Options	Customizable Keypad Overlays, Installs without Tools	
Features	Software Programmable Scan Codes Downloadable Firmware for Easy Updates and Support ConnectSmart Battery Level Indication	
Chassis	Durable, Premium Grade Polycarbonate Metal Reinforced Top for Extended Life Resistant to Extreme Temperatures, Water and Grease	
Dimensions	1.25" x 8.25" x 2.75" (H x W x D)	
Weight	11.2 ounces *(without batteries)*	
Power	Two, Four or Six AAA Batteries	
Audio	On-board Annunciator	
Interface	Bluetooth Low Energy (BLE) via USB Dongle	
Range	Up to 30 feet, in direct line-of-sight	
Environmental	Operating Temperature	0° – 50° Celsius
	Storage Temperature	-20° – 95° Celsius
	Humidity	10% - 95%, non-condensing
	Altitude	15,000 feet
Certifications	FCC Part 15, Class A	
Warranty	Limited 3-Year Hardware Warranty	

Out of the Box

The KP-9000 Wireless Keypad arrives with dongle stored inside.

1. Unscrew the back of the keypad and remove the dongle.

2. Install six AAA batteries. (The keypad only requires two AAA batteries to function, but up to six batteries may be installed at once to increase the keypad's battery life.)

Battery Installation

3. Plug the dongle into the Kitchen controller.

4. The keypad and dongle have been pre-paired, and will pair automatically.

Note: It is recommended that you label the keypad and its corresponding dongle upon unpacking to avoid confusion should they ever become separated.

LED Indicators

Keypad LED

There is one LED visible in the upper left portion of the keypad. The following table describes what the different LED messages are conveying.

Mode	LED	Description
Unpaired	No LED	The default when not paired with a dongle. Special keypress (upper left and bottom right keys for 3s) required to enter pairing mode. Unpaired is the mode for factory storage and shipping. Keypad will shut 'off' in this state, using the lowest power consumption possible with batteries installed.
Searching	Blinking low-duty Amber (Amber also on very low-duty cycle for low battery)	Dongle has been previously paired but is not currently found. The keypad will search indefinitely in an attempt to reconnect. However, it will only search 1 minute at high speed (10Hz) before dropping back to power savings (1Hz).

Mode		Description
		Special keypress can force into pairing mode. In BLE terms, a keypad 'Searching' means sending only directed advertisements to the address of its paired dongle.
Connected	Solid Green for one second (Also blinks Green on each key press or SCROLL LOCK)	Normal operating behavior with paired dongle found and communicating. Wireless poll period and slave latency depend on whether beeper is enabled (power savings are greater when in its default state – beeper disabled). Special keypress can force into pairing mode.
Pairing	Blinking Amber once every 10 seconds until paired	Allows pairing with a new dongle. Requires special keypress to enter. It has a 1 minute timeout, as pairing consumes high power to advertise. Keypad will auto-pair to first dongle found in pairing mode. If timeout is reached, behavior depends on whether it was previously paired to a dongle. In BLE terms, 'Pairing' means sending undirected advertisements.
Low Battery	Double blinking Amber every 10 seconds	

Dongle LED

There are two LEDs visible. One on either side of the dongle. The following table describes what the different LED messages are conveying.

Mode	LEDs	Description
Unpaired	Off	Only entered when not paired and when software has commanded dongle to not auto pair.
Searching	Slow Blinking Blue	Keypad has been previously paired, but is not currently found. Dongle will search for 1 minute to attempt to reconnect. Afterwards, it will automatically enter pairing mode. Software commands can override this behavior. In BLE terms, 'Searching' on the dongle means passive scanning for only directed advertisements from its paired keypad.
Connected	Solid Blue	Normal operating behavior with paired keypad found and communicating. In BLE terms, 'Connected' here means connected and bonded.
Pairing	Rapid Blinking (low-duty) Blue	Allows pairing with a new keypad. If previously paired, the dongle will still auto-connect with

		that keypad if found (same as searching). If a new keypad in pairing mode is found, a new pairing (and connection) is established with that keypad. Other keypads not in pairing mode are ignored. In BLE terms, 'Pairing' means active scanning for advertisements from any keypad, but also accepting directed advertisements from its paired keypad.

Troubleshooting

What Does This Light Mean?

Dongle

If the light is…	This means…	What next…
Off	Unpaired	Pair with keypad.*
Slow blinking blue	Searching	Dongle will attempt to reconnect.
Solid blue	Connected	The device is ready to go!
Rapid blinking blue	Pairing	Dongle is pairing with keypad.

Keypad

If the light is…	This means…	What next…
Off	Unpaired	Pair with dongle.*
Blinking low-duty amber	Searching	Keypad will attempt to reconnect.
Blinking low-duty green	Connected	The device is ready to go!
Rapid blinking amber	Pairing	Keypad is pairing with dongle.

*Manually Pairing the Devices

1. Insert dongle in the USB port of target controller.

2. Turn the controller on.

3. Hold the KP-9000 (prepared with batteries installed) so that the light is in the upper left corner.

4. Press and hold both top left key and bottom right key simultaneously for 3 seconds.

5. The LED will quickly blink on and off in amber while it is trying to talk to the dongle.

6. If it establishes the pairing with the dongle, the light will blink green briefly and then remain quiet.

Set Pairing Mode

The Set Pairing Mode command impacts both the dongle and keypad. When the command is given to change the pairing mode to Unpaired, the dongle goes idle and the keypad goes into searching mode. That means the keypad is still looking for the dongle to which it was previously paired, so if you send a command to change the pairing mode back to Pairing, the dongle will "wake up" and automatically reconnect to the keypad.

If you want to pair the keypad with a different dongle while the current dongle is idle, press and hold keys 1 and 20 simultaneously on the keypad to force the keypad into pairing mode. When in this mode, the keypad will pair with the first available dongle it finds.

It's most effective to do this with only one keypad powered on at a time.

Sample Images

Keypad - Opened Back

Keypad - Front

Control Point 3.1

The KP-9000 Wireless Keypad can be configured and managed through ControlPoint 3.1. For more information, see the ControlPoint 3.1 User's Guide.

Appendix A: Device Compliance Information

Warning: Changes or modifications to this device not expressly approved by QSR Automations, Inc. could void the user's authority to operate the equipment.

Federal Communications Commission (FCC) Statement

FCC ID NUMBER	
Keypad	2AJX7KP9000
Dongle	2AJX7KP9000D

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Innovation, Science, and Economic Development (ISED) Canada Statement

IC ID Number	
Keypad	21998-KP9000
Dongle	21998-KP9000D

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Sample Combined FCC/IC Label

Keypad

(BA10227)
FCC ID: **2AJX7KP9000**
IC: **21998-KP9000**

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.

Note: Picture only showing label location not actual label

Dongle

HVIN: **BA10222 Rev. B**

FCC : **2AJX7KP9000D**
IC: **21998-KP9000D**

Note: IDs are laser printed onto USB connector

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