

USB dongle Plug & Scan User Guide

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SUMMARY

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Revision History

Changes to the original manual are listed below.

Document	Date	Description
3.13	03 Jan 07	Initial release
3.23	01 Nov 07	Add CAPS LOCK key option
3.23.1	17 Apr 08	Update graphic presentation
3.23.2	16 June 08	Add RoadRunners Evolution
3.23.3	26 June 08	Update Batch Mode section and add D-Fly, ScanWear and ToughRunners
3.23.4	31 July 08	Update Additional features section (Suffix part)
3.23.5	01 Aug 08	Update the "Upload Message" note
3.23.6	22 Aug 08	Modify the Batch section
3.23.7	04 Dec 08	Update Additional features section (Prefix & Suffix part)
3.28	27 March 09	Add DualRunners & Terminal Server section
3.28-2	30 June 10	Precision on TSE configuration
3.30	7 July 10	Correct random disconnection issues Remove support of Pencil1 ; BL1000; Bx2604 ; BCM2604. Add Keyboard emulation speed (40 & 80ms)
3.31	12 Sept 10	KEmul software from Apple Macintosh: link not available.
3.33	21st Jan 11	Added a note to the TSE section.
3.33b	15th June 2011	Changed the note related to the TSE section.

1. Introduction

This document describes the USB dongle Plug & Scan v3.30 (see “Print Firmware Version” section on how to read the firmware version).

The USB Plug & Scan dongle is a Keyboard Emulation solution and allows to simplify the connection between the Baracoda scanners and all laptops, PCs, Tablet PCs, or all devices that can accept a USB keyboard.

Normally, a USB Bluetooth Dongle requires the user to install the Bluetooth drivers in order to add the Bluetooth connectivity to their host computer.

The Baracoda USB Plug & Scan dongle has the Bluetooth drivers and the Bluetooth application embedded in the USB device. **This configuration avoids the installation of the drivers and the software for the end-user.**

The USB Plug & Scan solution allows user to have an acknowledgement beep, automatic reconnection, and buffering of the incoming barcode data. Barcode data buffering allows the Baracoda scanner to store incoming barcodes even when the scanner is not connected to the dongle (this is the ‘No data loss mode’).

Simply plug the USB Plug & Scan dongle in your computer, scan a “connect barcode” with a Baracoda barcode scanner, and the Bluetooth connection will be automatically established.

NOTE:

Please note that the BaracodaManager software for PC does not work with Plug & Scan solutions.

2. Product Description

2.1 Bluetooth Connection

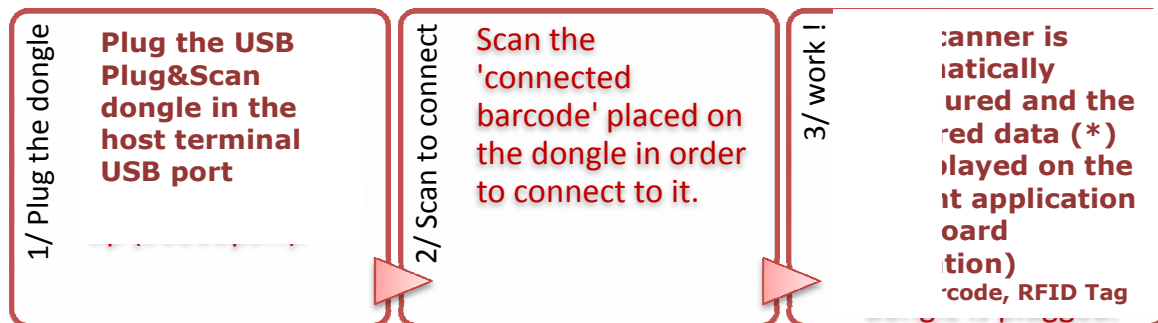
The USB Plug & Scan dongle is only able to establish point-to-point Bluetooth connections. This means that the USB dongle cannot connect simultaneously to more than one device.

The USB Plug & Scan dongle can have three (3) states:

- **Disconnected**: The dongle can accept connections from any Baracoda scanner (see how to connect your Baracoda scanner).
- **Paired and waiting for connection**: The dongle has already been paired to a Baracoda scanner. Just switch on this scanner inside the Bluetooth range of the USB dongle and the connection will be automatically established. This mode allows other Baracoda scanners to connect to the USB dongle. Scan the “connect” barcode, then the previous Baracoda scanner will disconnect and the new Baracoda scanner will connect to the dongle.
- **Connected**: The USB dongle is connected to the Baracoda scanner. Just scan barcodes and the data will be transmitted to your active application. This mode allows other Baracoda scanners to connect to the USB dongle. Scan the “connect” barcode, then the previous Baracoda scanner will disconnect and the new Baracoda scanner will connect to the dongle.

2.2 Features

Using the USB Plug&Scan dongle is quite simple. In three steps, it can be installed and ready to operate:



Note: the USB Plug & Scan forces the settings of the scanner to which it gets connected in the following configuration:

- ➔ Restore scan engine defaults
- ➔ Enable default code ID
- ➔ Set Slave Mode
- ➔ Set output format: Baracoda Frame, enable acknowledgment (ie: no data loss mode), no prefix/suffix

It may be problematic if you use the same scanner in the above configuration with an application that does not give an acknowledgment back to the scanner.

3. How to connect your Baracoda scanner ?

3.1 Connection process

Here is the process to connect the scanner to the USB Plug&Scan dongle:

1. Reset the scanner (see Scanner User Guide to perform this operation).
2. Plug the dongle into the USB port of the computer.
3. **Do not scan any other barcodes except the 'connect barcode' that is delivered with the dongle.**
4. Within 5 seconds (not necessary to rescan), the connection is established.
 - The scanner beeps twice and the LED will change to a double flashing green. (*)
5. Start scanning barcodes.

(*) If the LED on the scanner is not double flashing green, this can possibly mean:

- *The scanner is low on power. Charge the unit up completely and try again*
- *The scanner has not been reset. Reset it and try again*
- *The scanner has been programmed from its default status and it is not able to decode the Code 128 symbology. Be aware that the 'connect barcode' is a code128 symbology and so the scanner shall stay in its default mode "Code128 on"*

By default, the Plug & Scan dongle activates the "No Data Loss Mode". (Please refer to the paragraph [3.4](#) for additional information)

Nota: When you will be connected with the DualRunners, you could scan barcodes and read RFID TAG ID

3.2 Embedded firmware version

Once the scanner is connected ; a capture of this barcode will forward and display the firmware version of your Plug & Scan dongle following this format "Baracoda HID vx.xx":

Print firmware version



3.3 Disconnection process

There are **3 different ways** to disconnect a scanner from the Plug&Scan dongle.

1. Reading the "disconnect" barcode with the connected barcode scanner. Use this barcode to disconnect your barcode scanner from a Plug&Scan dongle.

Disconnect barcode



2. Remove the USB dongle from the USB port (power will be OFF)
3. Connect another scanner by reading the dongle's 'Connect barcode' with it (Swap process).

3.4 'No Data Loss' mode

The 'No data loss mode' is activated *by default* for all scanners supporting the feature. When you leave the connection area, the 'No data loss mode' allows scanned barcodes/data buffering. All scans will be automatically uploaded to the host when reconnected.

If your application is unable to handle all of the incoming barcode scans, disable this feature by scanning the 'no data loss mode' barcode. **Your scanner and any future connected scanners will retain this configuration.**

Enable 'no data loss mode' (*)



Disable 'no data loss mode'



Note: This feature is enabled by default.

4. Scanner configuration: ‘Batch mode’

4.1 Explanations

BEHAVIOUR



For a user application requiring batch mode feature, please note that the USB Plug&Scan forces the scanner settings to which it gets connected in the last configuration used by the USB dongle. So it's very important before connecting a new scanner using Batch mode (and with data in its Batch memory) to check that the RS232 Plug & Scan is already configured in Batch mode, and not in Real Time mode. So you have to respect the following process:

- 1) Associate the scanner to the RS232 Plug&Scan **FIRST** (by scanning its CONNECT barcode).
- 2) Configure your scanner in Batch mode **AFTER** (by scanning the configuration barcodes available in this document), and start your work.

The upload process consists of temporarily switching the scanner into Real time with “no data loss mode” ON (all the barcodes or RFID Tag ID in memory will be sent using the no data loss protocol). Then the scanner switches back to batch mode when all the barcodes are properly sent.

Notes:

- This functionality is only available for USB Plug&Scan dongles with firmware version 3.10 and newer (see “Print Firmware Version” section for how to get the firmware version).
- *If there is a lot of barcodes to upload, notes that the USB Plug&Scan takes a long time to receive & emulate the data.*

4.2 Enable ‘batch mode’

When this mode is set, all the scanners (supporting the functionality) working with the dongle are set in batch mode: all scanned data (barcodes, TagID) are stored in the flash memory.

Enable batch mode



4.3 'Upload' batch data

When the Bluetooth connection is existing, the scan of 'upload stored data' barcode will launch the upload process.

Upload batch data



Upload batch data (for RoadRunners only)



Note: UPLOAD Messages

This feature is not available for *RoadRunners*.

Obviously, it is supported on *Pencil2, D-Fly, RoadRunners Evolution ...* products

As keyboard emulation is used, the host application has a limited access to information on the scanner. To answer this, the dongle can use a messages system which can help the host application having a status on the upload process. This mode can be enabled or disabled (default) using the following barcodes:

Enable upload messages



Disable upload messages (*)



When this is used, the dongle adds information messages with the incoming data:

Before the upload:

- *<UPL>: start xxxxx*
xxxxx being the number of expected barcodes to come

After the upload, two messages can appear:

- *<UPL>: transmission OK*
This means that the barcodes were correctly transmitted from the scanner to the dongle and thus that they have been erased from the scanner
- *<UPL>: transmission NOK*
This means that an error occurred and has been detected by the dongle during the data upload. This means that the data has not been erased from the scanner.

5. Keyboard Emulation Configuration

5.1 Language

The USB Dongle is recognized by the host computer as a keyboard. Depending on your region and your spoken language, your computer will require different keyboards.

Please scan the barcode of your country (scan “USA” for QWERTY keyboards and “FRANCE” for AZERTY keyboards).

CANADA_MULTILANGUAGE



UK



FRANCE



SPAIN



GERMANY



SWEDEN



HUNGARY



SWISS_GERMANY



ITALY



USA



PORTUGUAL



Note: By default, the French keyboard configuration is activated.

5.2 Caps Lock function

The USB Plug & Scan dongle can disable the CAPS LOCK key on the HOST.

Force Caps lock OFF : enabled



Force Caps lock OFF : disabled(*)



Note: This feature is disabled by default.

5.3 Keyboard emulation speed

The barcode upload process can stress the host and, depending on the host type, the below barcodes may be necessary.

Indeed, the USB Plug&Scan dongle emulates a Keyboard. Thus, it has to send characters with a minor delay between them. If the delay is too short or if the host is too slow or too busy to process the incoming characters, some data can be lost by the host.

To avoid that phenomenon, the USB Plug&Scan can handle different keyboard emulation speeds:

Keyboard emulation speed: SLOW
Inter-character delay = **40ms**



Keyboard emulation speed: VERY SLOW
Inter-character delay = **80ms**



Keyboard emulation speed: SLOW
Inter-character delay = **20ms**



Keyboard emulation speed: MEDIUM (*)
Inter-character delay = **16ms**



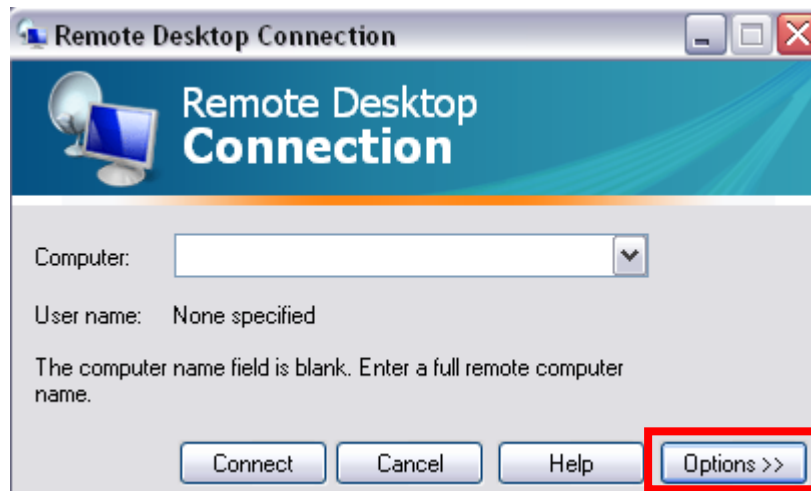
Keyboard emulation speed: HIGH
Inter-character delay = **8ms**



5.4 TSE configuration

You can use the USB Plug & Scan with Terminal Server Emulation, but note that you must follow this procedure:

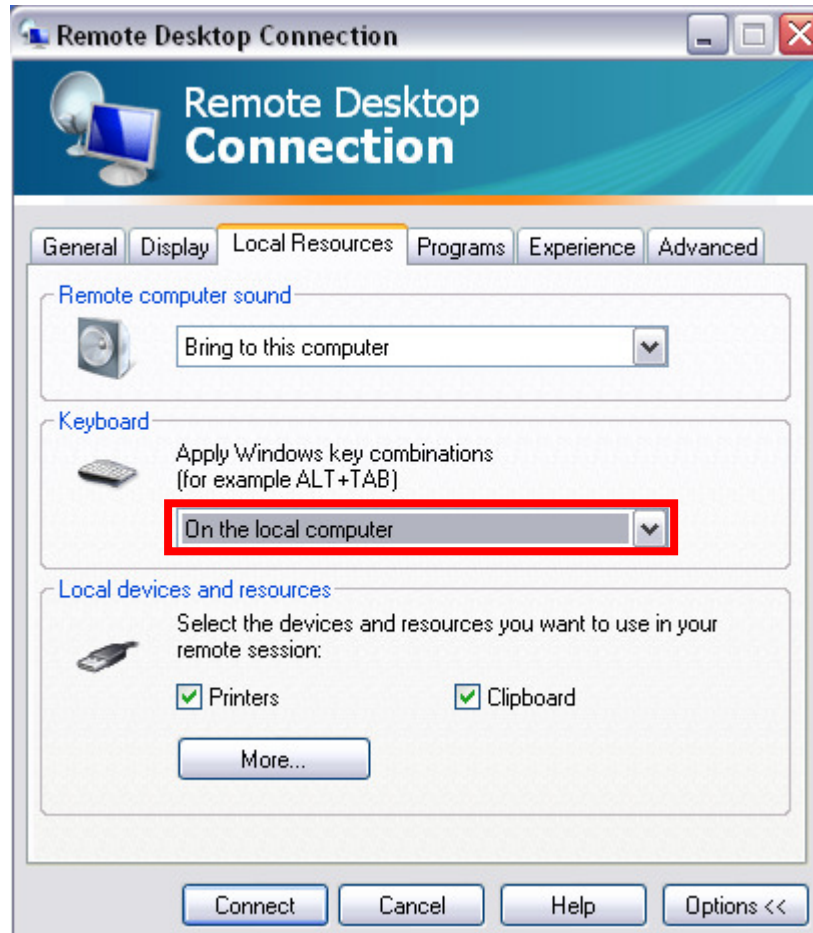
1. Connect the USB Dongle Plug & Scan
2. Scan the 'CONNECT barcode' to connect the scanner to the USB P&Scan dongle
3. Open the Remote Desktop Settings by clicking the Options button



4. Select the Local Resources tab



- Set the Keyboard option to "On the local computer"



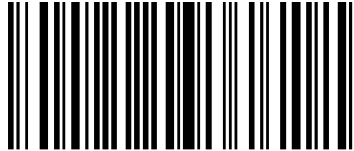
- Open the remote session, then the chosen remote application
- Now you can start working with your remote application

Please note that remote keyboard emulation is sensitive to delays and may not work in some network environments (especially if the French language is used). The user should always verify if the USB Plug&Scan dongle works correctly with remote applications before the project is deployed.

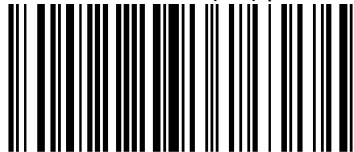
6. Additional features

6.1 Prefix

Disable prefix [default]



Horizontal Tab (HT) prefix

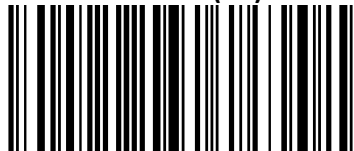


6.2 Suffix

Disable suffix



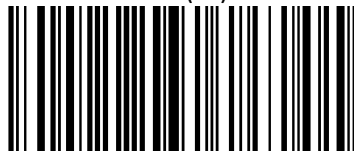
Horizontal Tab (HT) suffix



Carriage Return (CR) suffix



Line Feed (LF) suffix



Carriage Return (CR) + Line Feed (LF) suffix [default]



7. Compatibility

The USB Plug & Scan v3.30 and newer (see 'Print Firmware version' section) is only compatible with the following Baracoda barcode readers:

The batch mode can be used with scanners supporting batch mode:

- BaracodaPencil2 All versions ('batch mode' configurable from CPU firmware v.1.34)
- D-Fly All versions
- RoadRunners All versions ('batch mode' configurable from CPU firmware v.3.20)
- RoadRunners Evolution All versions
- DualRunners All versions
- ScanWear All versions
- ToughRunners All versions

Limited Warranty

Manufacturer warrants that the product will be free of defects in material and workmanship for one (1) year from the date of shipment. Manufacturer will, at its option, either repair, replace or refund the purchase price paid by buyer for the defective products.

Such repair, replacement or refund shall be buyer's sole remedy in the event of Manufacturer's breach of this limited warranty. Repaired or replaced parts or product may include new, reconditioned or remanufactured parts and equipment at Manufacturer's option. All costs associated with shipment to Manufacturer for warranty service, including but not limited to freight, duties, insurance and customs fees are buyer's responsibility. Manufacturer will pay the freight costs (duties, insurance, customs and any other fees are buyer's responsibility) associated with the return shipment to buyer. The method of shipment will be at Manufacturer's discretion. Repair or replacement of any parts or equipment does not extend the period of warranty provided for herein. THIS LIMITED WARRANTY IS MANUFACTURER'S ONLY WARRANTY. MANUFACTURER DOES NOT GIVE WARRANTIES OF MERCHANTABILITY OR WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE. To take advantage of this warranty, buyer should contact the seller not the Manufacturer. The warranty set forth herein does not cover and Manufacturer will have no obligations hereunder if any non-conformance is caused in whole or in part by; accident, transportation, neglect, misuse, alteration, modification, or enhancement of the products or incorporation, interfacing, attachment of any feature, program, or device to the Products by a person or entity other than Manufacturer, failure to provide a suitable installation environment, use of the products for other than the specific purpose for which the products are designed or any use of the product not in accordance with the User Guide or other misuse or abuse of the product. The warranty does not cover problems linked to batteries.