

# BaracodaPencil™ User Guide

## 1. Package contents

Check to make sure you have the following items. Contact your supplier if any item is missing.

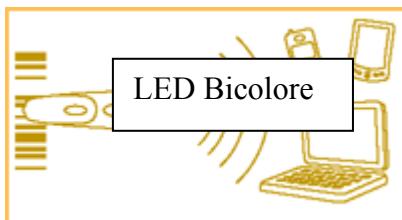
- 1 BaracodaPencil
- 1 Battery charger 110-230V/9V 200mA
- 1 User's Guide

## 2. BaracodaPencil Interface

BaracodaPencil is designed for easy use. You simply press a button when scanning a barcode. The color of the LED (red, green or yellow) shows the status of the device. You can also find a Reset button, located on the back; this button can help you to reset the default parameters, if necessary (should you experience further problems, please contact our Customer Support, at support@baracoda.com).

BaracodaPencil can process several types of barcodes: EAN/UPC, Code 39 or Code 128. The bar codes are transmitted either in real time or memorized for later transmission, to remote terminals which use the Bluetooth protocol.

You can download decoding algorithms updates from <http://www.baracoda.com>



Pictures below show the BaracodaPencil features:



Bouton



Tête de lecture



LED Bicolore



Plug to load battery

Connecteur de recharge

### 3. User's Guide

#### 3.1 Usage modes

2 usages modes are possible:

##### 3.1.1 Real Time Mode

In “Real Time mode”, the barcode is decoded and transmitted immediately to a remote device.

##### 3.1.2 Batch Mode

In “Batch mode”, the barcode is read and stored in the BaracodaPencil non-volatile memory\*, for later transmission. This memory can contain up to 1,000 barcodes.

\*Non-volatile memory: when the BaracodaPencil is turned off, data is saved in memory.

#### 3.1.3 Mode selection

“Real Time mode” is the default mode. To switch to “Batch mode”, download the Baracoda configuration software from <http://www.baracoda.com>

### 3.2 Real Time Use

To use the BaracodaPencil:

- Check all connections.
- Keep pressing the button during the scan.
- Make sure that the BaracodaPencil tip is in physical contact with the barcode as long as the scan lasts.

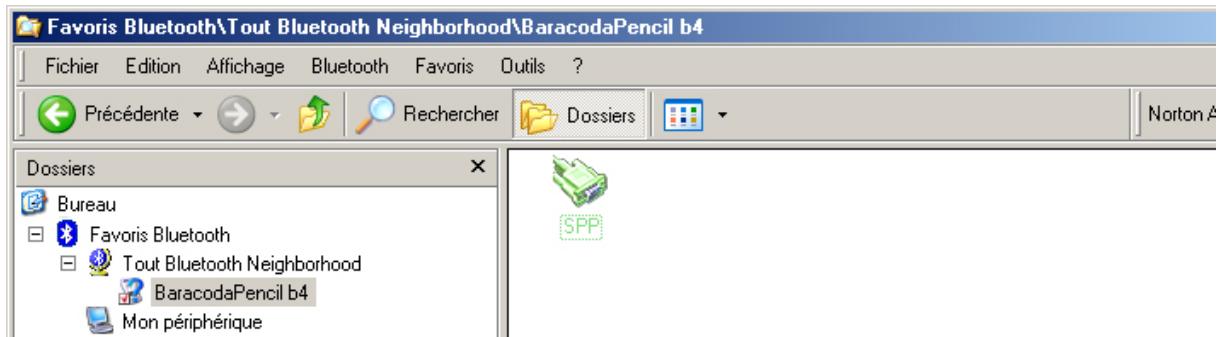
#### 3.2.1 Connecting the BaracodaPencil to a remote device

This connection phase opens a communication channel between the barcode reader and a remote device.

- To connect the BaracodaPencil, turns it on by pressing the button. The blinking green LED indicates that the BaracodaPencil is awaiting a connection. If no connection is made within 3 minutes, the BaracodaPencil switches off automatically.
- Use the Bluetooth software provided with your Bluetooth device to detect the BaracodaPencil (See the Bluetooth device documentation).
- Search for available services.
- Enter the default PIN code: 0000. You can change this default code using the Baracoda configuration software.
- Connect the two devices using the Serial Port Profile (SPP). When the BaracodaPencil is connected, the SPP icon turns green.

## BaracodaPencil connected with SPP

- When the BaracodaPencil is connected, the green LED blinks twice as fast.
- After one hour of inactivity, the BaracodaPencil automatically disconnects from the Bluetooth device and switches off.
- When you are done with the BaracodaPencil, close the SPP connection. The green LED blinks again at a slower rate.

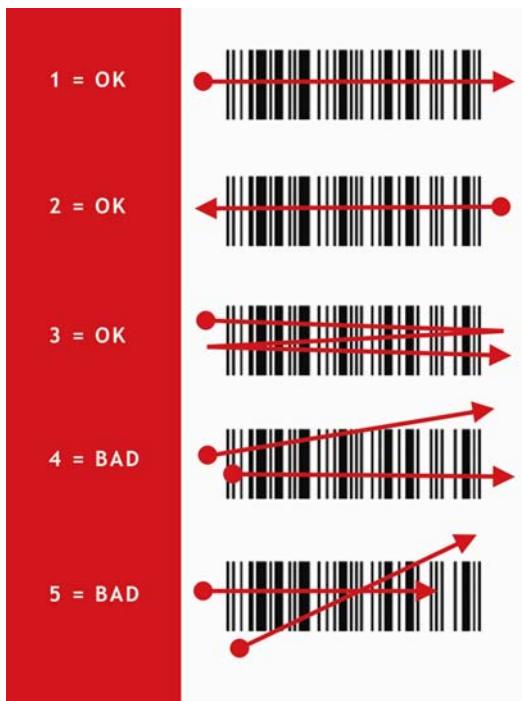


### 3.2.2 Reading a barcode

To scan:

- Position the barcode reader tip a few millimeters ahead of the barcode,
- Press and hold the button. The tip emits a red light, indicating that the BaracodaPencil is ready to scan,
- Scan the barcode from left to right OR from right to left (as if you were highlighting the barcode),





- The LED flashes green for 0.5 seconds if the scan is complete.
- The LED flashes red for 0.5 seconds if the scan fails. In this case, you must redo the operation.



*LED verte*



*LED rouge*

### 3.2.3. Automatic connection through the BaracodaPencil

The BaracodaPencil memorizes the address of the last device to which it was connected. A successful scan triggers an automatic connection to this device. The LED blinks green when the connection is made. The LED blinks yellow if no connection is possible: either the device is turned off or is out of range. In this case, the BaracodaPencil switches automatically to "Batch mode". See "Batch mode" below.

#### 3.3. "Batch mode" use for later transmission

In "Batch mode", the barcode is read and stored in memory, for later transmission to a remote device.

To operate in batch mode:

- Turn on the BaracodaPencil. The LED blinks green.
- Use the Baracoda configuration software to set the BaracodaPencil to "Batch mode". A yellow blinking LED indicates "Batch mode".
- Scan the barcodes:
  - The LED turns green for 0.5 seconds if the barcode is read,
  - The LED turns red for 0.5 seconds if the operation has failed.
  - When the LED is yellow, the memory is full. To clear the memory, create a connection with a device and use the Baracoda configuration software.

### 3.4. Other functions

#### 3.4.1 Low Battery

The BaracodaPencil is supplied with a charger.

3 periodical red blinks of the LED indicate that the battery level is low. You can continue to use the BaracodaPencil until it turns off by itself.

To recharge the battery, connect the charger into the battery plug (see 2-BaracodaPencil interface, 'Battery connector').

The LED remains red while the battery is charging. A full recharge takes about 2 hours. You cannot use the BaracodaPencil during the charging period. Remember to turn off the Bluetooth connection before recharging the battery.

#### 3.4.2 Battery Manager

In order to economize the battery power, the BaracodaPencil automatically breaks the Bluetooth connection and turns off after six minutes of inactivity in connected mode and 20 minutes in disconnected mode.

## 4. BaracodaPencil Status Display

### The status of the LED

Green blinking  
Fast green blinking  
One 0.5 seconds green flash  
One 0.5 seconds red flash  
Yellow blinking  
1 Yellow flash  
3 red blinks  
Constant red light

### Indicates the BaracodaPencil status

BaracodaPencil is on, awaiting a connection  
BaracodaPencil is connected to remote device  
Barcode is decoded  
Barcode cannot be decoded  
"Batch mode" is set  
Full memory  
Low battery  
Battery charging

## 5. Technical Specifications BaracodaPencil v1.0

### General

Interface: Radio, Bluetooth 1.1  
Recognized Codes: UPC/EAN, Code 39, code 128, Baracoda™  
Specific codes

### Radio specifications

Protocol: Bluetooth™ 1.1  
Emitting power: 2.5 mW maximum (Class 2)  
Range: 15 m (Class 2)  
Frequency: 2,4GHz – 2,48GHz (ISM)  
Modulation: GFSK (Gaussian Frequency Shift Keying) - 1Mbps  
Used profiles: GAP – SPP

### Processor

Micro controller: ARM7 TDMI (RISC 32-bits)  
Frequency: 20MHz  
Memory: 8kB RAM, 256kB Flash  
Decoder algorithm: Baracoda™ MBS 1.0  
Batch capacity: More than 1,000 scans

### Optical Specifications

Decoding technology: physical contact by optical sensor, composed of a LED (660 nm), a photodiode and a tip.  
Resolution: 0.1 mm.  
Field width: 0.6 mm/0.15 mm  
Light source: red/660 nm  
Scan speed: 80 – 600 mm/Sec.  
Scan angle: 5° to 40°

### Electrical Specifications

Battery: Ni-mH – 3.6V – 80mAh  
Consumption (Emission / Reception): 1mA in connection mode, no scan  
50mA in scanning mode, connected  
80mA (maximum)

Battery capability: 2,000 scans in one day.

### Physical Specifications

Dimensions: 4.40 in X 0.6 in X 0.98 in (122 mm X 26 mm X 20 mm.)  
Weight: .48 Oz (42g)  
Environment  
Temperature for use: 32° F to 104° F (0° C to 40° C)  
Temperature for storage: -4° F to 140° F (-20° C to 50° C)

### Standardization

CE Norm – European Union EMC Directive FCC  
Approved Bluetooth™ qualified

## 6. Barcodes for testing purposes

7.1.1 Code 39 :



7.1.2 Code EAN 13 :

3211341901001



Note: use a laser printer (600 dpi) to print new barcodes.

# **Federal Communications Commission (FCC) Compliance Notice**

## **Declaration of Conformity for Products Marked with the FCC Logo:**

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.

2-this device must accept any interference received, including interference that may cause undesired operation.

For questions regarding your product or this FCC declaration, contact:

Baracoda, Inc.  
575 Madison Avenue, Suite2500  
New York, NY 10022-2511  
Tel +1 800-262-0890  
Fax +1 212-755 6385  
[contact@baracoda.us](mailto:contact@baracoda.us)

To identify this product, refer to the Part, Series, or Model number found on the product.

## **Modification statement :**

The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by Baracoda Wireless Technology may void the user's authority to operate the equipment.

## **Class B digital devices regulatory notice:**

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 1 or more of the following measures: (1) Reorient or relocate the receiving antenna, (2) Increase the separation between the equipment and receiver, (3) Connect the equipment into an outlet on a circuit different from that to which the receiver is connected, (4) Consult the dealer or an experienced radio or television technician for help.

## **Wireless notice:**

This product emits radio frequency energy, but the radiated output power of this device is far below the FCC radio frequency exposure limits. Nevertheless, the device should be used in such a manner that the potential for human contact with the antenna during normal operation is minimized.

## **CAUTION:**

1-The plug is the disconnection device of the equipment therefore the socket outlet shall be nearly to the equipment and easily accessible.

2-Do not see directly the emitting diode.