"Petscan RT 250"
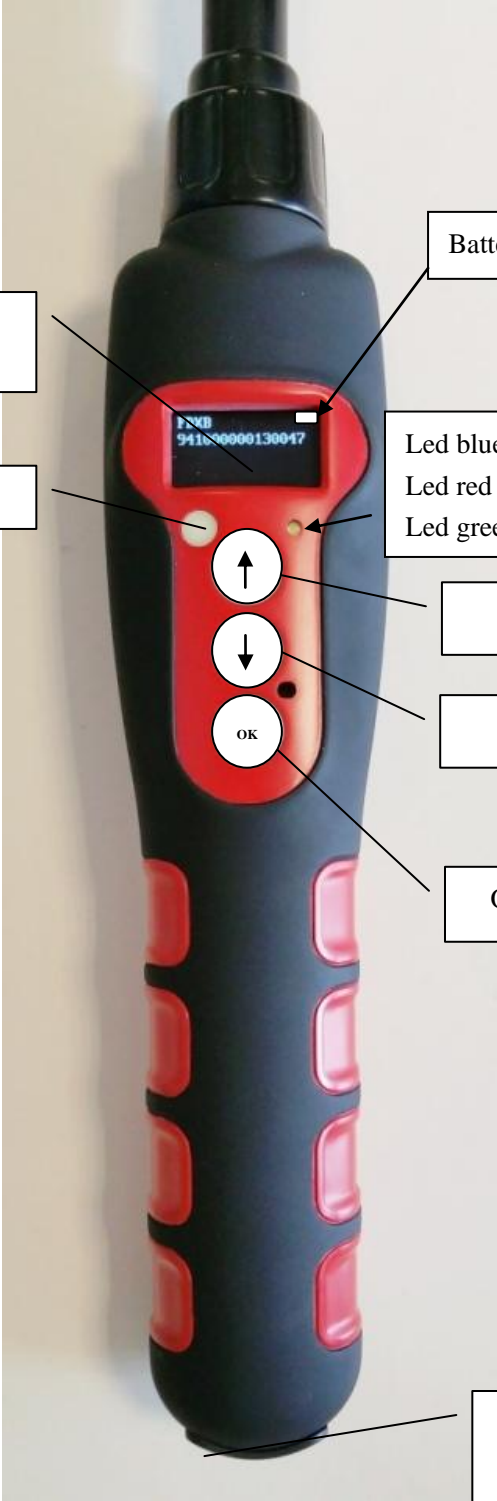
Display OLED
128×64 pixels

In/out button (1)

Battery charge level

Led blue :Bluetooth activated
Led red : charging battery
Led green : battery charged

Scroll up

Scroll down

OK (enter or validate)

Mini USB and reset button
Battery and communication

Reader Characteristics

Frequency	134.2kHz read and write
Protocol	ISO11784/5 FDX-A, FDX-B, EM4102, HDX
Reading range	14 /15cm （12mm×2mm, glasstag FDX-B) 9/11cm (12mm x 2mm glasstag FDX-A) 28/30cm ear tag FDX-B (depends of the provider)
Display	128×64，black & white，OLED
Button	4 buttons
Indication	Battery charge level, Bluetooth , Buzzer
USB port	USB virtual comport，bluetooth virtual com.port
Power supply	Lithium battery，5000mAh，3.7V
Dimensions	650mm (L)×63(W)×45(H)
Weight	460g
Charging mode	Mini USB
Accessories	Mini USB cable, User manual, Battery 5000mA: 3,7Volts.
Compliances certifications	FCC - CE
Memory	Up to 800 numbers of chips

The RT250 is delivered with English language configured. To change the language see chapter hereunder « Menu Language »

Table of contents

Bluetooth RT 250 reader

All readers are delivered with integrated Bluetooth technology. The Bluetooth function consumes energy. It is therefore recommended to activate this function only for the time necessary for its use.

To stop Bluetooth communication, simply select the "Bluetooth" menu and disable the function. Communication via Bluetooth is limited to around ten metres and depends on the environment of your PC. To enable Bluetooth on your PC, please consult your computer user manual. Don't forget to disable the security of Bluetooth on your PC because the V8BTBT don't ask a security code. If your PC need a code, enter 1234.

Data transmission by Bluetooth or via the USB cable

To be able to transmit the tag numbers read or the numbers recorded in the memory (maximum 800), via Bluetooth or using the USB cable, the user needs to have installed the appropriate driver* on his PC. This driver can be downloaded free of charge from :
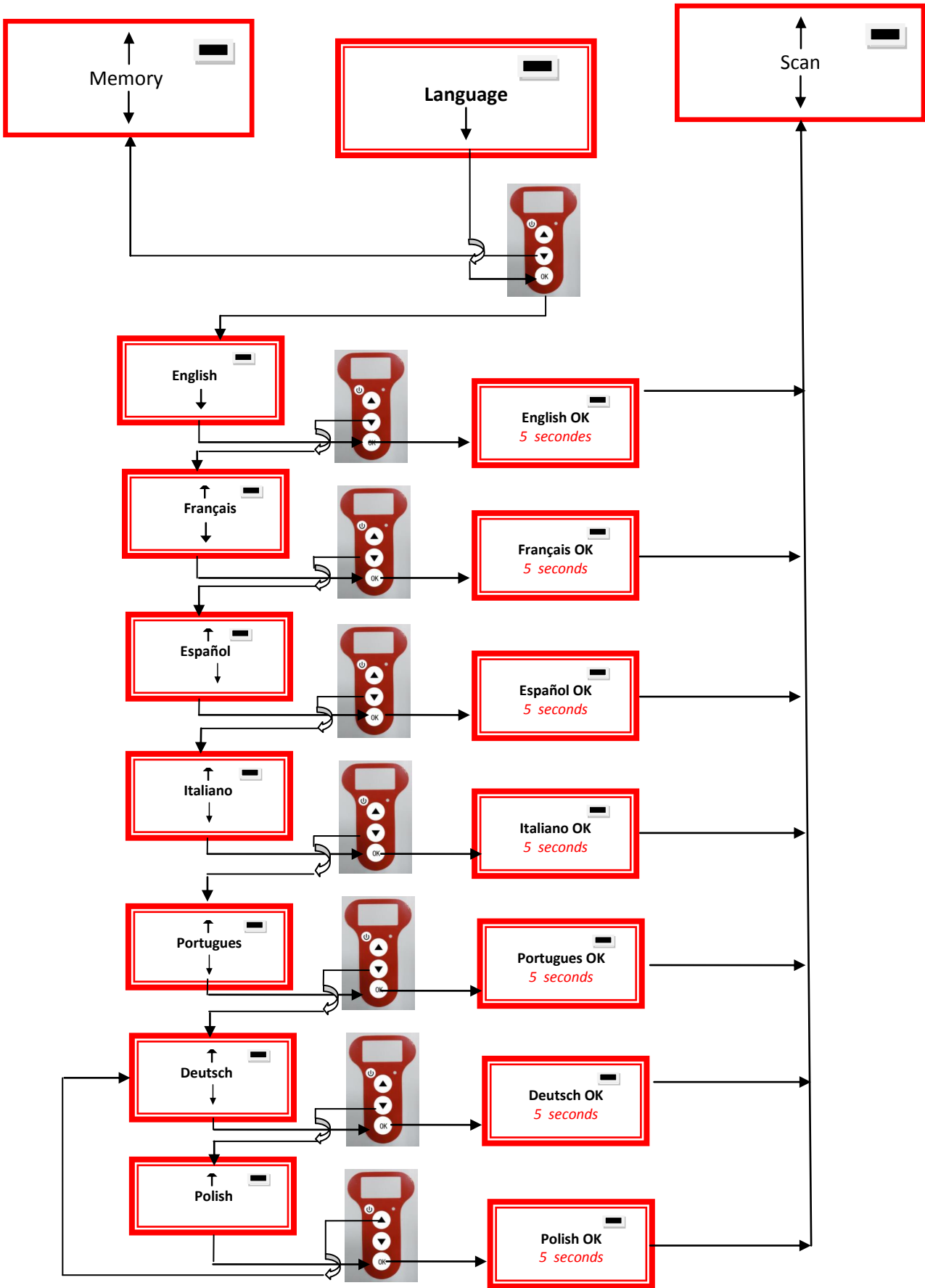
http://www.swissplusid.com/downloads/RTDriver.zip

Once the driver is installed on your PC you will need to have application software to view and potentially record the data sent by the reader.

You can use Hyperterminal if your operating system is XP or Realtrace Terminal with XP or Windows 7/8.
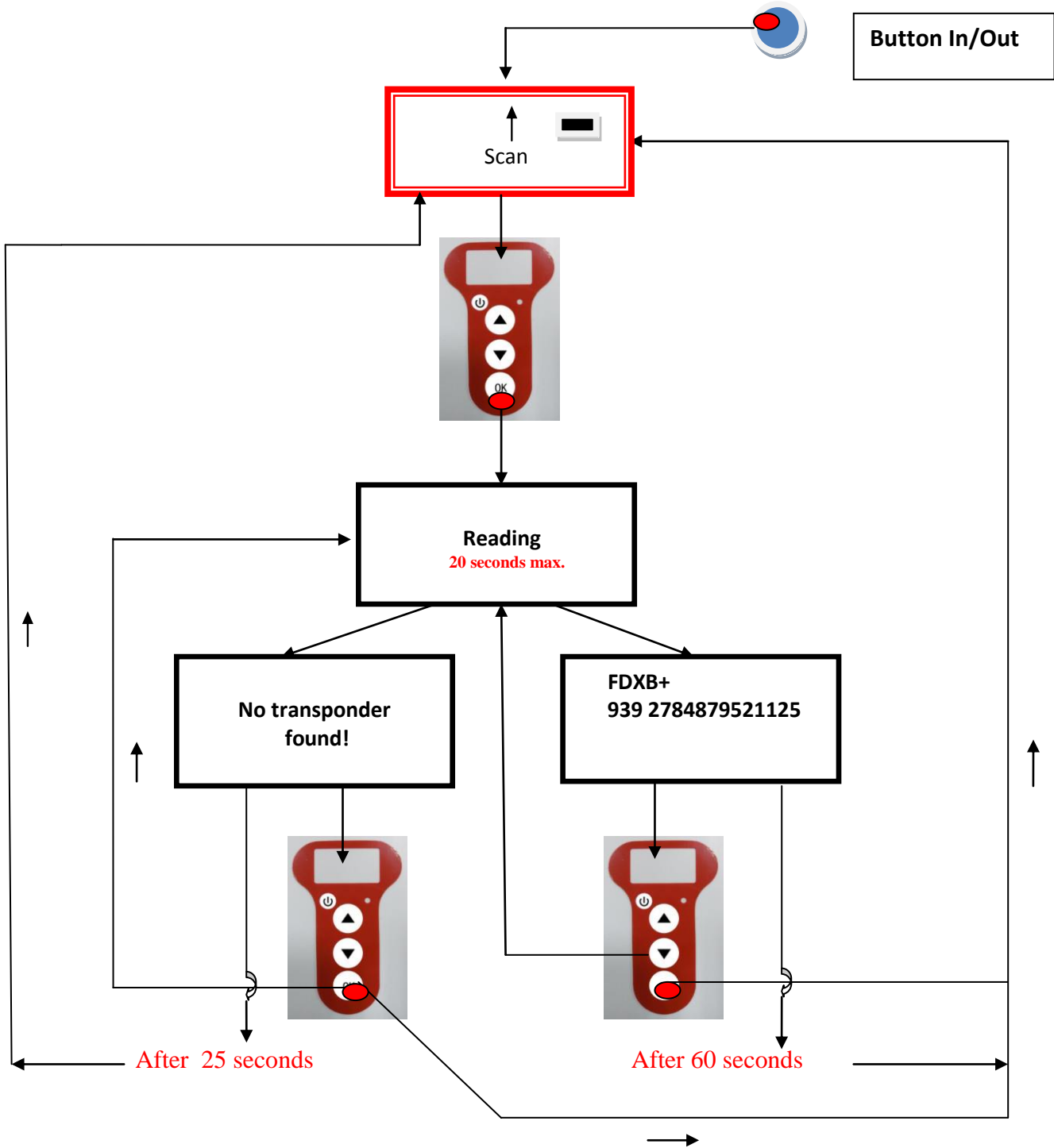
* A driver is a program enabling an operating system, in this case Windows XP or Windows 7 on a PC, to recognise a <u>hardware peripheral</u> and use it.

Synoptics of menu "Language"

Synoptic menu « Scan »

Button In/Out

Scan

Reading
20 seconds max.

No transponder
found!

FDXB+
939 2784879521125

After 25 seconds

After 60 seconds
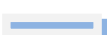
Charging indicator light

Synoptics menu « Bluetooth »

Enable Bluetooth

Bluetooth

Button IN/OUT

1

2

3

4

Scan
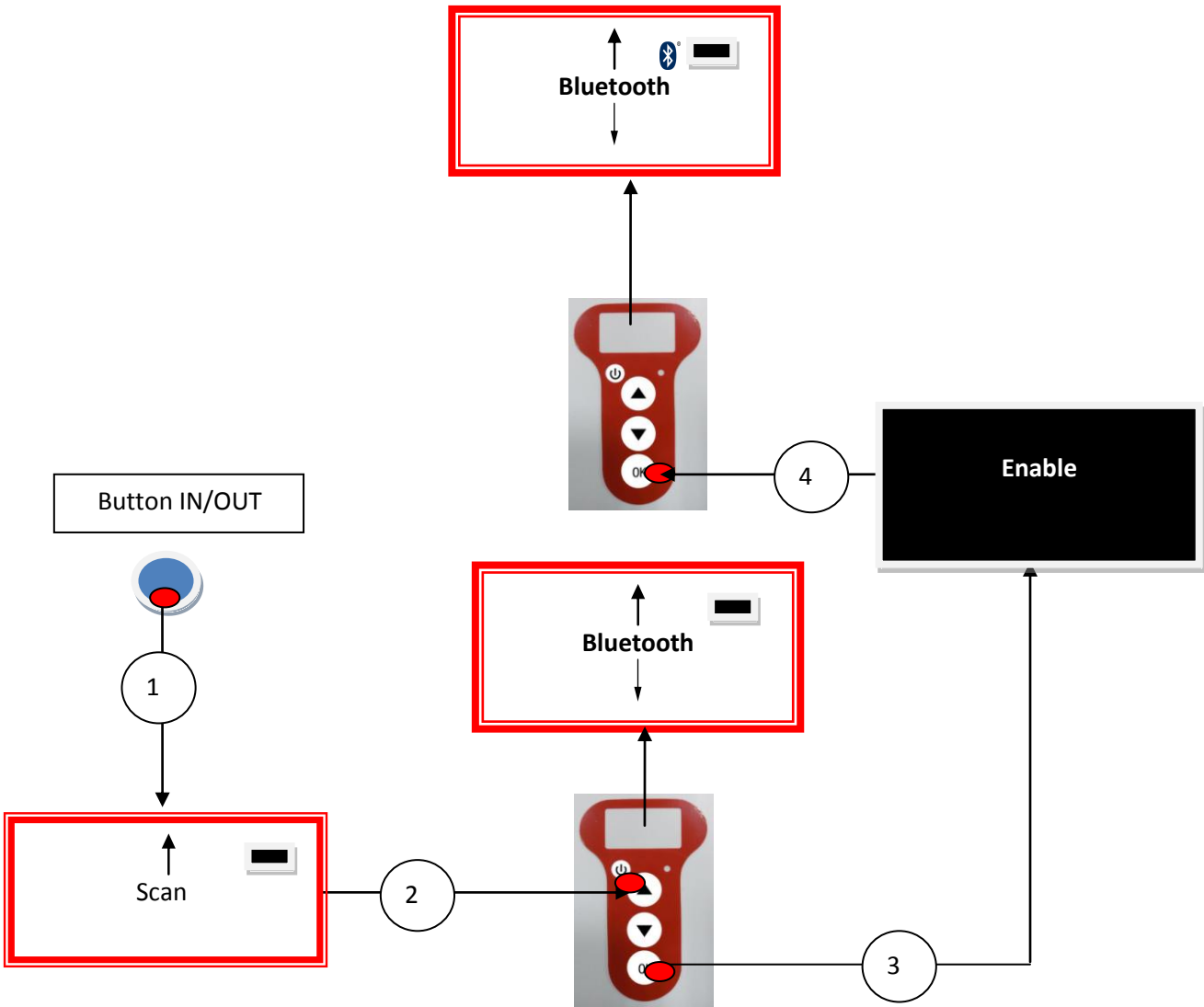
Bluetooth

Enable

▬ **Charging indicator light**

▬ **Bluetooth indicator light**

Synoptics menu "Bluetooth"

Disable Bluetooth

Scan

Bluetooth

7

6

5

4

Disable

Button IN/OUT

Bluetooth

1

Scan

2

3
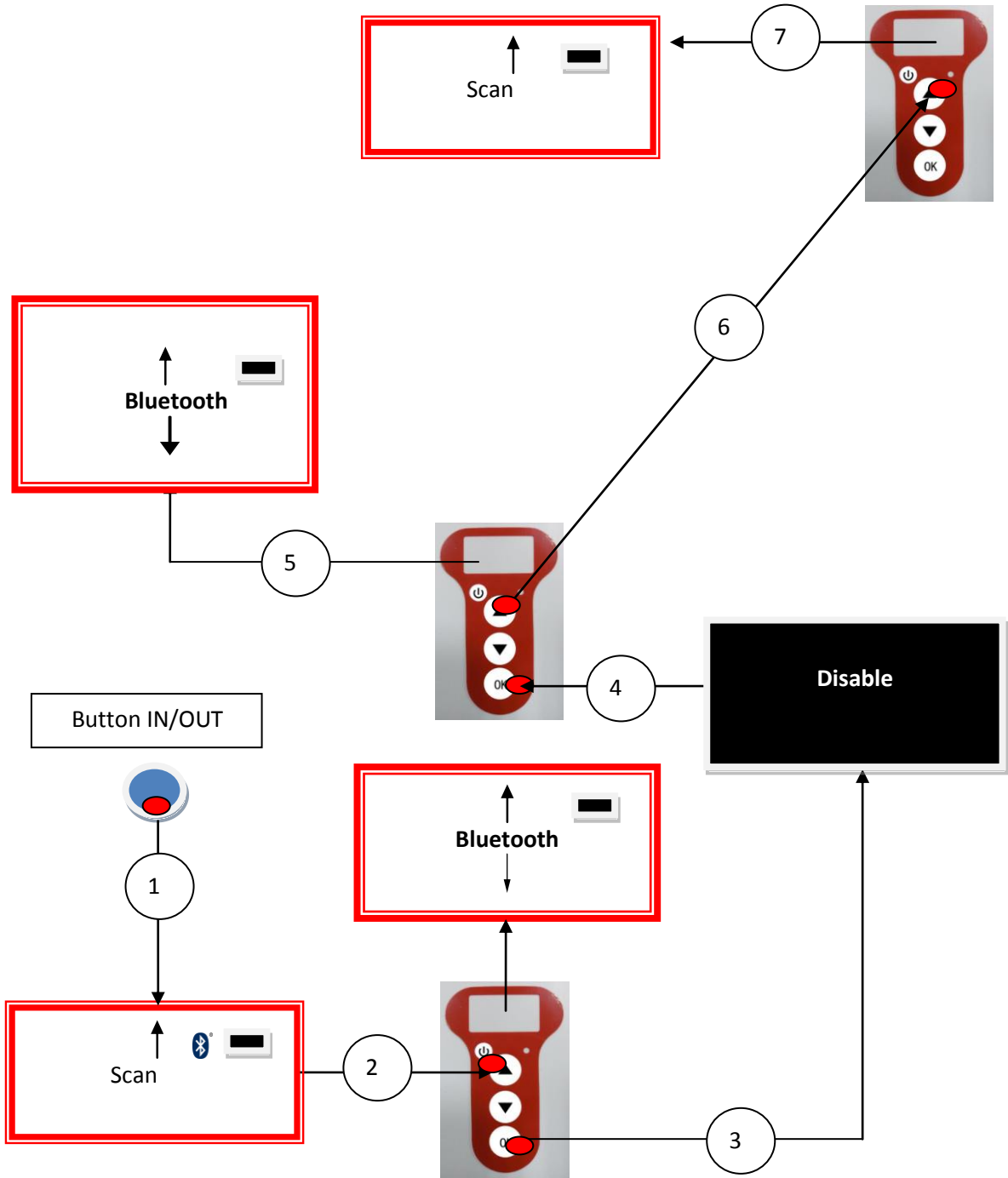
Using the RT 250BT Memory

The RT 250BTBT reader has a memory enabling it to store 800 identifiers (tag numbers).
This function must be activated by the user if he wishes to use it.

Storage of numbers read by the RT 250BTBT reader

The RT 250BTBT allows the user to store the numbers of the tags read in order to transfer them subsequently to a PC using the USB cable included with the reader or with Bluetooth.
To use this function, you must first activate the "Memory" function (see block diagram: "Memory 1").
When the Memory is activated each time a new tag is read, the reader displays the number but if the same tag is read twice by mistake the reader indicates this by emitting a characteristic beep and displaying "DUP" on the right of the screen.
This number will not be stored a second time.
If the reader is switched off, the memory function will still be activated when it is switched on again.

Deactivating the memory

The memory can be deactivated via the "Memory" menu.
Two cases may arise:

First case:
Numbers are recorded in the reader's memory (Block diagram: Memory 3)
In this case you must transmit the list of recorded numbers actually or virtually (without plugging in the USB cable) and then erase them .

Second case:
The memory has been previously activated but no number has been recorded.
In this case simply "deactivate" the memory (block diagram: "Memory 2"

Erasing the memory

To erase the contents of the memory to avoid errors, you must select the "Memory" menu and transmit the list of recorded numbers actually or virtually (without plugging in the USB cable) and then erase them (see Block Diagram: Memory 3).

Synoptics menu « Memory 1 »

Enable the Memory

M:0   ↑
Scan

4

Enable

3

Memory

Press twice

1

2

Scan

1

Button IN/OUT

1
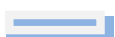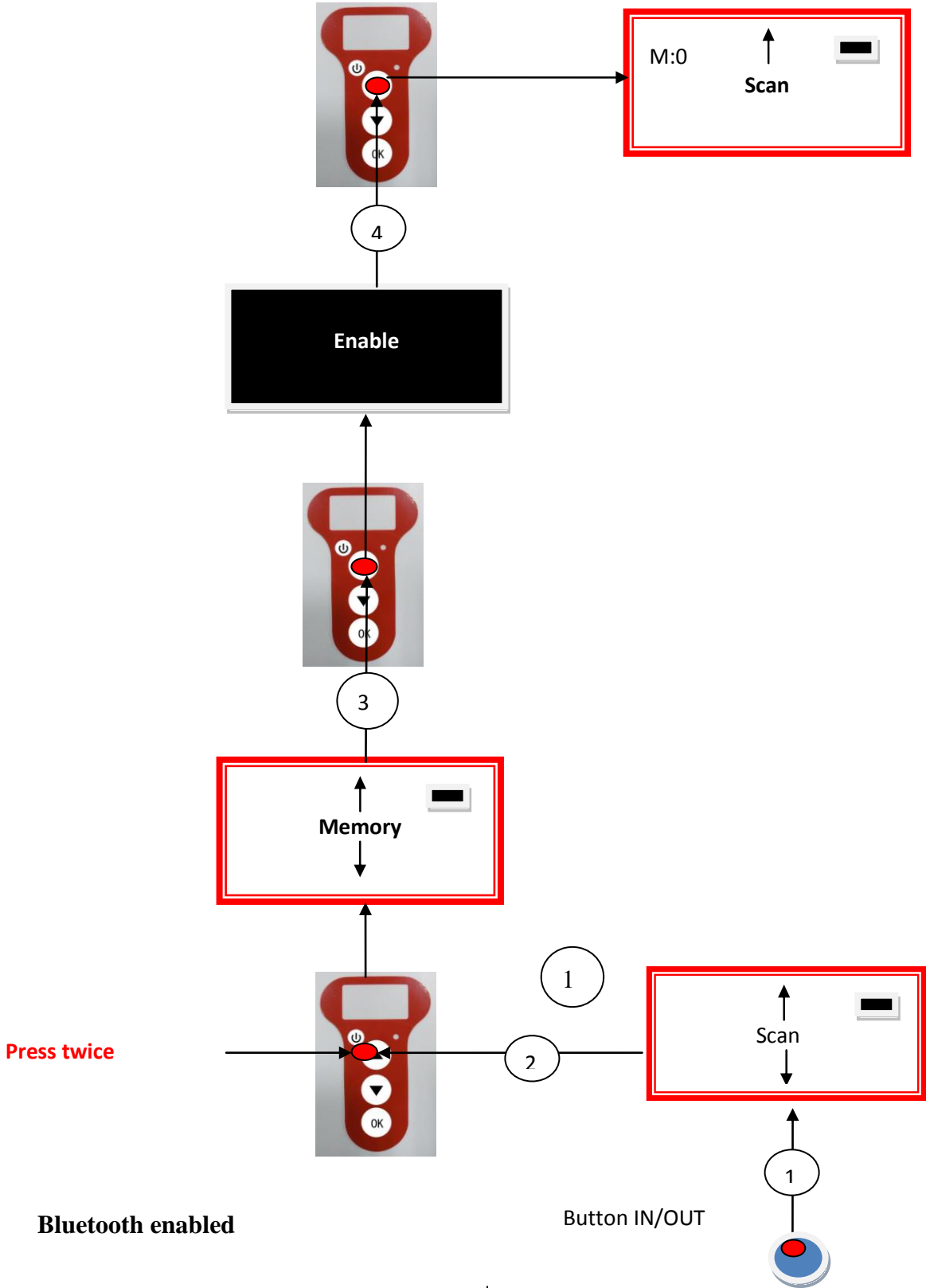
Bluetooth enabled

Statement of the battery

Synoptics menu « Memory 2 »

Disable the Memory
No chip registered

Scan

4

Disable

3

Memory

M:0

Scan

2

Press twice

1

Button IN/OUT
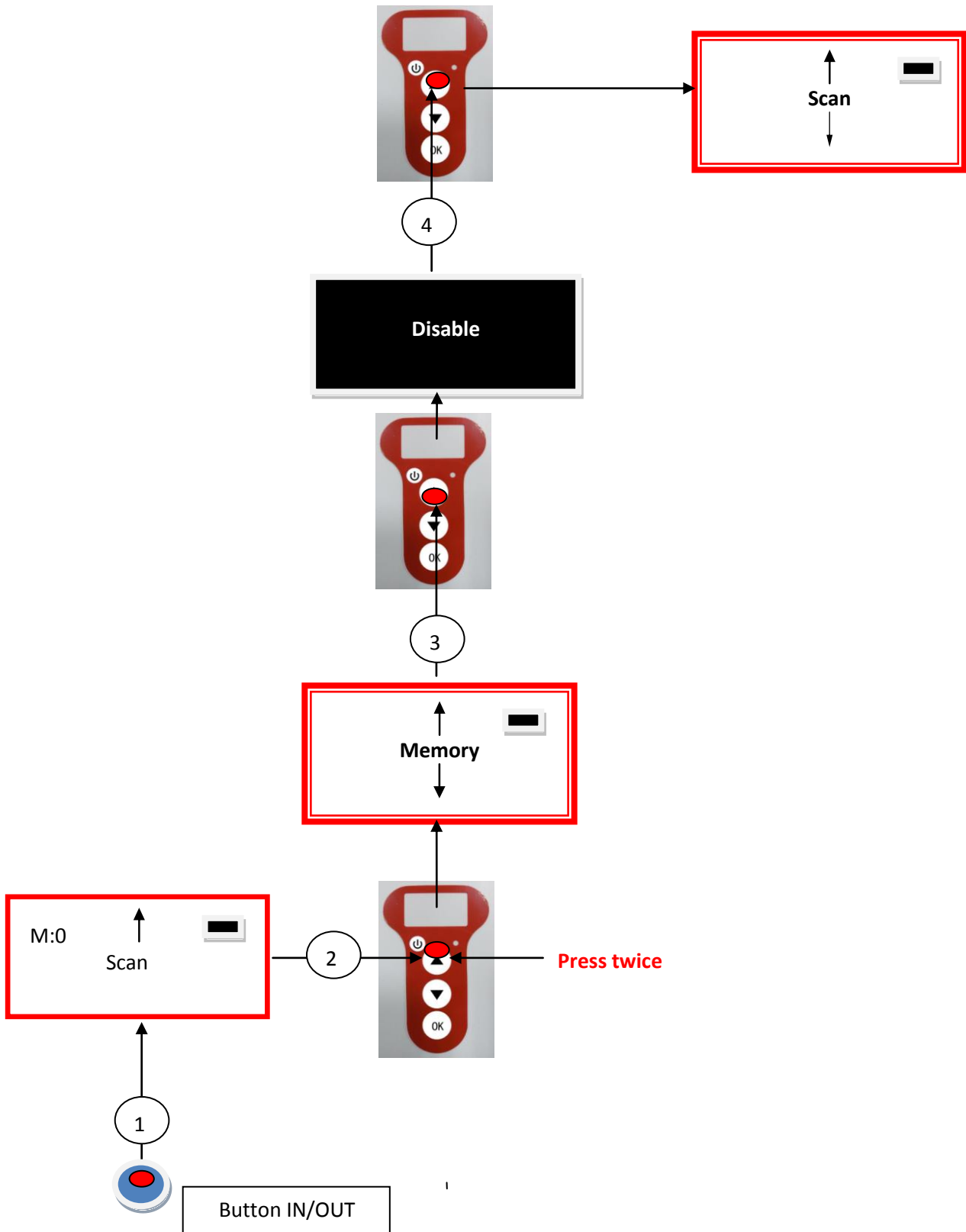
Synoptics menu « Memory 3 »

Disable the Memory
15 chips numbers registered in the memory

Sending
*****

**Press "OK"
to erase**

(5)

**Press "OK"
to confirm erase**

(6)

If you don't press « OK »
After 8 seconds

(4)

Send

M:15   ↑   ▬

Scan

Erasing
******

(3)

M:15   ↑   ▬

Memory
↓

M:0   ↑   ▬

Scan

M:15   ↑   ▬

Scan

(2)   **Press twice**

(1)

Button IN/OUT
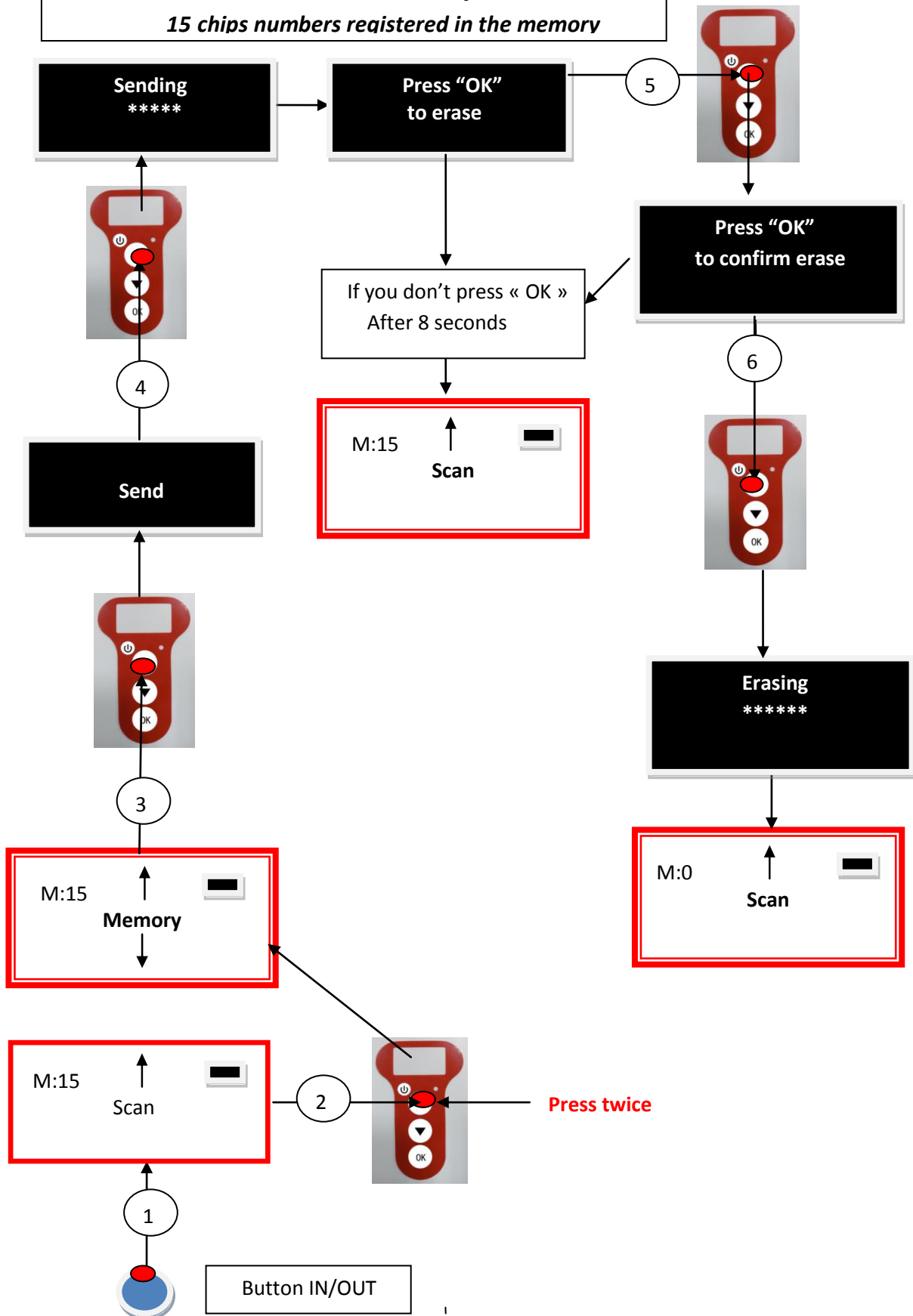
Communication between RT 250BTBT and a PC

To transfer the contents of the memory you must connect the reader to a PC via the USB cable. You must then select the "Memory" menu and follow the instructions given on the display (see Block Diagram: "Memory3").

If the reader is connected to a PC it will transfer the number of the tag read on each reading. It is not necessary for the "Memory" function to be activated to carry out this transfer.

Caution: for the reader to communicate with a PC, you must first install the readerr and have software such as Hyperterminal (Windows XP), Realtrace Terminal, etc. which enables the data to be displayed on the computer screen and processed if necessary.

## *Serial link: use of the Windows « Hyperterminal »*

The current version of the PetScan RT100 RT 250BTBT, transmits the read identifiers to the PC it is connected to, either via the USB cable or its wireless link (Bluetooth). The PetScan does not wait for any order or acknowledgement from the PC.

🞣 *Hardware configuration*

The serial port for reading the data is configured as follows:

- 9600 bauds, 8 bits, 1 start bit, 1 stop bit, non-parity, and no flow control.
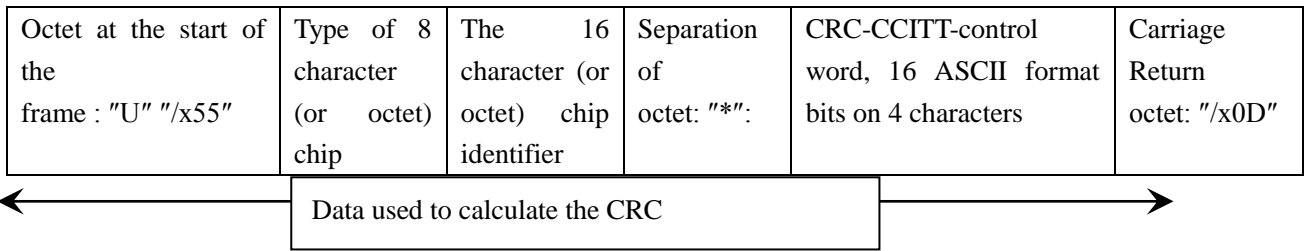
You must authorize line feeds to visualize the frames using the *hyperterminal*: click on « properties » in the « file » menu. Go to the « parameters » and then click on « ASCII Configuration… » :
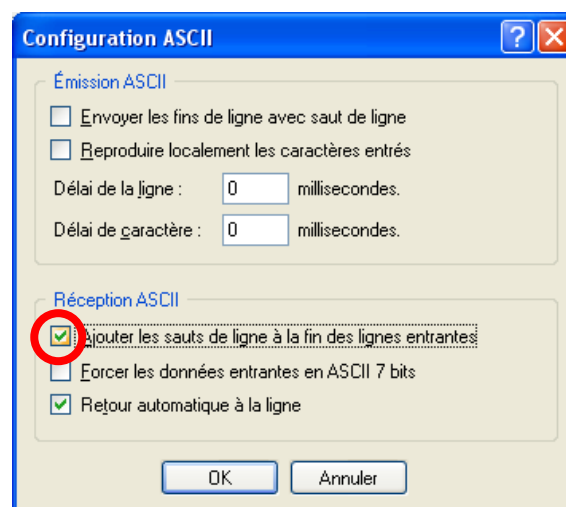
The circled box above must be ticked…

 Description of the frame transmitted each time a transponder is read

The PetScan transmits the following frame to the PC after each valid reading :

Octet at the start of the frame : ″U″ ″/x55″	Type of 8 character (or octet) chip	The 16 character (or octet) chip identifier	Separation of octet: ″*″:	CRC-CCITT-control word, 16 ASCII format bits on 4 characters	Carriage Return octet: ″/x0D″

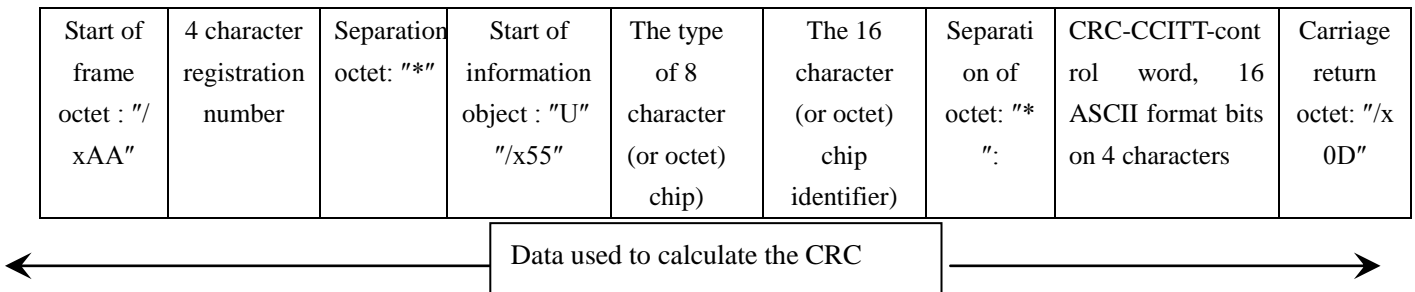←——————— Data used to calculate the CRC ———————→

Tips: the developers of software associated with PetScan must use the head and separation characters to separate the information transmitted by PetScan, calculate a control word with the data received and compare it to the word transmitted by the PetScan to validate the information (see appendix for the CRC-CCITT-16 bit calculation algorithm)

 Description of the frames emitted when reading the databases (PetSCAN memory option)

If a PetScan reader has a memory option, when « Press SCAN to send » is displayed, the reader is ready to transmit the identifiers stored in the memory. The PetScan displays « Sending ! » during transmission and the reader offers the user the option of deleting the content of its database at the end of the transmission.

Format of the frames transmitted to the PC : the frame which is transmitted on each reading of a transponder is preceded by a header octet ″/xAA″, its 4 character registration number in the memory and a separation character ″*″.

Start of frame octet : ″/xAA″	4 character registration number	Separation octet: ″*″	Start of information object : ″U″ ″/x55″	The type of 8 character (or octet) chip)	The 16 character (or octet) chip identifier)	Separation of octet: ″*″:	CRC-CCITT-control word, 16 ASCII format bits on 4 characters	Carriage return octet: ″/x0D″

←——————————————— Data used to calculate the CRC ———————————————→

 Algorithm for calculating aCRC-CCITT-16bit control word

The C ANSI function's source code enabling a control word to be calculated from a string of characters terminating with the character ″/x00″ is described below. The JAVA applet on the « http://www.zorc.breitbandkatze.de/crc.html », website enables you to also calculate the control word. Previously the fields had to be correctly completed before making the CRC calculation and a check made that the control word is equal to 0xE5CC or the ″123456789″ character string.

```
/*============================================================================*/
/* Function that calculates CRC-CCITT 16 bits
/* INPUT:
/*          unsigned char *inbuffer : 8 bits input vector over which CRC checksum is calculated
/*                                   must termined by 0x00
/* OUTPUT:
/*          unsigned int: 16 bits return of crc_ccitt checksum
/*============================================================================*/
/* OVERVIEW:
/*          Width = 16 bits
/*          Truncated polynomial = 0x1021
/*          Initial value = 0xFFFF
/*          No XOR is performed on the output CRC
/* DESCRIPTION:
/*      Computing a POLY number from the crc equation.
/*      Crc s are usually expressed as an polynomial expression such as:
/*
/*          x^16 + x^12 + x^5 + 1
/*      CHECK
/*              0xE5CC This is the checksum for the ascii string "123456789"
/*      EXAMPLE
/*      http://www.zorc.breitbandkatze.de/crc.html
*============================================================================*/
#define crc_poly 0x1021        // Polynome du CRC-CCITT-16Bits
unsigned int crc_ccitt16 (unsigned char *inbuffer) {
    unsigned int crc_checksum = 0xffff;
    unsigned char ch;
    char i,xor_flag;
    while ( *inbuffer!=0)
      {
        ch = *inbuffer++;
        for(i=0; i<8; i++)
        {
          xor_flag=(crc_checksum & 0x8000)? 1:0;
          crc_checksum = crc_checksum << 1;
          if (ch & 0x80) crc_checksum++;
          if (xor_flag) crc_checksum = crc_checksum ^ crc_poly;
          ch = ch << 1;
        }
      }
      for(i=0; i<16; i++)
      {
        xor_flag=(crc_checksum & 0x8000)? 1:0;
        crc_checksum = crc_checksum << 1;


        if (xor_flag) crc_checksum = crc_checksum ^ crc_poly;
```

```
        }
    return (crc_checksum);
}
```

CRC parameters

CRC order (1..64)   16

CRC polynom (hex)   1021   [reverse!]

Initial value (hex)   FFFF   [convert!]   ● nondirect ○ direct

Final XOR value (hex) 0

☐ reverse data bytes   ☐ reverse CRC result before Final XOR

[clear] [CRC-CCITT] [CRC-16] [CRC-32]

Data sequence

123456789   [clear]

Result

E5CC (hex), 9 data bytes   [compute!]

How to know what USB port the RT 250BTBT is connected to.   (Windows XP)

When you connect a peripheral to a USB port on a PC, the PC automatically assigns it a port number. The peripheral is often automatically recognised by the application software, thus it is not necessary to configure it. This is the case with printers, scanners, etc.

Other types of application software need to have the communication port assigned by the PC indicated to them, in some cases with other information such as the communication speed, the form of the data transmitted, etc.

As regards the RT 250BTBT, it is possible that the right port will be automatically assigned by the PC to the application software, but it is also quite likely that you will have to choose it yourself from all the ports offered to you. You can of course try them one after the other, but in some cases the PC's peripheral configuration system will propose dozens of them…

In this case we suggest a more rational method which will also allow you to check that your RT 250BTBT's readerr is correctly installed.
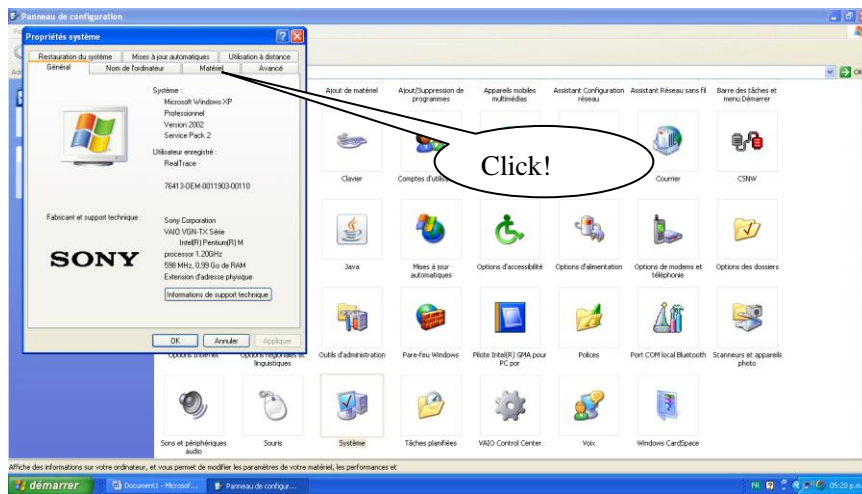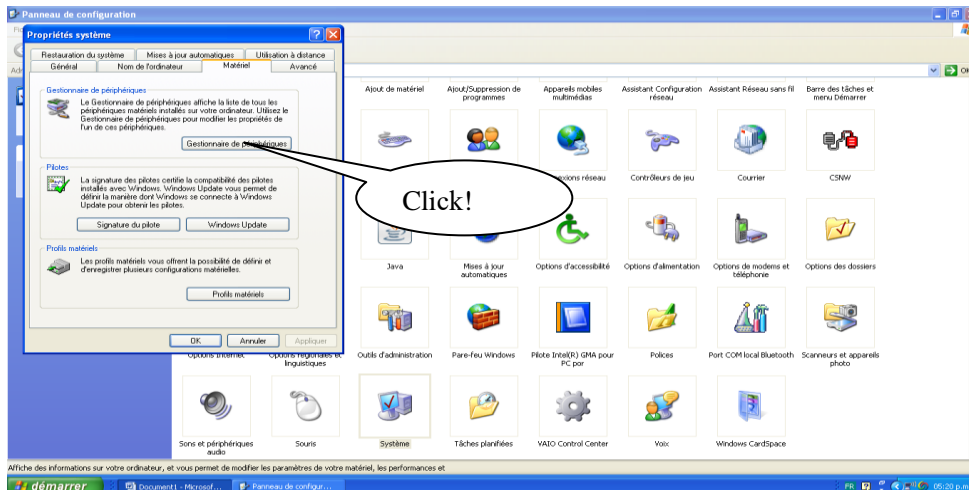
Select as shown below.
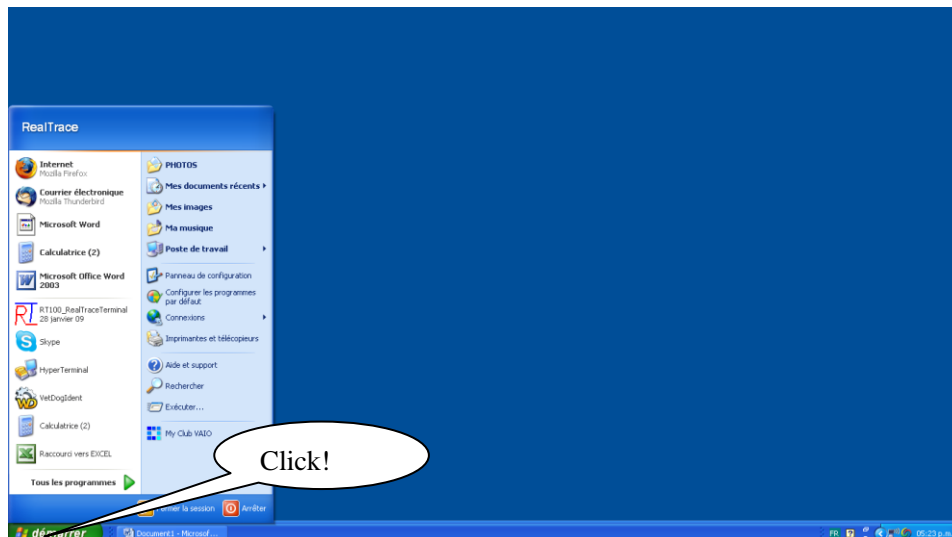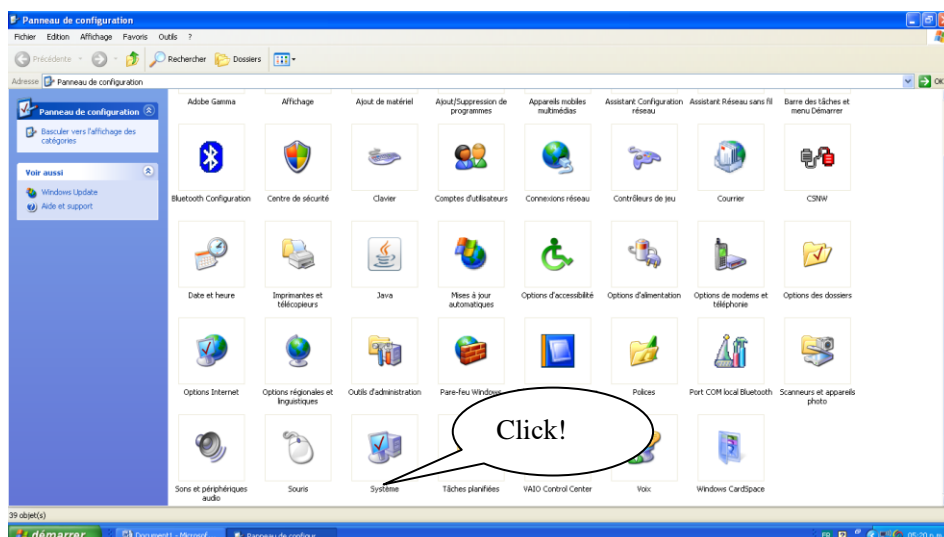
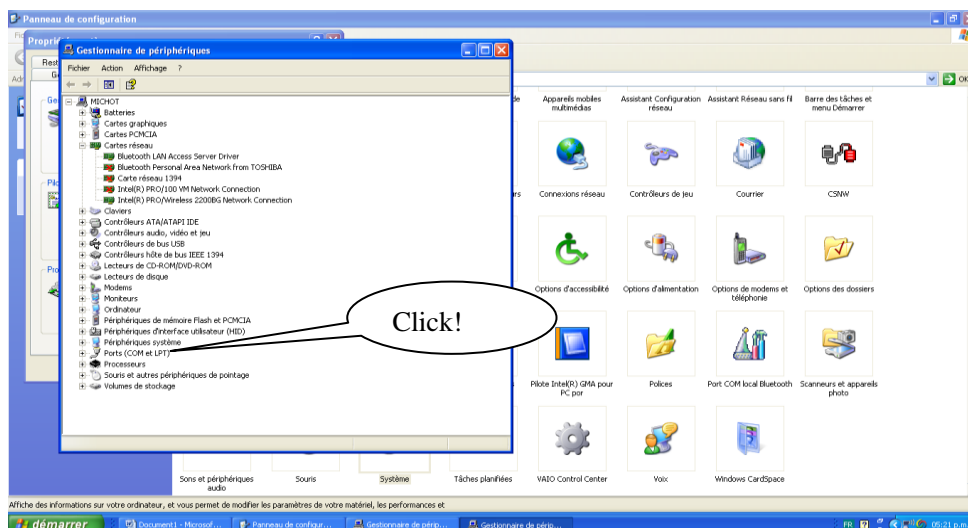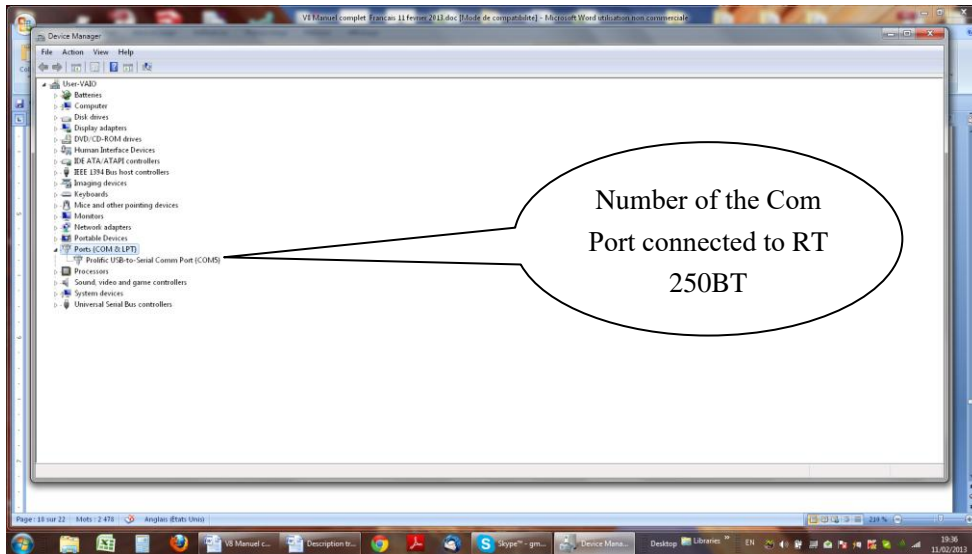
Then select   « System »

Then select « Device »

Then Select « Device Manager »

Then select « Ports (com et LPT) »
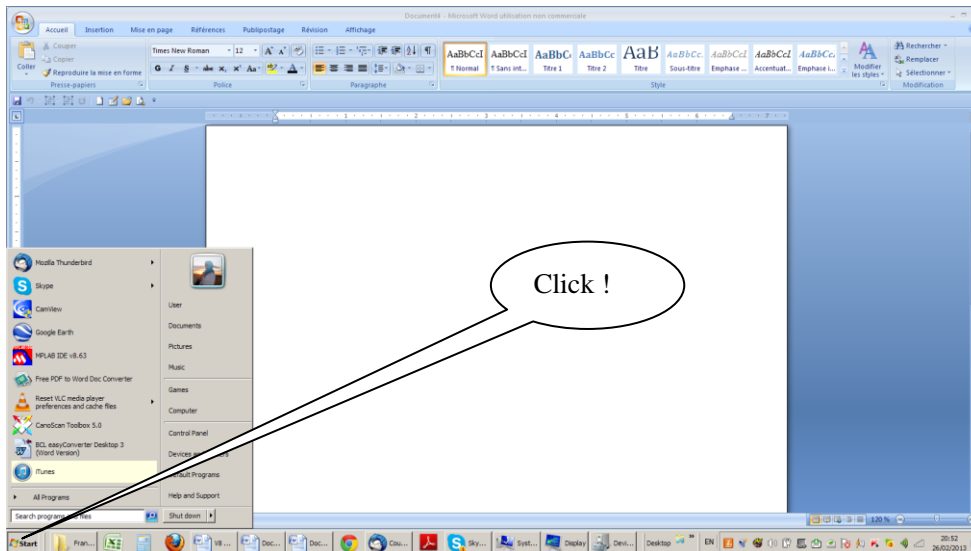
The number of the Com port is shown.

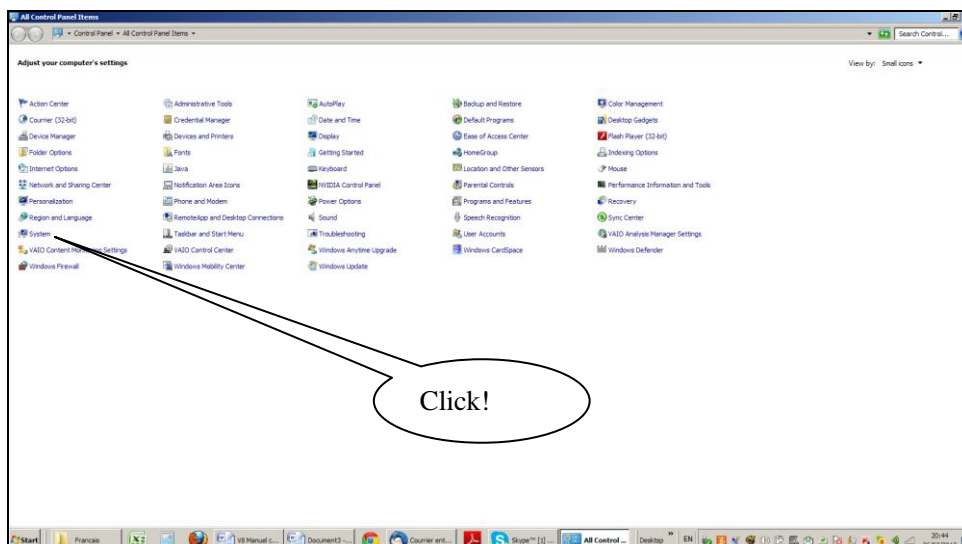Number of the Com Port connected to RT 250BT

How to know what USB port the RT 250BTBT is connected to.   (Windows 7/8)
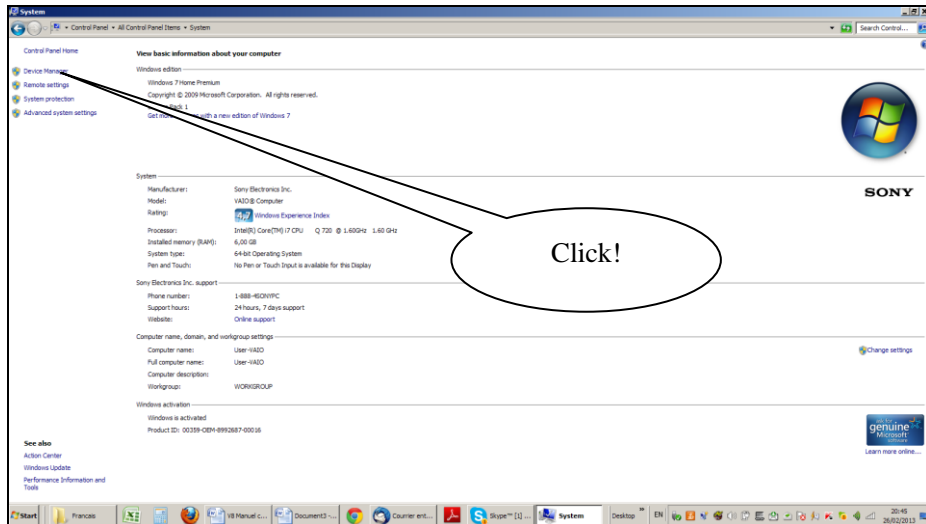
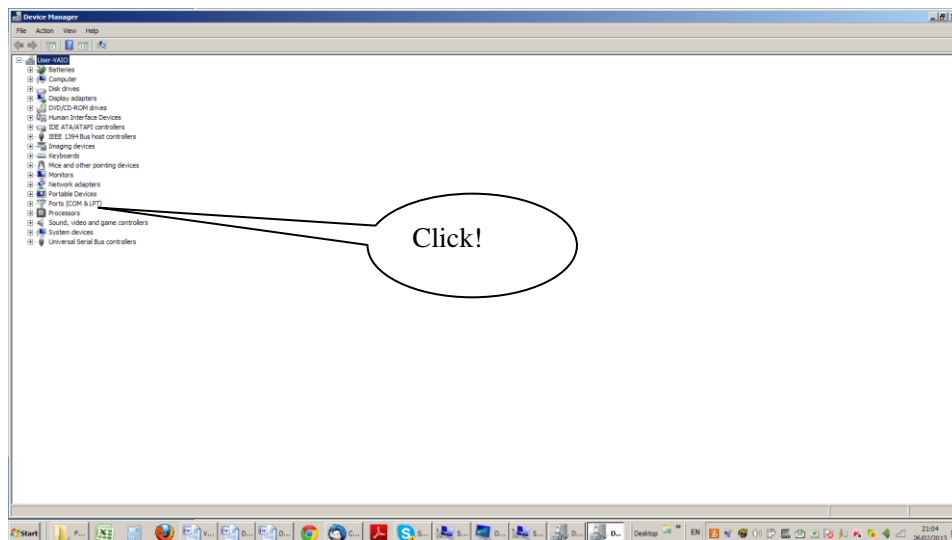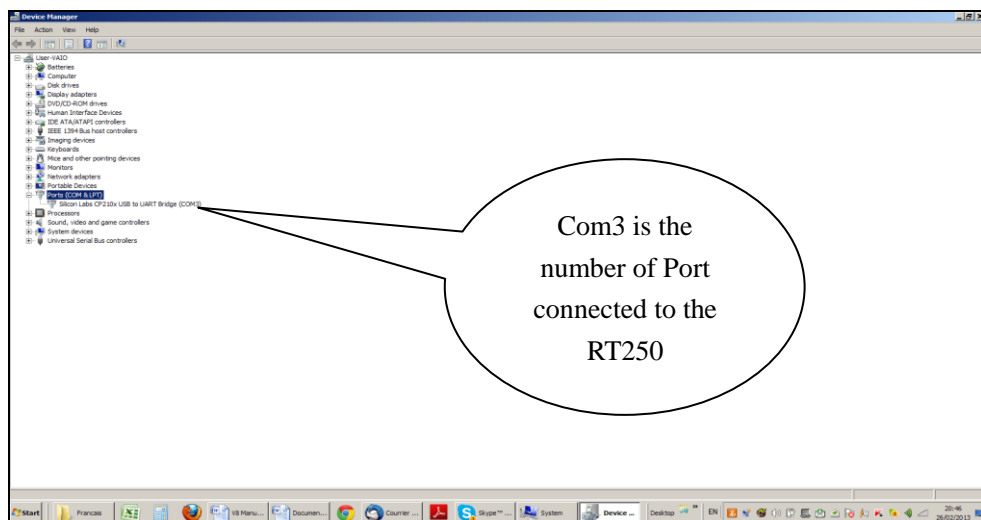Select as shown below.

Then select « System »

Then select « Device Manager »

Then select « Port COM et LPT»

The number of the Com port is shown.

The screens may be a little bit different. It depends of the Windows version.

RealTrace Terminal

This software is a tool supplied free of charge to all users of the RFID Realtrace standard (with USB cable) or Bluetooth reader.
You can download this software following this link :

http://www.swissplusid.com/downloads/RealtraceTerminal.exe

You will find that once the communication has been established between a PC and the RealTrace reader both appliances which were previously paired up remain connected providing that they are separated by no more than 10 meters.   The communication is cut if the distance is over 10 meters, and a search and pairing up must be performed to restore transmissions.

The communication is also cut when the RealTrace reader switches off after several minutes on standby to save energy in the battery.
The lost communication in both these cases is connected to the way Bluetooth technology operates as well as the Windows operating system.

The use of a lithium/ion battery has provided a significant increase in the autonomy of the reader (several thousand uses). Therefore, you can adjust the auto-power-off period as required: 2, 5, 10, or 30 minutes or if you prefer, you can switch off the timeout altogether (not recommended). This setting can be implemented the same way if Bluetooth is enabled. For your information, the reader without auto-power-off, and with **Bluetooth enabled** works for over 48 hours.

http://www.swissplusid.com/downloads/RT-Timeout.exe

Initial parameterization of the « RealTrace Terminal » software

Sometimes, after installing Realtrace Terminal on your PC, you will have to parameterize the communication. Sometimes it is not necessary but as safety precaution you can verify if all is correct.   Click on « *File* » *then* « *Properties* » then enter the USB port or Bluetooth's communication port number as well as the following data :

- *bits per second : 9600*
- *data bits : 8*
- *stop bits :1*
- *parity : none*
- *flow control : none*

Using the software "Realtrace Terminal"

Menu Options

Choose your language. You can choose between French, English, Spanish, and Chinese.
Select the data you want to appear:

- if you select "All data" it will show the type of chip (FDXB, HDX, FDXA) followed by the ISO "smart" number and the CRC.

<p align="center">Example: UFDXB 939 000004095425*AC02</p>

- If you do not select "All Data" only the ISO number of the "chip", or 15 numeric characters (FDXB and HDX), or 10 Hexadecimal characters (FDX A) will be displayed.

<p align="center">Example: 939 000004095425</p>

Do not forget to declare the type of keyboard you use - AZERTY or QWERTY - if not you risk having inconsistent signs being displayed on the PC screen.

"File" menu

The "Save", "Delete" and "Exit" functions are classic.

The "Linking an application" function when selected allows you to link the data sent by the reader to the PC to a Windows application (Word, Excel, etc.) and simultaneously display in the "RealTrace Terminal" window.

If you want to save an Excel file, a number or a list of numbers stored in the memory of the reader you must select "Linked to an application." You then have five

seconds to open your application, Word, Excel, etc. After this period if no application is opened data will be sent to the Realtrace Terminal and appear on the initial screen.
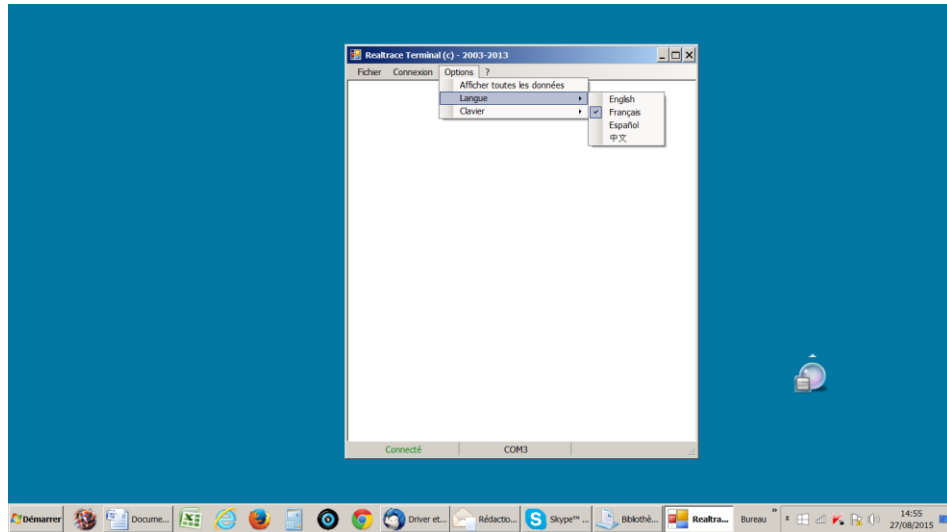
"Connection" Menu

In case of breakdown in communication between the PC and the reader simply select "Connect" to automatically reconnect.
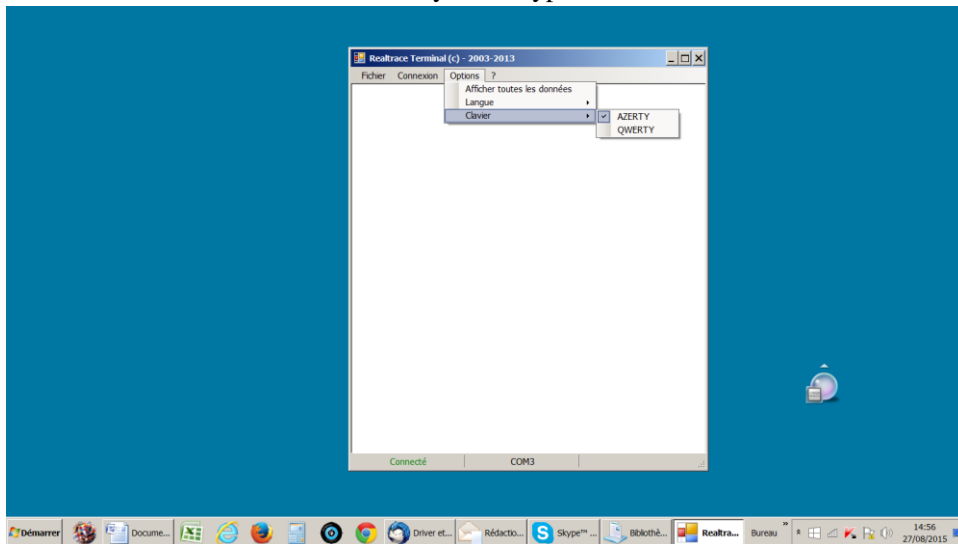
Obviously for reconnection to be possible, the reader must be turned on and be within ten meters around the PC, which must also be turned on.
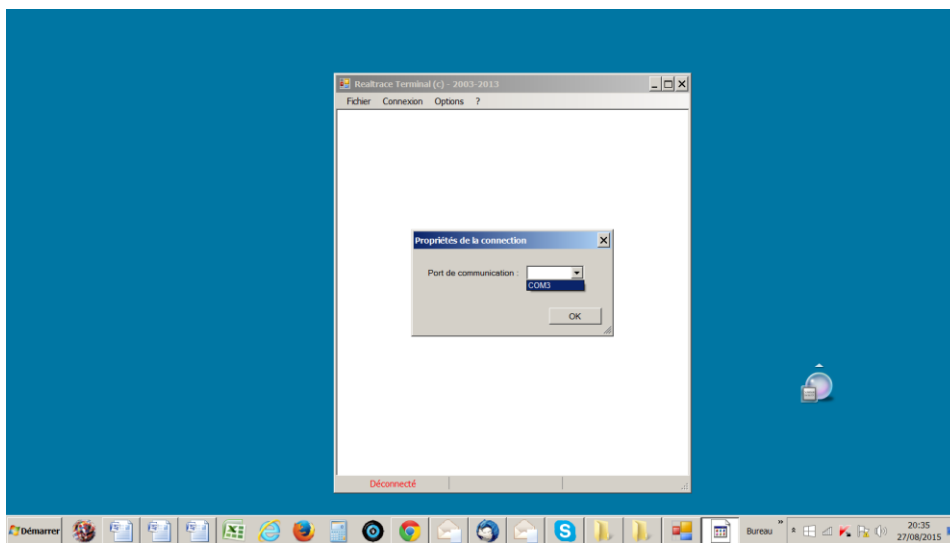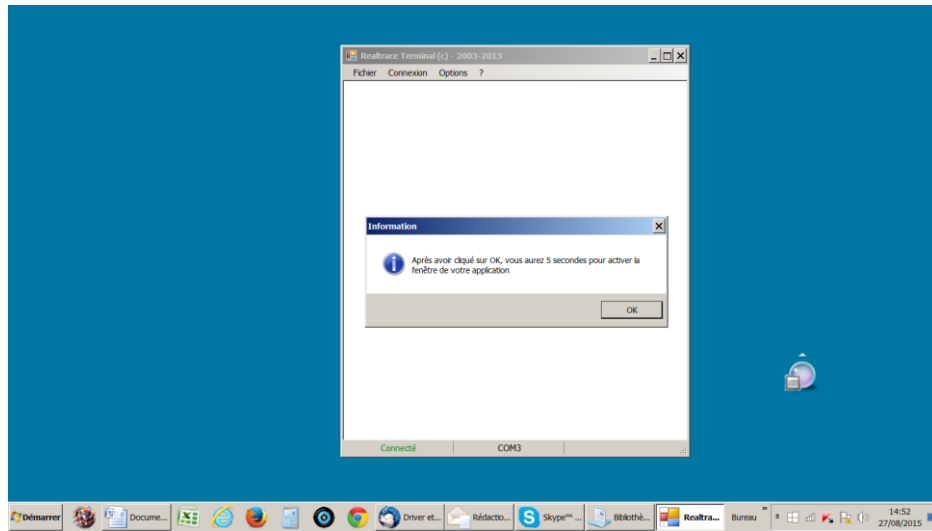
Menu Realtrace Terminal

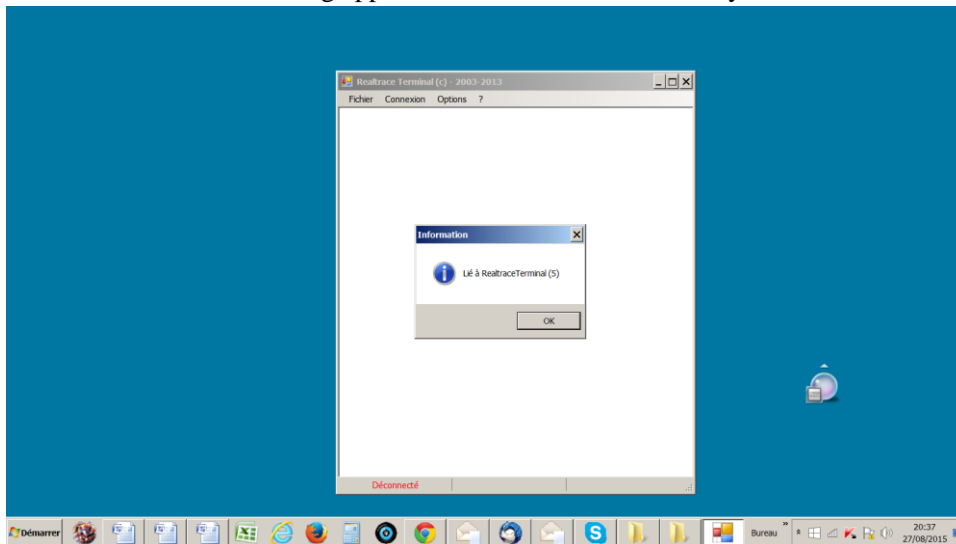## Language Selection

Keyboard Type
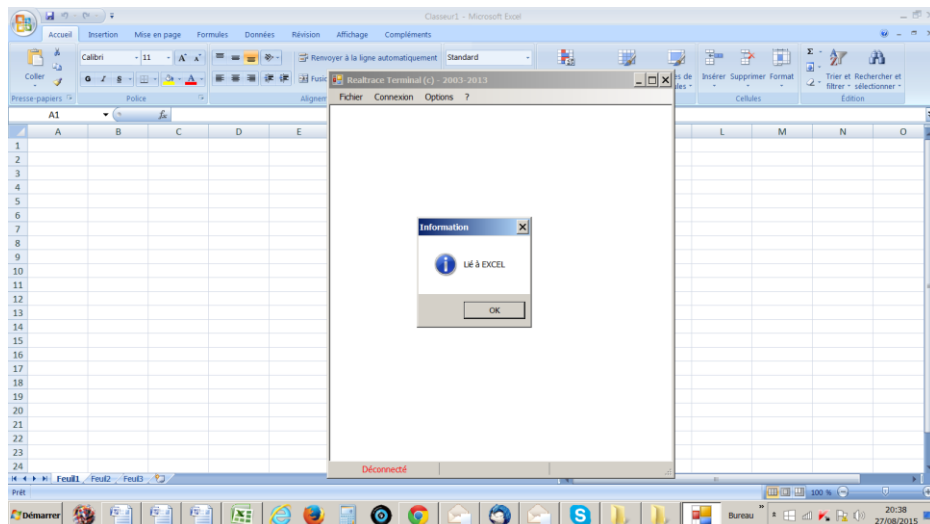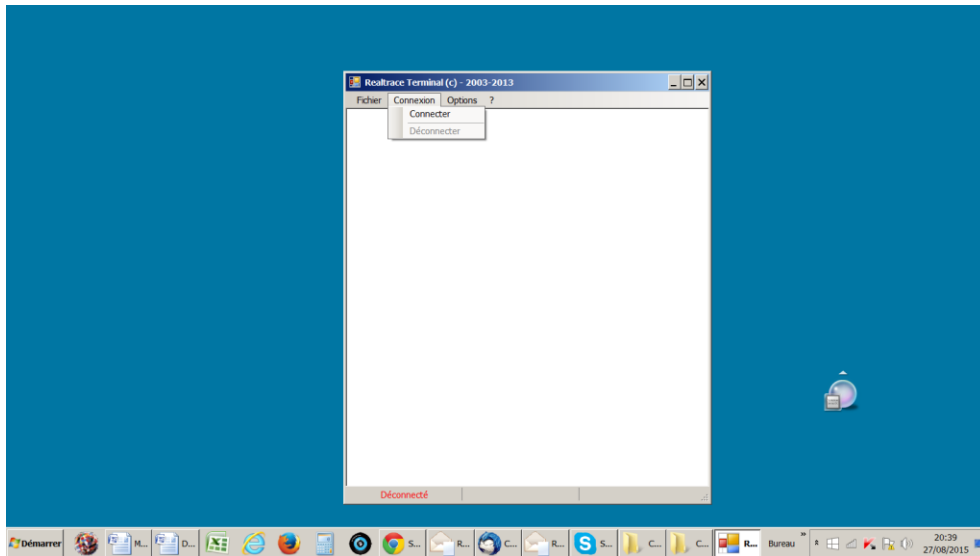

Communication Port Selection

Linking an application

Selecting application after the 5-second delay
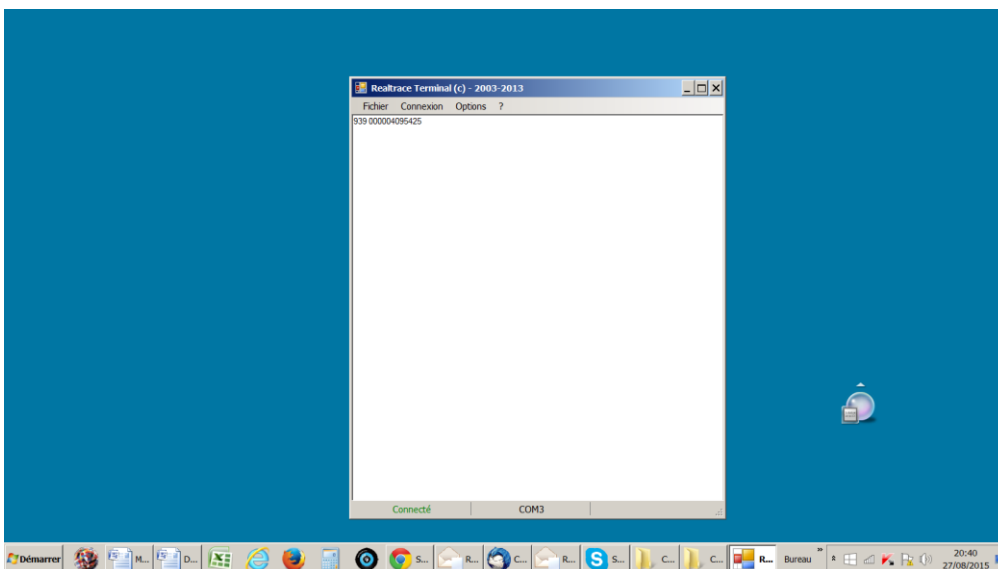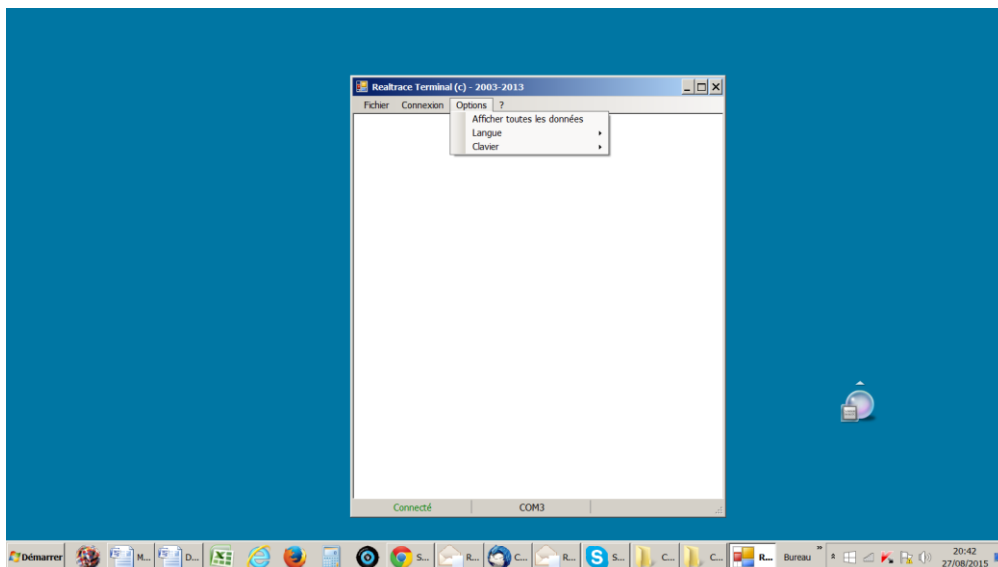

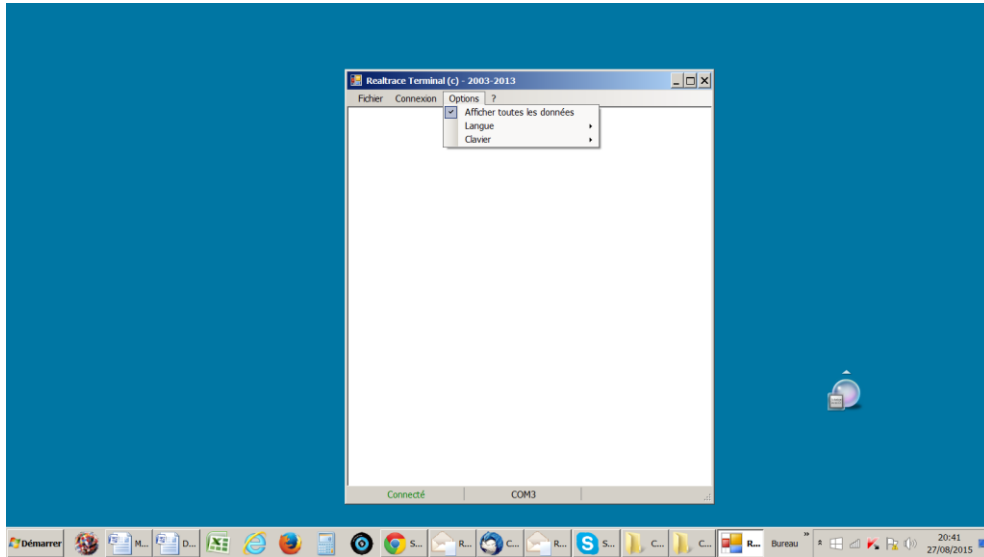Application open within 5 seconds: Excel

Connect!

Simple view: only ISO number

Showing all data.

Display message on reader startup!   Setting the reader power timeout!

Through its hardware design, the RT 250BTBT reader was intended to be easier to update, allowing distributors and users to benefit immediately from upgrades that could better respond to market demands.

Now you can customise your readerthrough your PC by connecting to the http:// links that are listed below, but be careful:

The RT 250BT customizer that provides for customising the welcome message upon starting the reader only works from version VM14_v05

RT 250BTTimeout, which can set the time before automatic shutdown, only works from version VM14_v6

Please note that you may find   the version of the program installed in your RT 250BT by reading the "Master Card Version RT 250BT" card that came with it.

1 / Display message on reader startup (RT 250BT Customizer)

This message could be your company name, customer name, date of sale or other text of your choice given that you have two 16-character lines.

Upon starting the reader, the RT 250BTBT displays the recorded message for 4 seconds.

2 / Setting the reader power timeout. (RT 250BT timeout)

The use of a lithium/ion battery has provided a significant increase in the autonomy of the reader (several thousand uses). Therefore, you can adjust the auto-power-off period as required: 2, 5, 10, or 30 minutes or if you prefer, you can switch off the timeout altogether (not recommended). This setting can be implemented the same way if Bluetooth is enabled. For your information, the reader without auto-power-off, and with **Bluetooth enabled** works for over 48 hours.

How to benefit from these options.

1/Just load the program option you are interested in on your PC, using the following links:
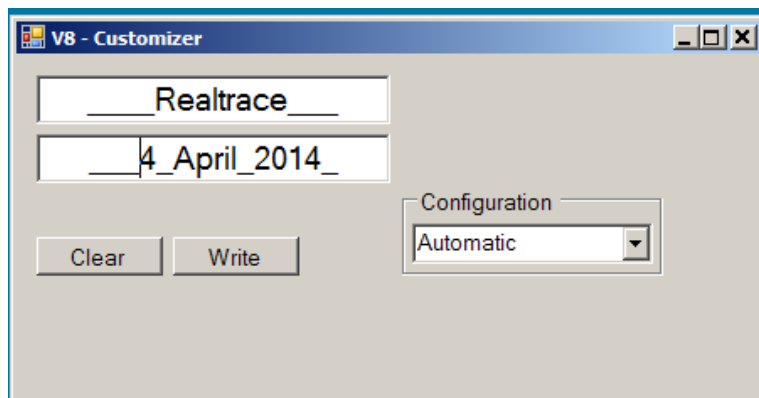
For the greeting:

http://www.swissplusid.com/downloads/RT-Customizer.exe

To set the power timeout

http://www.swissplusid.com/downloads/RT-Timeout.exe

2 / Connect the reader to the PC via USB cable

3/ Start the   reader and open the program on the PC

```
V8 - Customizer                              _ □ ×

    _____Realtrace____

    ___4_April_2014_
                         ┌─ Configuration ──────┐
                         │ Automatic        ▼   │
    Clear     Write      └──────────────────────┘
```

For example, you can use this date as the validity of the start of the guarantee period

4 / Enter the fields on the screen and confirm (Write). The communication port is configured automatically.

The new settings will be implemented upon the next launch of the RT 250BT reader.

```
V8 - Timeout                                        _ □ ×

Default Timeout :    2 minutes        ▼
Bluetooth Timeout :  2 minutes        ▼

                              ┌─ Configuration ──────┐
                              │ Automatic        ▼   │
         Set                  └──────────────────────┘
```
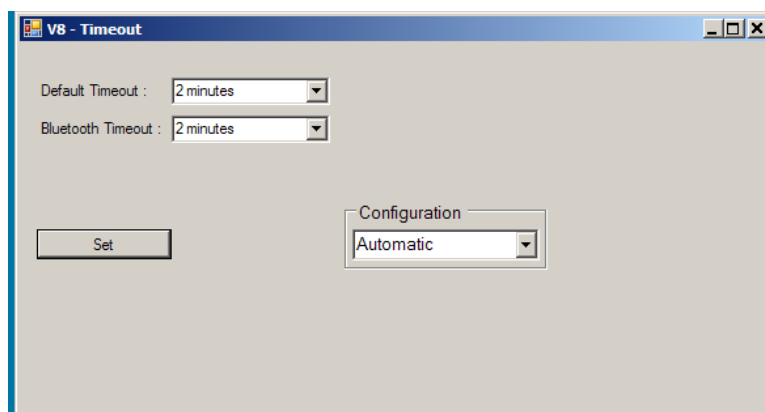
PS: Customising each reader takes a few seconds.

System « WOOSIT »

Writing the animal owner's telephone number(s) in the ISO tag

Our wish to constantly innovate and improve our products has led us to offer vets the option of personalising the tag, if they wish, before implanting it in the animal.

The main technological advance offered by this RT 250BTBT reader is that it will allow reading and display of data which can be entered by the vet in the majority of the "tags" currently marketed worldwide, provided that they comply with the ISO standard.

Realtrace has developed a system called "WOOSIT®" which is comprised of:
-   A reader /programmer   the PetSCAN RT150 [1] which enables the vet to write additional information to the "chip" before injecting it into the animal[2].
-   The PetSCAN RT 250BTBT which now offers the possibility to read and display the ID number but also to display additional data recorded by the vet in the memory as the phone number of the owner.

Due to the low memory capacity available in ISO chips (used up until then) the "WOOSIT" system is limited to the recording of one or two telephone numbers of 16 digits each. The vet and/or the owner of the animal may choose these numbers.

This system is totally compliant with the ISO 11784/85 standard of 1996 in addition to the new 14223 standard* (May 2011) concerning the recording of data in advanced transponders.

It protects the asepsis of the chip, as the writing of the data is carried out via the cap which protects the needle.

If the owner prefers this, after the recording of one or two telephone numbers, the memory area used for this record can be blocked, making it impossible to delete or subsequently modify this information.

With the "WOOSIT" system, finding the owner of an animal will be particularly easy as reading the "chip" with the RT 250BTBT will provide the phone number(s) of the administrator of the database and/or   the owner of the pet.

Naturally, any pet owner who does not wish to use this service can simply enter nothing in the memory area of the chip, as is currently the case.
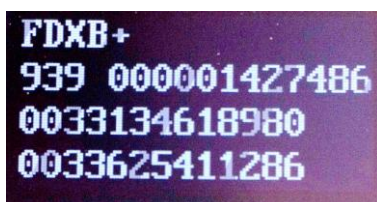
ID number and phones numbers

Iso Chip 11784/85 compatible with the possibility to write aditionals data (+)

(1)Patented

(2)sous réserve que les blocks 3/9/10/11/12/13 (EM4305) ou 9/10/11/12/13/14/15 (EM 4569) ne soient pas verrouillés par le fournisseur de la « puce ».

*L'ISO 14223-1:2011 spécifie l'interface hertzienne entre l'émetteur-récepteur et le transpondeur évolué utilisé pour l'identification des animaux par radiofréquence, à compatibilité ascendante totale avec les spécifications données dans l'ISO 11784 et l'ISO 11785.

RealTrace-Phone Version 1.03 of 14 October 2015

This software is intended for distributors and veterinarians. It has been developed to allow the reading and writing of data on the "chips" injected into animals, in accordance with ISO Standard 11784/85 and 14223.

The data to write, in this case one or two telephone numbers, is saved into memory blocks not used by the 'chip', the ISO identification number (15 digits) having been written and locked by the manufacturer. It is therefore imperative that some blocks are available, and therefore open, so the procedure of writing using the RT 250BT reader can be correctly achieved.

This additional information can be written to the 'chip' in the needle,through the cap, either before injection of the transponder into the animal or in the animal after injection.

We recommend that you write the number(s) in the needle, and then by reading, check the accuracy of what has been written and then inject the chip to the animal.

When reading from a 'chip' that contains no phone numbers the reader emits a single "beep" when it has found the chip.

If the "chip" contains or has contained telephone numbers, the reader emits two "beeps".

In the event that the owner of the animal should change phone number, it will be possible to update the numbers by overwriting the "chip" implanted in the animal. The write and read distance for additional data on the chip by the RT 250BT reader is about 7 to 9 centimetres that is slightly less than the distance for reading the ISO number (10 to 12cm).

The PC program allows the entry of two 16-digit sequences, i.e. two phone numbers. We advise to register these numbers indicating the ISO code of the country.

Example: **0033134618980** (do not put spaces between numbers)

The choice of telephone numbers is left to the discretion of the user: the number of the owner of the animal, of the veterinary clinic, of an association, etc.

These numbers can be changed by the veterinarian as many times as necessary.

What is the essential equipment?

1/ The implanters, needles, and "chips" are the same as those currently used by veterinarians. "Chips" may be standard size; that is 2 x 12mm or the smaller 1.4 x 8.5 mm format that is currently gaining on the market.

However, whatever format is selected, the "chips" delivered by manufacturers must be programmed with the **locked ISO identification number**, with blocks 3/9/10/11/12/13 open. These currently unused blocks will be used to save the phone numbers and signature.

2/ A conventional PC running XP, Windows 7 or Windows 8. The PC must have a USB connection and possibly Bluetooth connection.

3/ A PetScan RT 250BT reader with its USB cable.

4/ Realtrace-Phone software, which is provided free of charge.

Installing the Realtrace-Phone software

http://www.swissplusid.com/downloads/Realtrace-Phone.exe

The installation of the software and the readerr are done automatically on the PC. Just follow the instructions given by the messages on the screen, like the installation of a printer or a scanner.

After installation an icon will appear on the PC desktop.

Using the Realtrace-Phone software

Phase 1 Connecting the RT 250BT and opening the RealTrace-Phone program.

Connect the RT 250BT to the PC using the USB cable, turn on the reader (display shows "Read") and then the computer monitor, click on the icon and the following window will open on the screen:
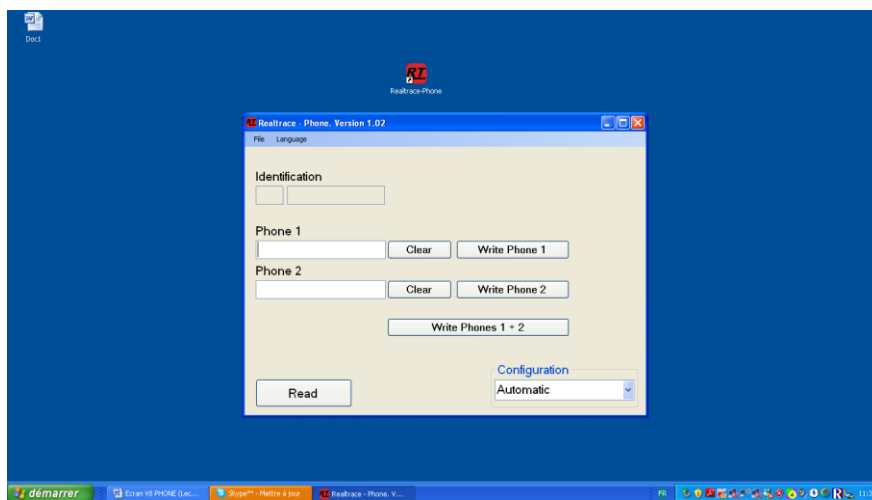
It is possible that when connecting the RT 250BT to the PC that an update the software resident in the RT 250BT is carried out automatically. Wait until the loading has ended before continuing.

Phase 2 language selection
Click on the "Language" tab and select the language of your choice: English, Spanish or French.
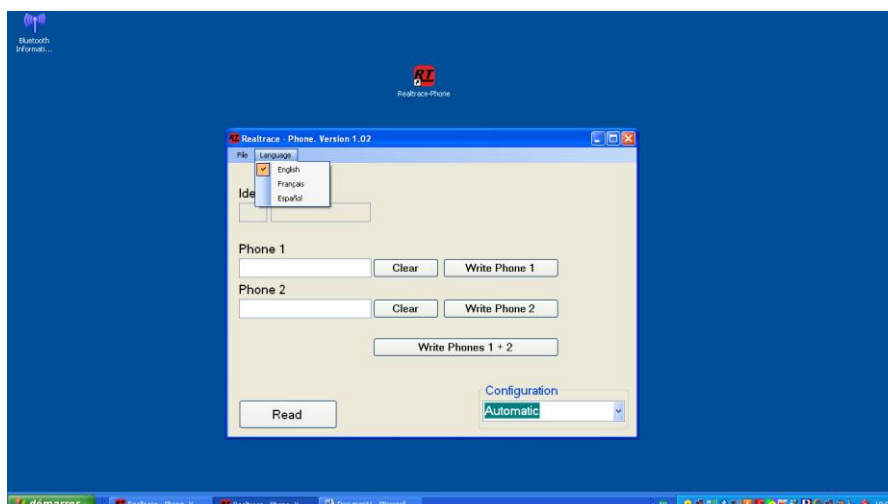
Phase 3 Find communication port

At the bottom of the screen to the right is a "Configuration" window, it may say "Automatic" or on opening the window "USB COM 5". This port number 5 is the one used on our PC. It could well be different on your PC.

A search of all available COM ports on the PC takes place automatically. You can stay in automatic search, but if you have a lot of COM ports open on your PC, you can select it in the window to expedite the allocation process.
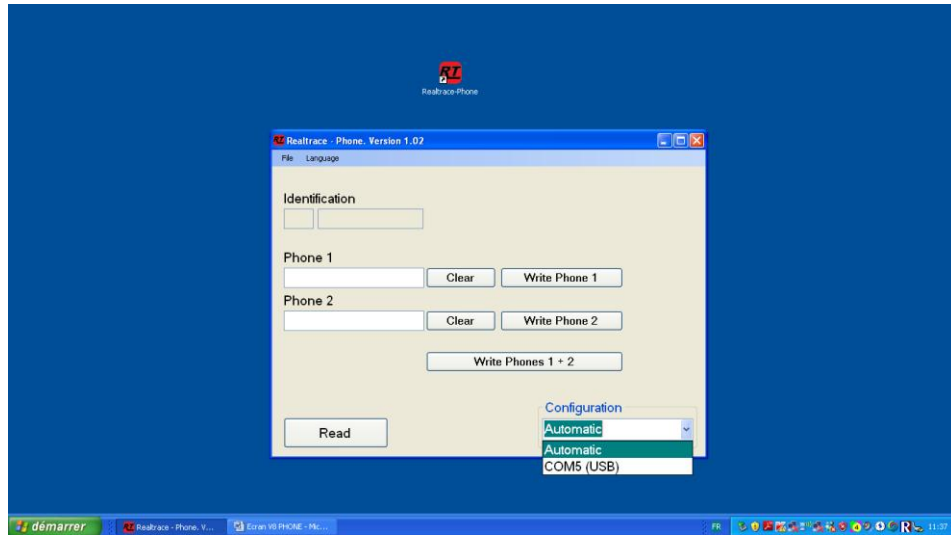
Step 4 Reading a "chip"

Make sure the RT 250BT connected to the PC is still on. In order to preserve the energy of the battery to a maximum, the reader is programmed to turn off after two minutes if no key has been activated during this time.

So if it is off, turn it on and read a chip, either through the needle or on the animal. <u>During this reading it is not necessary for the RT 250BT to be connected to the PC.</u>

The number of the "chip" appears on the screen on first line of the reader, possibly followed by one or two lines of numbers corresponding to the phone number(s) (if reading a chip where number(s) have been programmed).

Please remember that the first three digits of the "chip" indicate either the ISO country code (250 for France) or the manufacturer's ICAR code.
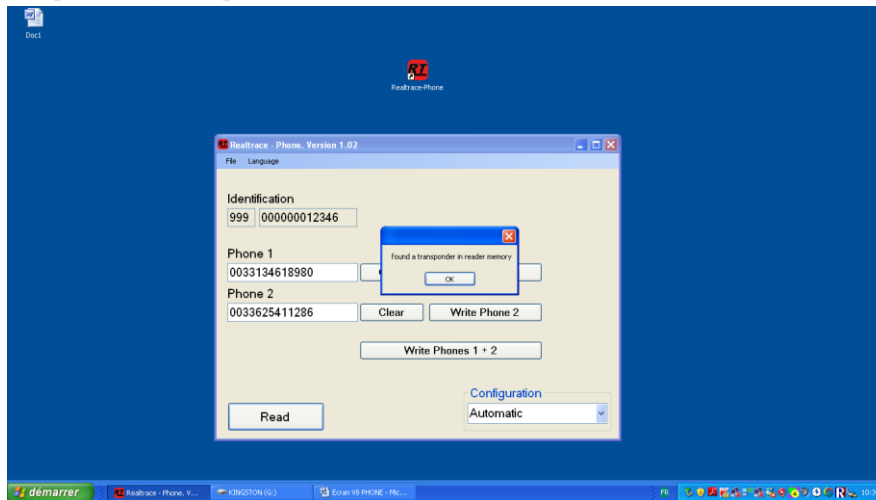
You will need to send this data to the PC.

Reconnect the RT 250BT to the PC if it was disconnected and then click the window at the bottom

left of the screen that says:　　　　Reading

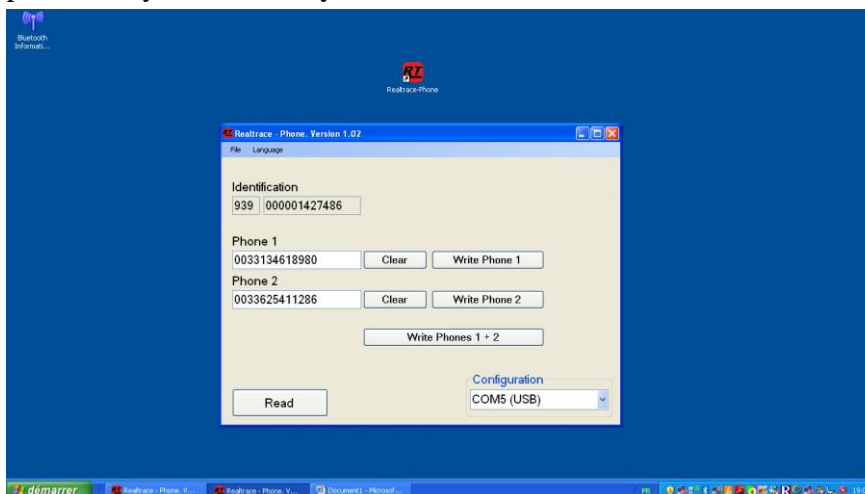After two or three seconds the following screen appears:
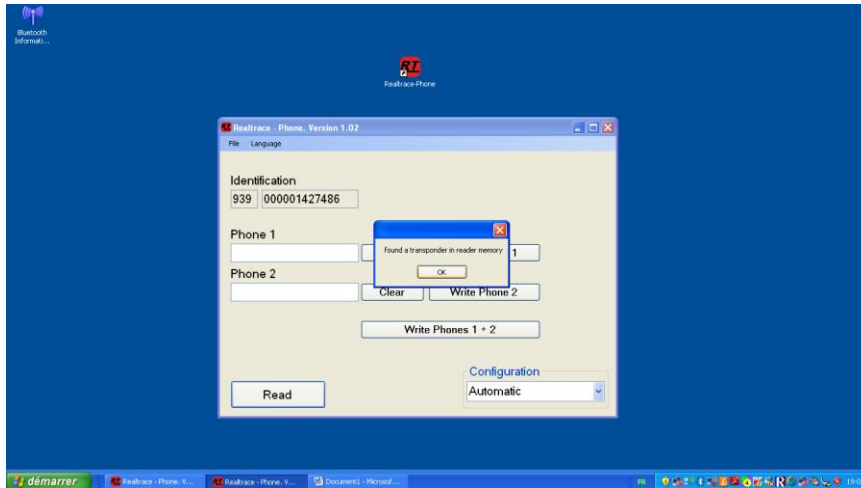
Or this one, if the "chip" already had phone numbers:

Confirm by clicking OK

Phase 5 - Enter one or two phone numbers using the PC

Depending on what you want to do you will either need to enter the phone numbers you want to write into the chip or modify those already saved to it.

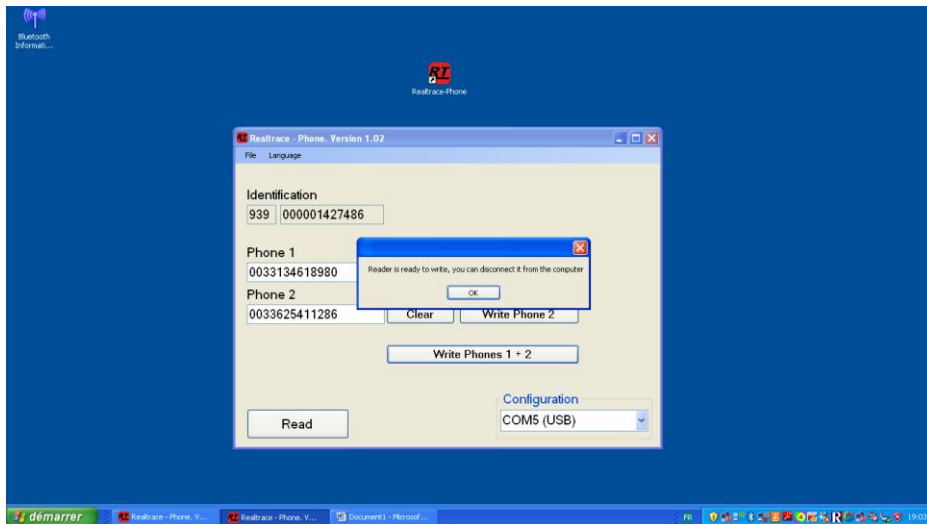If you make a mistake click delete and start typing again.

We recommend that you enter the full number with the prefix 00, then the country code.
<u>Make sure the phone numbers entered are correct</u> then click on the windows as required:

Write phone 1		Write phone 2		Write phone 1 + 2

After two or three seconds the following screen appears:

The PC has transmitted the data to be saved to the "chip" to the RT 250BT using the USB cable or Bluetooth.
A message informs you that you can disconnect the reader from the PC to write to the "chip".
This disconnection is not essential if you want to write to the "chip" in the needle but is advisable if you want write to a "chip" already injected into an animal.

<u>Very important : the PC can communicate with the reader only when the display of the reader is showing "SCAN".</u>

Phase 6 - Data entry by RT 250BT

At the same time as the message appears on the PC, the RT 250BT display indicates:

Approach the reader to the chip and validate by pressing the centre button to write
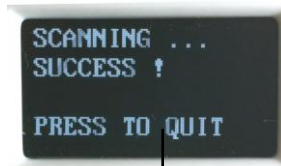
The reader seeks the chip in which it should write ...

SCANNING ...

Three possibilities:

1/ If the reader does not find the "chip" after 20 seconds of searching ...

PRESS SCAN TO
WRITE

Search other time

2/ If the reader has found the "chip" it must write to

SCANNING ...
SUCCESS !

PRESS TO QUIT

Back to Main Menu

Lecture

We recommend that you re-read the injected chip to verify that the data has been recorded, given that if the entry has been done correctly in the "chip" RT 250BT displays the following message:

SCANNING ...
ERROR

Very often this happens when one or more memory blocks needed to record phone numbers are closed in the "chip" so it is impossible to write.

Or:

SCANNING ...
BAD TRANSPONDER

You tried to write into another "chip" than that previously read,

Note: be careful not to discharge the battery by leaving the RT 250BT showing the message:

PRESS SCAN TO
WRITE

This is the only case where the RT 250BT does not turn off automatically! To return to the menu, press the In / Out button.

Operating problems:

1 / When switching on the RT 250BT displays the | Low battery | message and turns off immediately.

The battery is almost discharged. You need to charge it.

2/ When switching on the reader the screen stays black:
- either the battery is totally discharged: leave it to charge.
- or the RT 250BT is no longer working. In this case an extended press on the In/Out button will shutdown the reader with two "beeps". Send the reader back to After Sales.

3/ A message, whether or not intelligible remains displayed. Pressing buttons has no effect. The program has "frozen"…
In this case you need to reset the reader hiting the reset button very close the USB conector.

4/ The RT 250BT will not switch on, even after charging: return to our After Sales service.
Very important: this reader has the latest technology in terms of power supply. The Lithium/ion batteries should only be recharged using an USB power supply. Be careful to never short circuit the battery.

Program instructions for mobile phones

"Realtrace Android" for users of RFID readers

Models V8M -V8BT - RT250

This program, originally developed for the V8M, is also compatible with V8BT and RT250 readers delivered after August 2016.

The main function of these readers is to read the number of ISO chips implanted in animals but they each have their own specific elements to meet the different needs of users.

The compact, high-performance **V8BT** (reading a glasstag of more than 10 cm) was the first player on the market to offer the possibility to write additional information in the ISO "chip" (telephone, vaccinations, etc.).

The **RT250** allows, due to its length, an increase in the distance at which an animal's "chip" can be read. There exists a short version of the reader (65cm) and a long version (95cm). This version is intended for reading at a safe distance when reading aggressive dogs or caged animals through the bars.

The long version is also used in fish farms, the front part being perfectly watertight.

The **V8M** inaugurates the generation of connected drives. Its operation is linked to the use of an Android mobile phone. A version of the program for iPhone is under consideration.

With the power of the phone, the V8M reader becomes a mobile connected tool.

The information about the "chip" is stored in the phone memory. Each reading of the "chip" can be linked to the ISO number, the date and time of the reading, location, a photo of the animal as well as variable data such as name, address, etc. ...

These data are saved in the phone memory, but they can be transferred to an external database.

The V8M also allows additional data to be written to the "chips": phone number and email address *.

Furthermore, after reading a "chip" and recording the data in a database, it is possible to recover this additional information via connection to a server.

The following information relates to the functions offered by the standard supplied software for free (Play Store).

This entirely complete, free version can be used as a management tool. Upon special request it can be adapted to your needs.

Which phones are supported?

In theory, all "Android" phones. If you want to buy a phone dedicated to your application we recommend Wiko brand phones with a minimum 12k integrated memory . These phones are of excellent quality and offer a two-year guarantee at a price three to four times lower than other brands ...

To benefit from all the services offered by the V8M it is necessary that the phone has Bluetooth, WiFi and GPS.

How do I obtain the free V8M software?

You must log in to "Play Store" and download the V8M program onto your phone before installing. A V8 icon will appear on your phone's screen after installation is completed.

How much does it cost?

Using the program is free since you only use the Bluetooth communication between the reader and your phone and possibly WIFI between your phone and your Box.

Discovering the program!
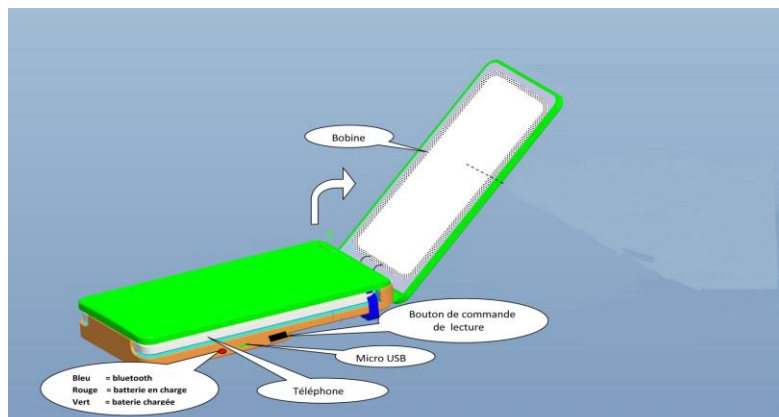
Once opened, the V8M reader is intended to connect to the mobile phone in order to allow you a free hand. It may be fixed using the Velcro provided or by using the reader's transparent strap. We recommend the Velcro, sticking the soft part on the phone.

Note that you do not have to join the two devices which is furthermore not possible if you use a V8BT or the RT 250 wand.

The distance between the two devices must not exceed ten meters in order to ensure good Bluetooth transmission.

Preparing the phone and the V8M:

1 / Enable Bluetooth (reader and telephone)

2 / If you have a WI FI connection it is recommended to activate it.   This will allow you to have faster access to Google Maps.

3 / Open the V8M program.

Upon opening the V8M program, the following screen will appear:
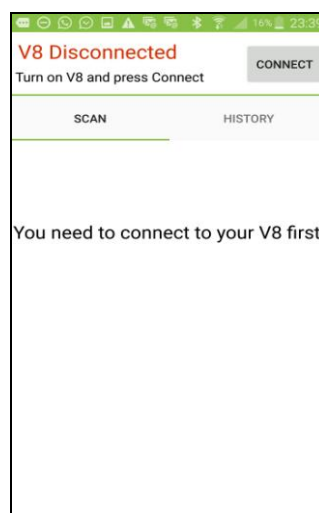
In red on the top left of the screen "V8M Disconnected" and "Turn on V8M and press Connect" informs you that the V8M is not connected to the phone and that you need to turn on your reader.

The V8M turns on by pressing the button on the underside of the reader for three seconds. It switches off automatically after 30 seconds if the communication with the phone is halted.

When turned on, a "led" blue on the right edge of the player flashes.

As the reader communicates with the phone via Bluetooth, it is necessary to pair the devices.

1 / Select "connect"

The following messages are displayed:
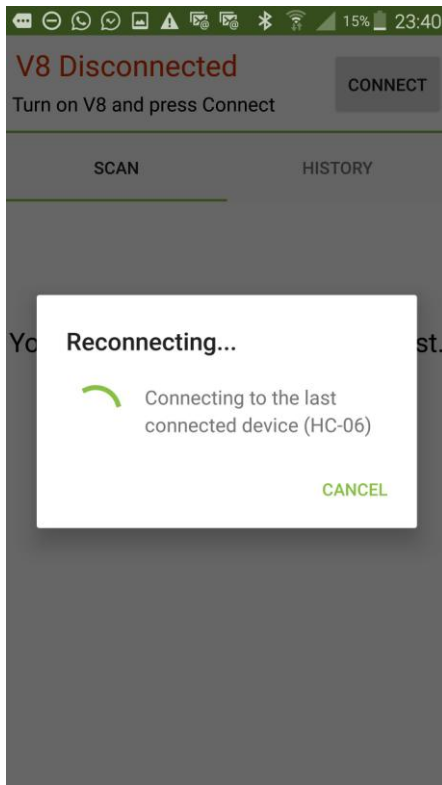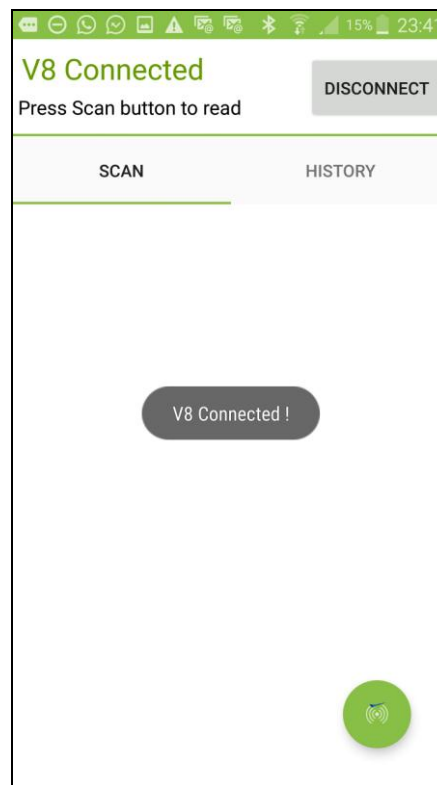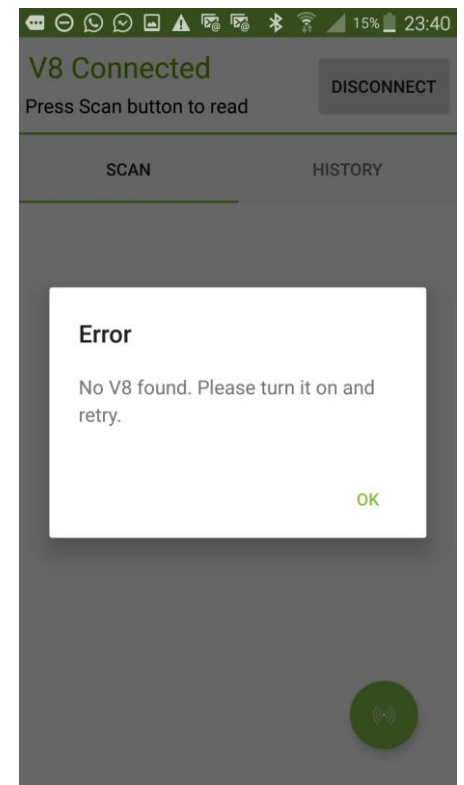
Fig.1	Fig.2	Fig.3

The phone will look for the last drive with which it was connected (Fig 1)

Case 1: If it is the same reader that is used, pairing is immediate. And the message "V8 connected" is displayed (Fig2).

Case 2: If it is another player looking for pairing, this may require 30 to 40 seconds.

Case 3: If the connection is not made, an error message "No V8 found. Please turn it on and retry " is displayed (Fig.3).   This could be:

- a failure to charge the reader's battery,

- a failure when turning on the V8M reader,

- an incorrect Bluetooth setting on your phone.

Comments

1 / to facilitate the pairing in Case 2, if other Bluetooth devices are in the environment, it is advisable to put the phone on top of the V8M because the phone pairs with the device with the strongest Bluetooth signal.

2 / To save battery, the reader is intended to turn off automatically after 30 seconds if it is not paired or if that pairing was lost. If you have difficulty re-pairing remember to check that the reader is still turned on.

*Once the phone and the player are connected the screen displays **"V8 connected"**, the reader's blue "LED" becomes constant and the phone screen informs you that you can start playback of a chip **"Press Scan button to read."***

If both devices are connected, a green button appears at the bottom of the screen. By selecting this button you activate the reader's scanning (reading) that will search for a "chip" in its environment at a distance of about 13 - 15cm (Fig 4).

Be aware that you can also activate the reader by using the V8M side switch.
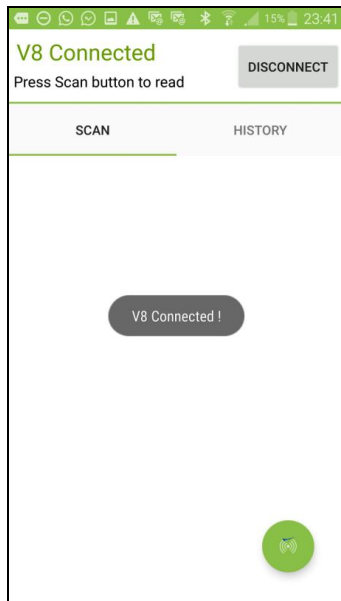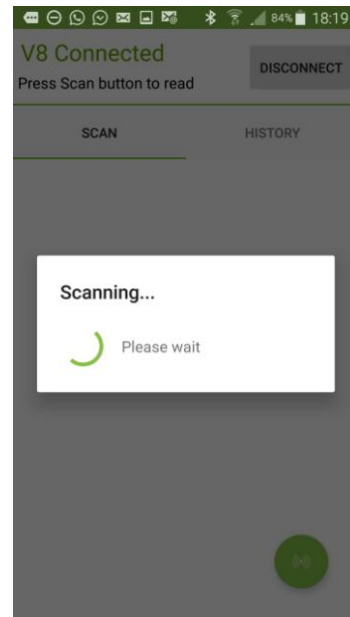
Fig.2   Fig. 4

Upon reading a "chip", the reader emits a "beep" and the screen displays, as appropriate:

**Case 1:** The chip is new and therefore not registered in the phone's database:
- ISO number of the chip,
- the date and time and the location of reading,
- if you request it, "MAP" the location via Google Maps.
- you can enter a name, an address and a city. These data will be saved in the phone's database.
- you can associate a picture with the number of this "chip", either from your "Gallery" or one that you take with your phone.
- A "Transponder Memory" field allows you to enter a phone number and email.
  <u>**These data will be listed in the chip *.**</u>

Case 1
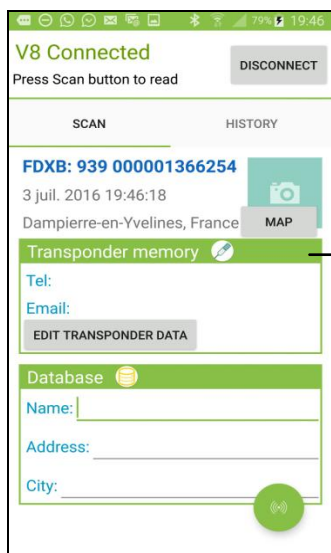
Note: The information relating to the location via the phone's GPS is not immediately available when the phone starts and the Realtrace Android program is opened.   You may need to wait a few minutes while the phone is located ...
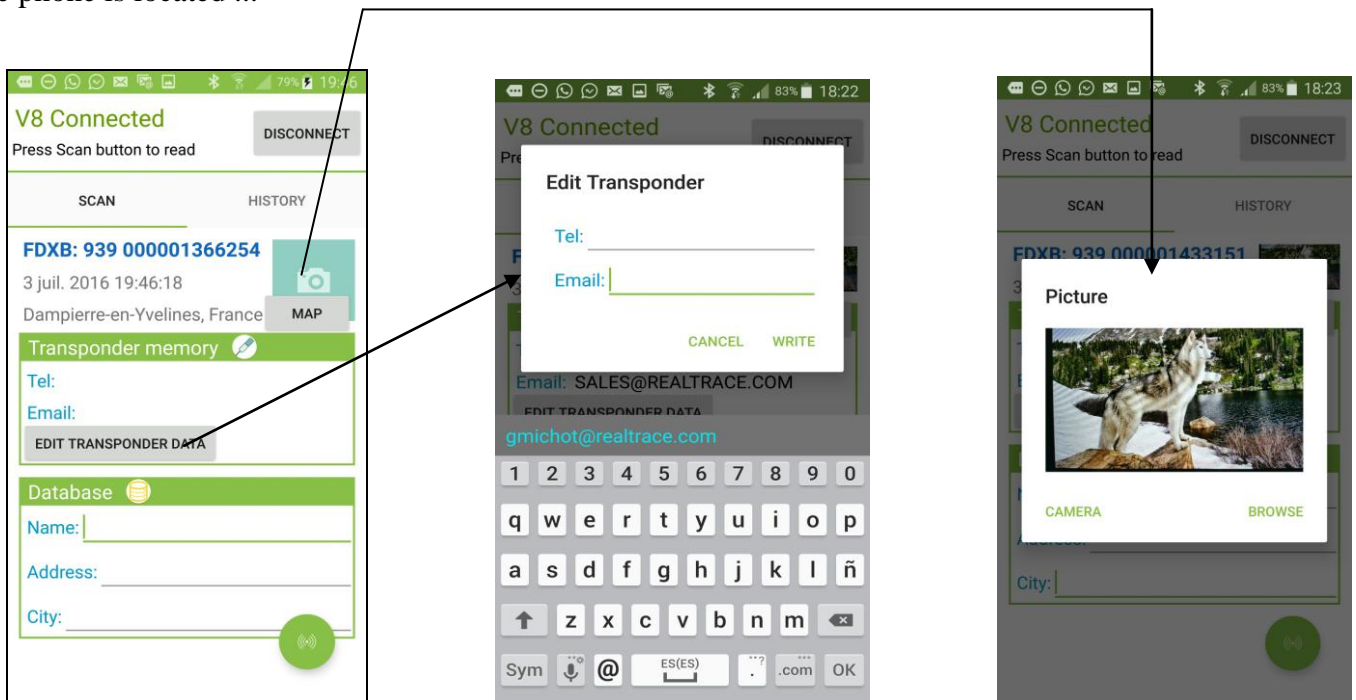

Comments
1 / The reader attempts to write the phone and Email to the chip several times, taking around 10 seconds. If writing to the memory of the chip succeeds, the phone emits a "beep", otherwise it emits three "beeps".

     2 / the email address must be entered in upper case.

Case 2: the "chip" is new, so it is not in the phone database, but it has additional data contained in its memory.
The screen will display the same information as in the previous case but the "Transponder Memory" field will show the data recorded in the "chip".

Case 2
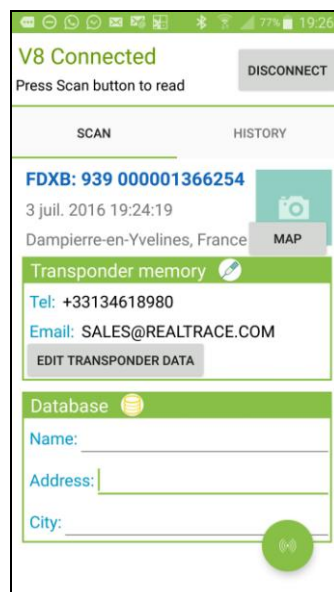
Case 3a: the "Chip" being read is in the the telephone's database:
- chip ISO number, date and time, location
- and the additional data (telephone database) and further data (written in the chip) that were recorded during the initial programming of the "chip".
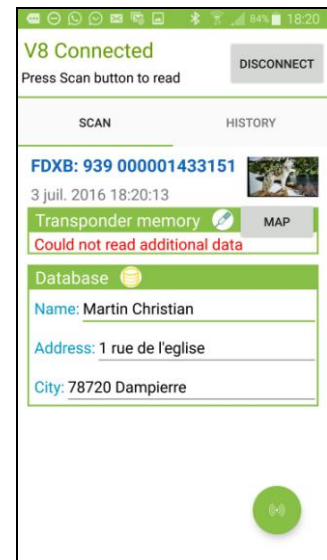
Case 3b: the "Chip" being read is in the telephone's database:
- chip ISO number, date and time, location, date and time,
- data stored in the phone database,
- Additional data on the chip is not read either because the chip was too far from the reader when reading, or because the chip has no free memory.
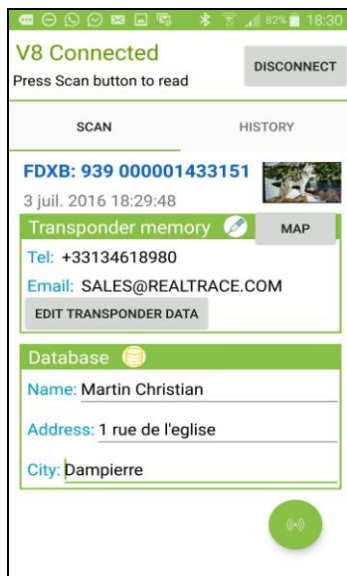
Case 3a	Case 3b

Notes: the V8M reader allows the reading of 13 / 15cm ISO chips.

Writing data into the "chip" requires more energy than reading and is therefore possible only at a distance of around 6-8cm.

When playing an ISO "Chip" further than 8cm away, only the identifying number of the chip will be read.

The reading of potential data recorded in the "chip" is not possible beyond this distance and the following message will be displayed: **"Could not read additional data."**

On the other hand, if additional information had been stored in the phone database at the first reading this will be displayed on the screen when re-reading the "chip".

* The "Whoosit" system was developed by Realtrace in 2014 and is used in many foreign countries such as Australia, England, United Arab Emirates ...

This system is fully compatible with ISO 11784/85 chip provided that the chip vendor has left free memory not used in the classic application, that being partitions 3/9/10/11/12/13 (EM4305)

The "History" function

Viewing the phone database.

If you have an animal, you can just read his "chip" and if it was registered the listing will appear on the screen.

You can also search for either the name or the "Chip" number if known. After having found the "chip", select the number displayed in blue and the card will appear on the screen ...

Example: search using the name "Realtrace"
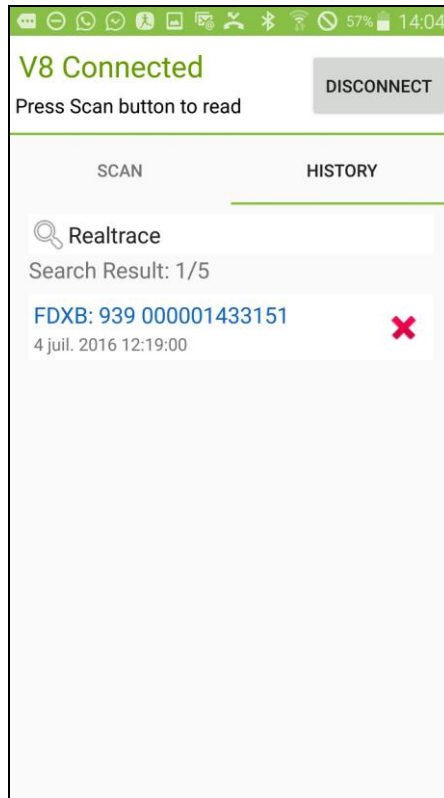
Finally if you want to delete records press the red cross corresponding to the "chip". You will be asked to confirm the delete request. After having confirmed you will still have the option to cancel the deletion by selecting **quickly** the "Dismiss" message in the bottom right of the screen.
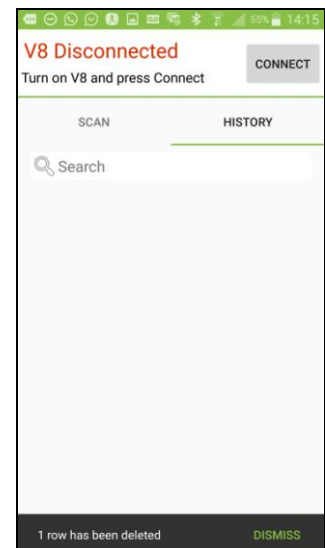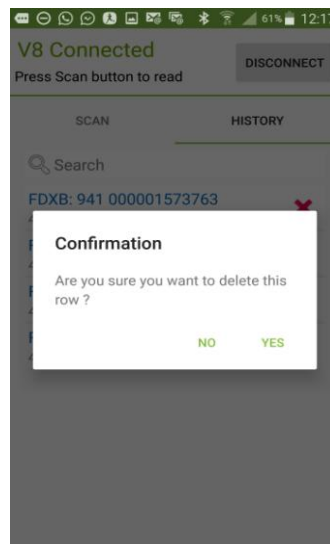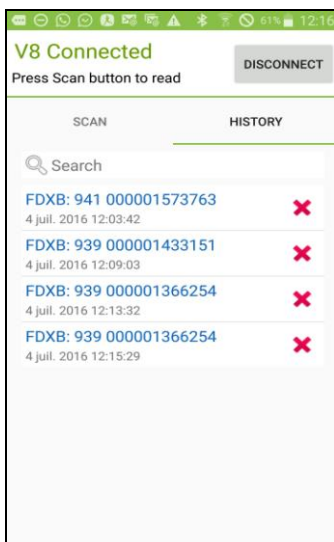
Using the "Realtrace Android" software with V8 BT

The "Realtrace Android" application can be used with the VBT after activating the reader's Bluetooth function **but only with the model produced after September 2016**.

However the V8BT is delivered with the "Time Out" function (2min) activated for power saving reasons it is advisable to change the "Time Out" setting and increase it to 30 minutes or more.   If you do not, you risk having to re-pair the player with the phone every time it turns off ...

To change the duration of the "Time Out", you must load the utility program on your PC which you will find at the following link: **http://download.realtrace.com/V8-Timeout.exe** and connect your PC to the reader.

The features described concerning V8M are all compatible with the V8BT.

Using the Realtrace Android software with the RT250

The "Realtrace Android" application can be used with the RT250 after activating the reader's Bluetooth function.

The RT250 is delivered with the "Time Out" function (2min) activated for power saving reasons; it is advisable to change the "Time Out" setting and increase it to 30 minutes or more.   If you do not, you risk having to re-pair the player with the phone every time it turns off ...

To change the duration of the "Time Out", you must load the utility program on your PC which you will

find at the following link   : **http://www.swissplusid.com/downloads/RT-Timeout.exe**

The features described concerning V8M are all compatible with the RT250 but the writing distance of additional data to the chips is much shorter, at approximately 4cm instead of 8 to 10cm with V8BT and V8M.

In order to leave one hand free, a phone attachment accessory for the RT250 has been provided.

Finally be aware that in all cases the reading of a chip can be performed by selecting the green button on the phone screen, or conventionally, by pressing the play button on the reader in use.

Questions? Contact your nearest SwissPlus ID distributor or visit;

www.swissplusid.com