



RFID 134.2 KHZ fixed reader (PRD 6540002A) **User Manual**



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This document gives information on how to use the RFID fixed reader works.

1. General information to the user.



1.1. *Manual function.*

Please read this user manual carefully and in its entirety before using the equipment.

This user manual provides you with clear and detailed information on how to use the fixed RFID reader. The illustrations and pictures in this manual represent all fixed RFID readers models.

This also applies to all actions, remarks and explanations contained in this manual. All documentation for your fixed RFID reader must be kept for its entire life.

1.2. *Intended audience.*

This manual is intended for all users likely to carry out operations on the fixed RFID reader throughout its usage cycle. All topics and areas important to users are covered.

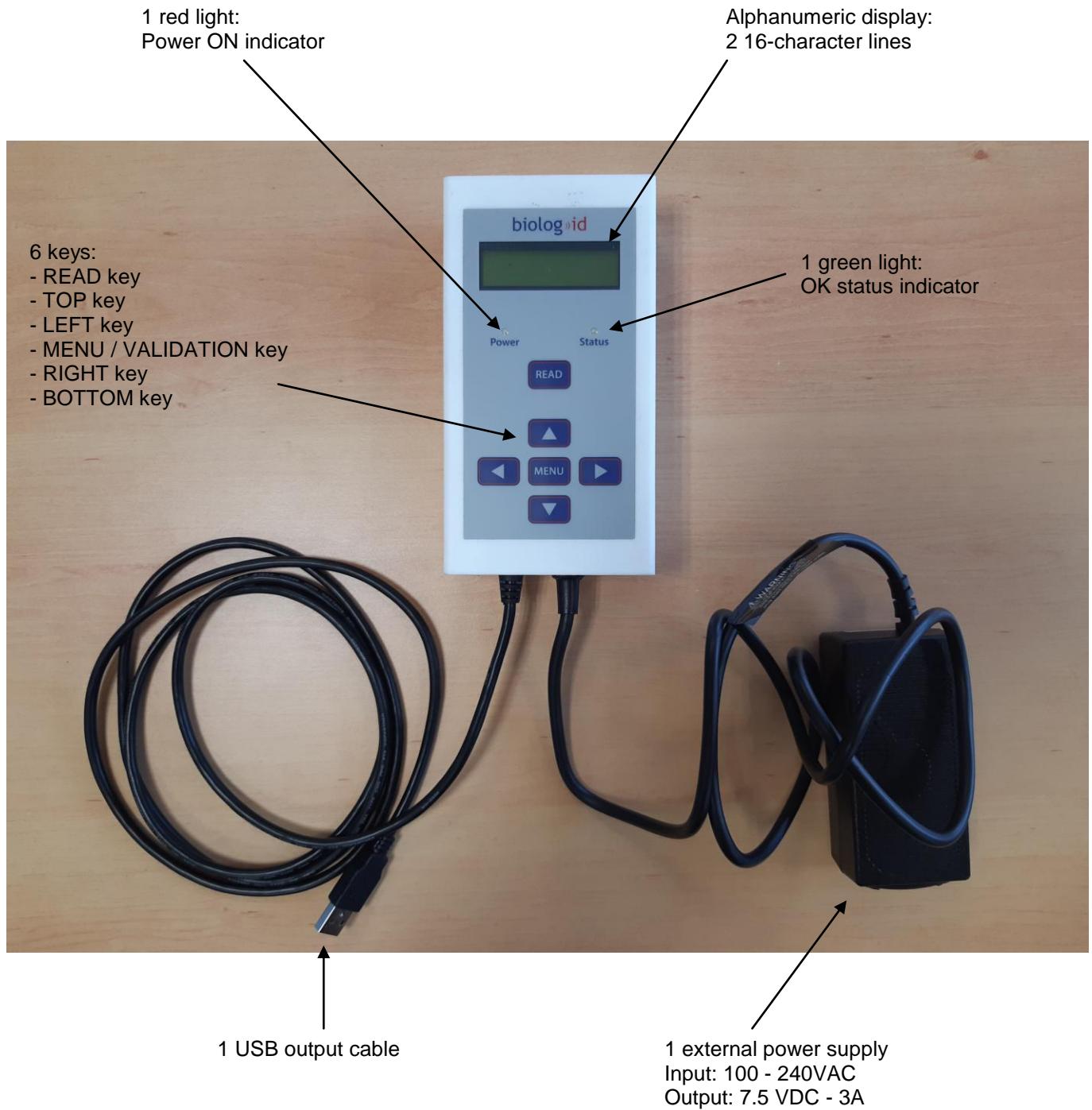
1.3. *Structure of the manual.*

The structure of the chapters follows the chronological order of the various usage phases of the fixed RFID reader.

1.4. *User advice.*

If you cannot find answers to questions linked to the operation or use of the fixed RFID reader, do not hesitate to contact us at the following email address support@biolog-id.com

2. Introducing the reader



3. Starting the drive

The reader is powered by plugging the external power cord into the electrical plug.
 The voltage range of entry is between 100 and 240VAC.

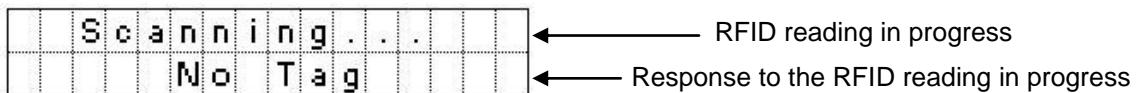
The reader then performs several steps that can be followed depending on the state of the red light and the display:

Steps	Description	Red Led	Lcd	Duration
1	Bootloader	Flashes	No character	3s
2	Automatic antenna adjustment	On		2s
3	The reader is ready and performs transponder reading continuously without any press on a key	On		

4. Description of the reader

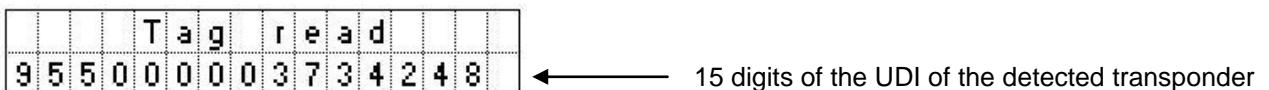
4.1. RFID reading

The reader performs RFID reading continuously without pressing any button. It displays:



Place a transponder near the drive.

When this transponder is detected by the reader, the green light lights up, a beep is emitted and the digital screen displays:



In addition, this unique number is sent to the USB communication port.

The unique number is as follows:

```
Response:  

<--data ASCII-->  

95500003734248 CR LF
```

The number of the detected transponder is displayed:

- for a set time: "DISPLAY TIME".
- or until a new transponder is detected.

During this display, RFID playback is not interrupted.

4.2. Standby mode

By pressing the READ button, the reader is turned to the standby mode.

In standby mode:

- the reader no longer detects RFID.
- the display and the red light turn out.
- only the READ button remains active, the other keys are no longer active.
- consumption is maintained at a minimum.

To turn the reader back on, press the READ button.

5. Reader settings

Press the MENU button  to enter the setting menu.
 The reader displays:

Initial menu	→	<table border="1" style="border-collapse: collapse; text-align: center;"> <tr> <td></td><td>S</td><td>E</td><td>T</td><td>U</td><td>P</td><td>M</td><td>E</td><td>U</td><td></td></tr> <tr> <td></td><td>D</td><td>I</td><td>S</td><td>P</td><td>L</td><td>A</td><td>Y</td><td>T</td><td>I</td><td>M</td><td>E</td></tr> </table>		S	E	T	U	P	M	E	U			D	I	S	P	L	A	Y	T	I	M	E
	S	E	T	U	P	M	E	U																
	D	I	S	P	L	A	Y	T	I	M	E													

The two keys   allow you to navigate from one menu to another in the list of the following menus:

Menu
DISPLAY TIME
DOUBLE READINGS
DOUBLE TIME
Buzzer
READER VERSION
UPGRADE FIRMWARE
EXIT

Press the MENU button  to validate the selected menu.
 The details of these menus are described in the following paragraphs.

If you select the EXIT menu, the digital screen will display:

Latest menu	→	<table border="1" style="border-collapse: collapse; text-align: center;"> <tr> <td></td><td>S</td><td>E</td><td>T</td><td>U</td><td>P</td><td>M</td><td>E</td><td>U</td><td></td></tr> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>EXIT</td></tr> </table>		S	E	T	U	P	M	E	U											EXIT
	S	E	T	U	P	M	E	U														
									EXIT													

If you validate this choice by pressing the MENU button , the reader leaves the setting menu and returns to its normal mode of operation.
 If no button is activated for 30 seconds, the reader automatically returns to the setting menu.

5.1. Menu "DISPLAY TIME"

This "DISPLAY TIME" setting is the second time of view of the single number (UID) of the detected transponder.

When you select this menu, the digital screen displays:

Shows the current menu	→	<table border="1" style="border-collapse: collapse; text-align: center;"> <tr> <td></td><td>D</td><td>I</td><td>S</td><td>P</td><td>L</td><td>A</td><td>Y</td><td>T</td><td>I</td><td>M</td><td>E</td></tr> <tr> <td></td><td>3</td><td>0</td><td>0</td><td></td><td></td><td></td><td></td><td></td><td>S</td><td>e</td><td>c</td><td>o</td><td>n</td><td>d</td><td>s</td></tr> </table>		D	I	S	P	L	A	Y	T	I	M	E		3	0	0						S	e	c	o	n	d	s
	D	I	S	P	L	A	Y	T	I	M	E																			
	3	0	0						S	e	c	o	n	d	s															
↑																														

Current viewing time

Press the keys   to increase or decrease the value of the desired duration.
 You can select a viewing time comprised between 1 and 300 seconds.

Press the MENU button  to validate your selection, the digital screen then displays:

	D	I	S	P	L	A	Y	T	I	M	E	
	S	A	V	E	:		N	O				

Press the keys   to enter whether or not you want to confirm your choice.

Press the MENU button  to confirm the validation of your choice:

- If you've chosen "YES," the digital screen saves your new duration and then returns to the setting menu.
- If you have chosen "NO," the digital screen retains its display time and then returns to the setting menu.

If no button is pressed for 30 seconds, the digital screen leaves this menu, keeps the display time and does not record it.

By default, the digital screen's viewing time is 300 seconds (5 minutes).

5.2. Menu "DOUBLE READING"

This "DOUBLE READINGS" setting allows you to validate or not the management of 2 consecutive identical RFID readings.

If this management of double-reading scans is not validated:

- then with each transponder detection, its UID is emitted on the USB port.

If this management of double readings is validated:

- then if the UDI of the detected transponder is identical to the one detected previously for a period less than the "DOUBLE TIME" setting then the UDI of this transponder is not emitted on the USB port

When you select this menu, the reader displays:

Shows the current menu →

D	O	U	B	L	E	R	E	A	D	I	N	G	S
A	C	T	I	V	E	:		N	O				

↑
Current setting status

Press the keys   to enter whether you want the "DOUBLE READINGS" setting to be active or not.

Press the MENU button  to validate your selection

If no button is activated for 30 seconds, the digital screen leaves this menu without changing this setting.

By default, the "DOUBLE READINGS" setting is active.

5.3. Menu "DOUBLETIME"

This "DOUBLE TIME" setting is the duration in seconds of managing 2 consecutive RFID readings that are identical. This duration is only active if the "DOUBLE READINGS" setting is active.

When you select this menu, the reader displays:

Shows the current menu

→

	D	O	U	B	L	E	T	I	M	E	
5											

↑

Time to manage dual readings in progress

Press the keys   to increase or decrease the desired duration.
 You can choose a display time-of between 1 and 30 seconds.

Press the MENU button  to validate your selection, the digital screen then displays:

	D	O	U	B	L	E	T	I	M	E	
SA	V	E	:								

Press the keys   to enter whether or not you want to confirm your choice.

Press the MENU button  to confirm the validation of your choice:

- If you've chosen "YES," the digital screen saves your new duration and then returns to the setting menu.
- If you have chosen "NO," the digital screen retains its previous duration and then returns to the setting menu.

If no button is activated for 30 seconds, the digital screen leaves this menu, maintains the duration of managing the double-reads and does not record it.

By default, the reader's viewing time is 5 seconds.

5.4. Menu "BUZZER"

This "BUZZER" setting allows you to validate or not the audible alarm during a valid RFID reading.

When you select this menu, the reader displays:

Shows the current menu

→

		B	U	Z	Z	E	R				
A	C	T	I	V	E	:	Y	E	S		

↑

Current buzzer status

Press the keys   to enter whether you want the buzzer to be active or not.

Press the MENU button  to validate your selection

If no button is activated for 30 seconds, the digital screen leaves this menu without changing this setting.

By default, the buzzer is active.

5.5. Menu "READER VERSION"

This "READER VERSION" menu allows you to view the firmware version of the reader.

When you select this menu, the digital screen displays the current version of your reader:

P	R	D	6	5	4	0	0	0	2	F	0	2	
V	1	,	0	0	2	5	1	0	2	I	2	0	2

Press the MENU button  to return to the setting menu.

If no button is activated for 30 seconds, the digital screen returns to the setting menu.

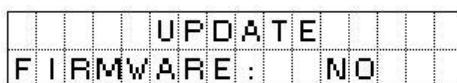
5.6. Menu "UPDATE FIRMWARE"

This update is to be performed following instructions sent by BIOLOG-id.

Before selecting this menu, make sure:

- to install the "PSoC5 Firmware Updater" application on a computer.
- to have a USB link between the PRD654 drive and the computer.
- to have a file available to update the firmware type "PRD6540002-F02-V1.00-250220.cyacd".

When you select this menu, the digital screen displays:



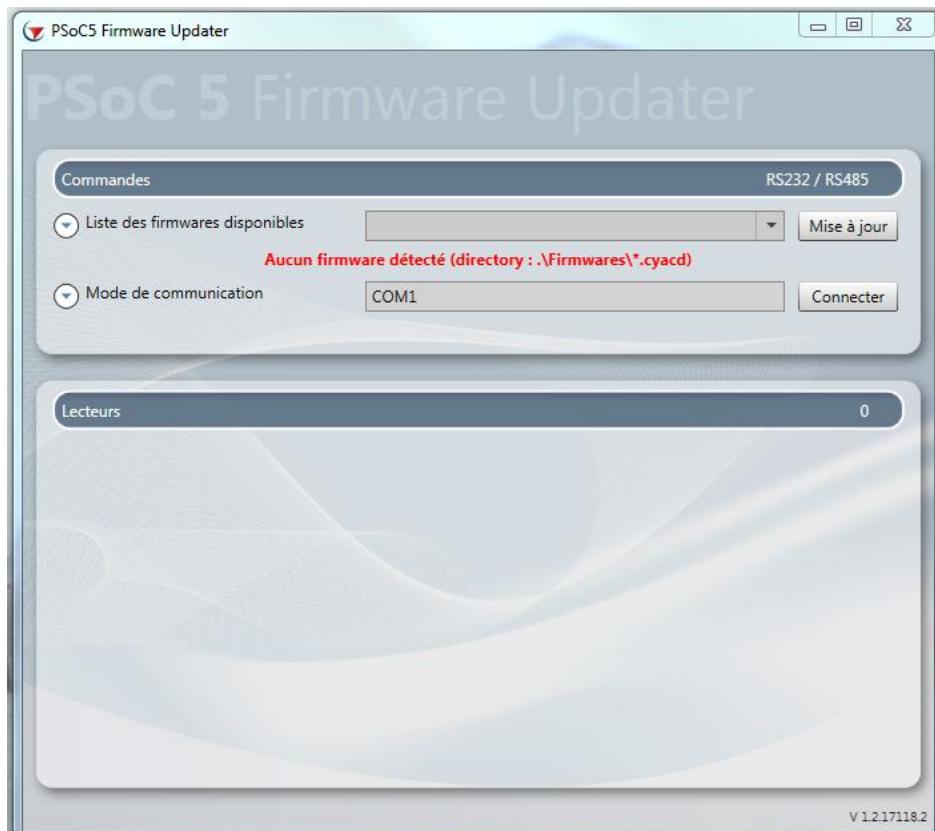
Press the keys to enter whether or not you want to confirm your choice.

Press the MENU button to confirm the validation of your choice:

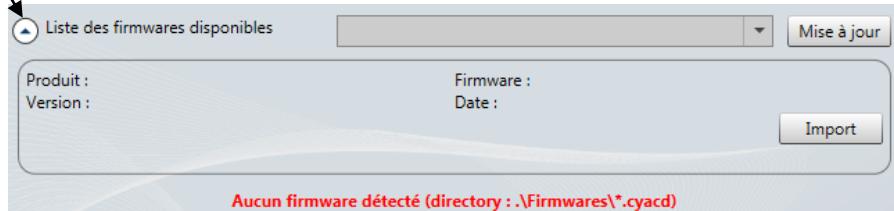
- If you have chosen "NO," the digital screen does not update and returns to the setting menu.
- If you have chosen "YES," the digital screen is ready for the update, the red light flashes and the digital screen no longer displays any character.

Important note: If you have selected "YES," the player will then stay permanently awaiting the Firmware update. We advise you to make sure to do this update before selecting "YES."

Then run the "PSoC5 Firmware Updater" app:



Click on the arrow to open the drop-down menu "Liste des firmwares disponibles"



Click "**Import**" and then search the directory for the update file type "PRD6540002-F02-V1.00-250220.cyacd". Then click "**Ouvrir**" and the file name appears:

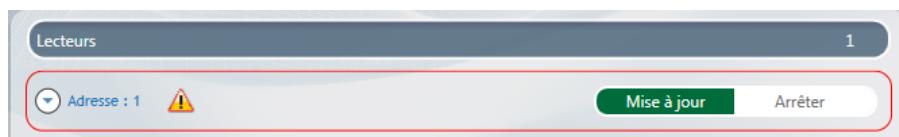


During the USB connection, the PORT COM service is used. You can identify the COM port number used in your computer's device manager.

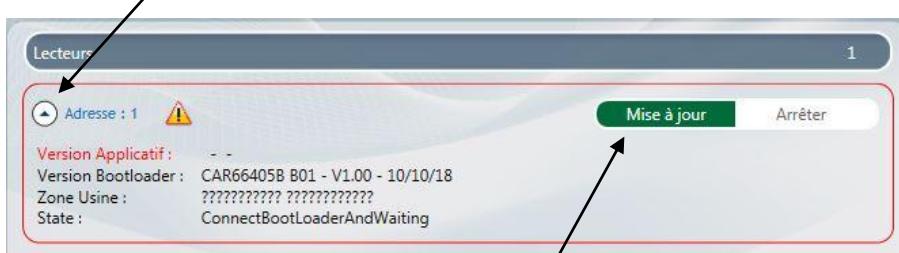


Enter the communication port by respecting "COMx", x being the number used.

Then click "**Connecter**" the reader's information then appears in the Readers framework:



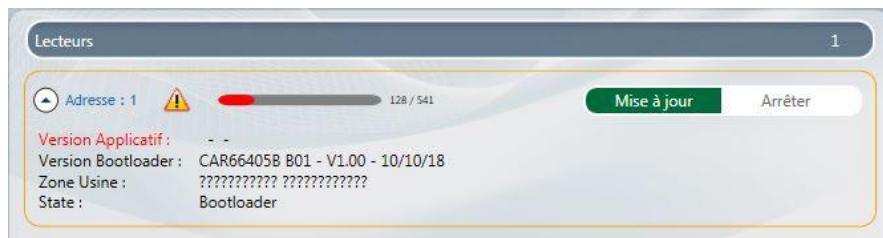
Click on the arrow to open the drop-down menu:



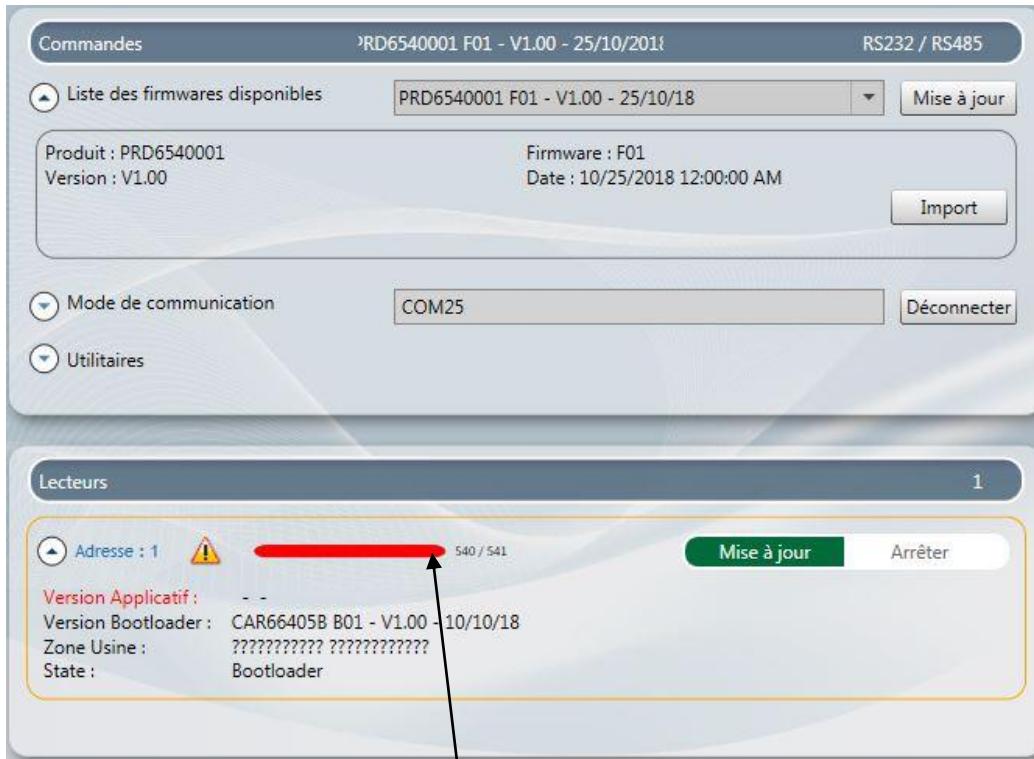
Click "**Mise à jour**"

The progress bar confirms the current update.





Wait about 2 minutes until the progress bar is solid.



The update is complete when the meter is at N-1 and the reader has started well.

Then click "**Déconnecter**"

The drive firmware is updated and the main menu is activated.

USB communication settings

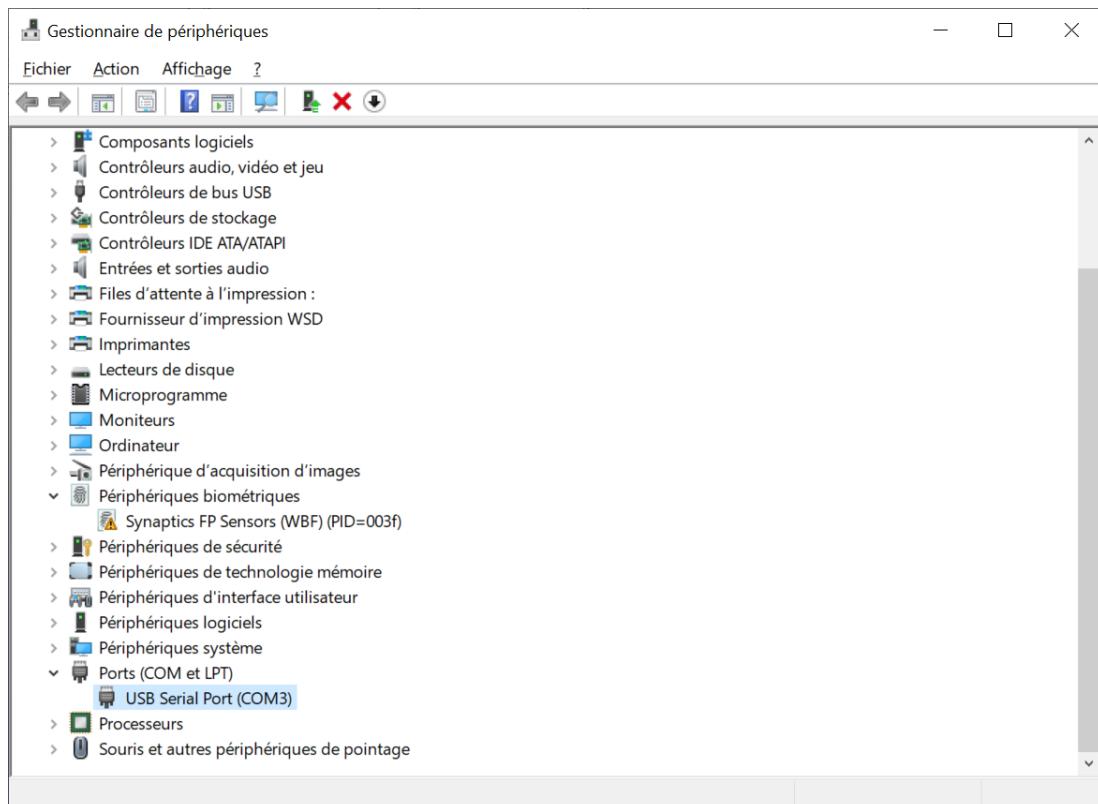
Serial communication on the USB port has the following parameters:

Settings	Value
Baud Rate	9600
Parity	None
Data Bits	8
Stop Bits	1
Flow control	None

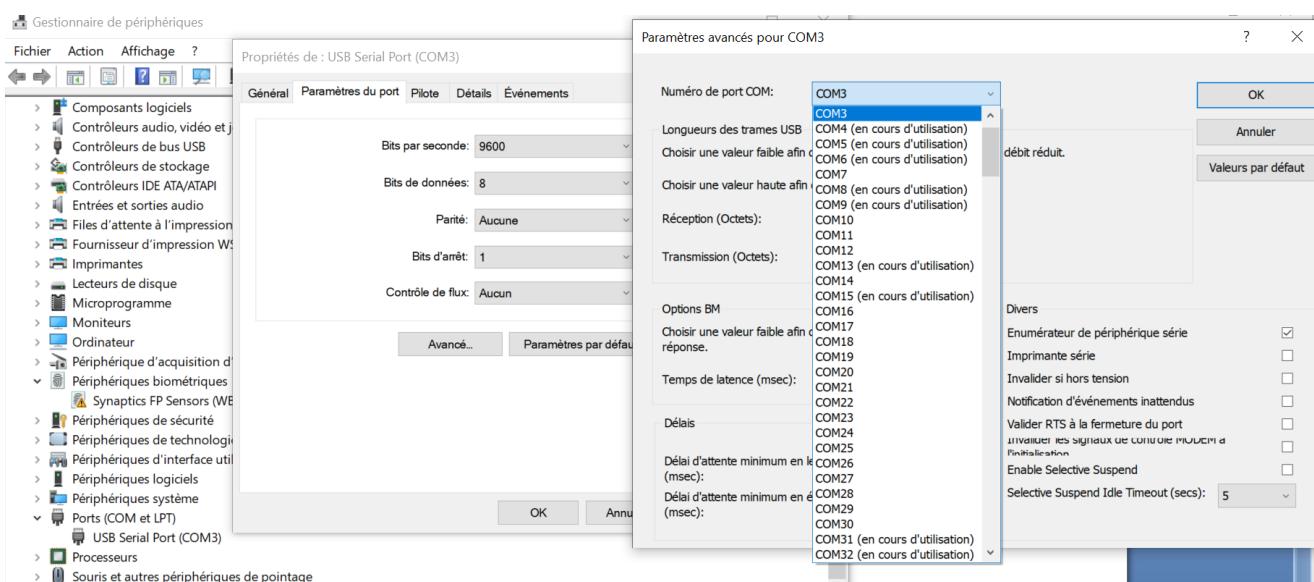
5.7. Find the reader's communication port

Once the reader is connected to the computer, to find out which communication port the computer is connected to, open the computer's device manager.

On this page, the reader must appear under the name "USB Serial Port" followed by the assigned communication port number. In the example Port COM 3.



If port COM doesn't show up, click right on "USB Serial Port" and then "Propriétés".
 In the "Matériel" tab appears the communication port on which the reader is connected.



6. Safety guidelines

6.1. General safety guidelines



- Ensure that the power cable is not jammed or bent when installing or moving the reader.
- Do not disassemble or disable the elements of the PRD_6540002A reader.
- Do not place an object on the PRD_6540002A reader.
- The reader cannot be stored or used outside the temperature and humidity ranges prescribed in this manual
- Never allow water or other liquid to enter the reader to avoid the risk of short-circuiting or oxidation of metal elements.
- The PRD_6540002A reader should only be used with original accessories or original spare parts as these are the only accessories/spare parts whose reliability, safety and compatibility have been verified with our reader.

6.2. RF radiation hazards



Portable or mobile RF communication devices can affect the PRD_6540002A reader.

The use of ACCESSOIRES, transducers and cables other than those specified, with the exception of transducers and cables sold by the MANUFACTURER of the PRD_6540002A reader as replacement parts for internal components, may result in an increase in EMISSIONS or a decrease in the IMMUNITY of the PRD_6540002A reader.

The PRD_6540002A reader should not be used next to other devices or stacked with them.

The PRD_6540002A reader may experience interference from other devices, even if they comply with CISPR EMISSION requirements.

Recommended separation distances

The PRD_6540002A reader is intended to be used in an electromagnetic environment in which radiated RF disturbances are controlled.

The user or installer of the device can help prevent electromagnetic interference by maintaining a minimum distance, depending on the maximum power of the radio frequency transmission equipment. Portable RF communication devices (including devices such as antenna cables and external antennas) should not be used within 30 cm of any part of the PRD_6540002A reader, including cables specified by the manufacturer. Otherwise, the performance of these devices could be affected.

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6.3. Contraindications

As a preventive measure, people with pacemakers are advised not to use PRD 654 0002A reader.

6.4. Warning for United States users

Federal Communication Commission Interference
Statement 47 CFR Section 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 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 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 PRD_6540002A reader 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 an operationdesired.

NO UNAUTHORIZED MODIFICATIONS
47 CFR Section 15.21

CAUTION: This equipment may not be modified, altered, or changed in any way without signed written permission from Biolog-id. Unauthorized modification may void the equipment authorization from the FCC and will void the Biolog-id warranty.

This device complies with FCC RF radiation exposure limits set forth for general population (uncontrolled exposure). This device must be installed to provide a separation distance of at least 20cm from all persons and must not be collocated or operating in conjunction with any other antenna or transmitter.

7. Environment

Operating temperatures	0°C to 40°C
Storage temperatures	-20°C to 70°C
Humidity	5 - 95% RH