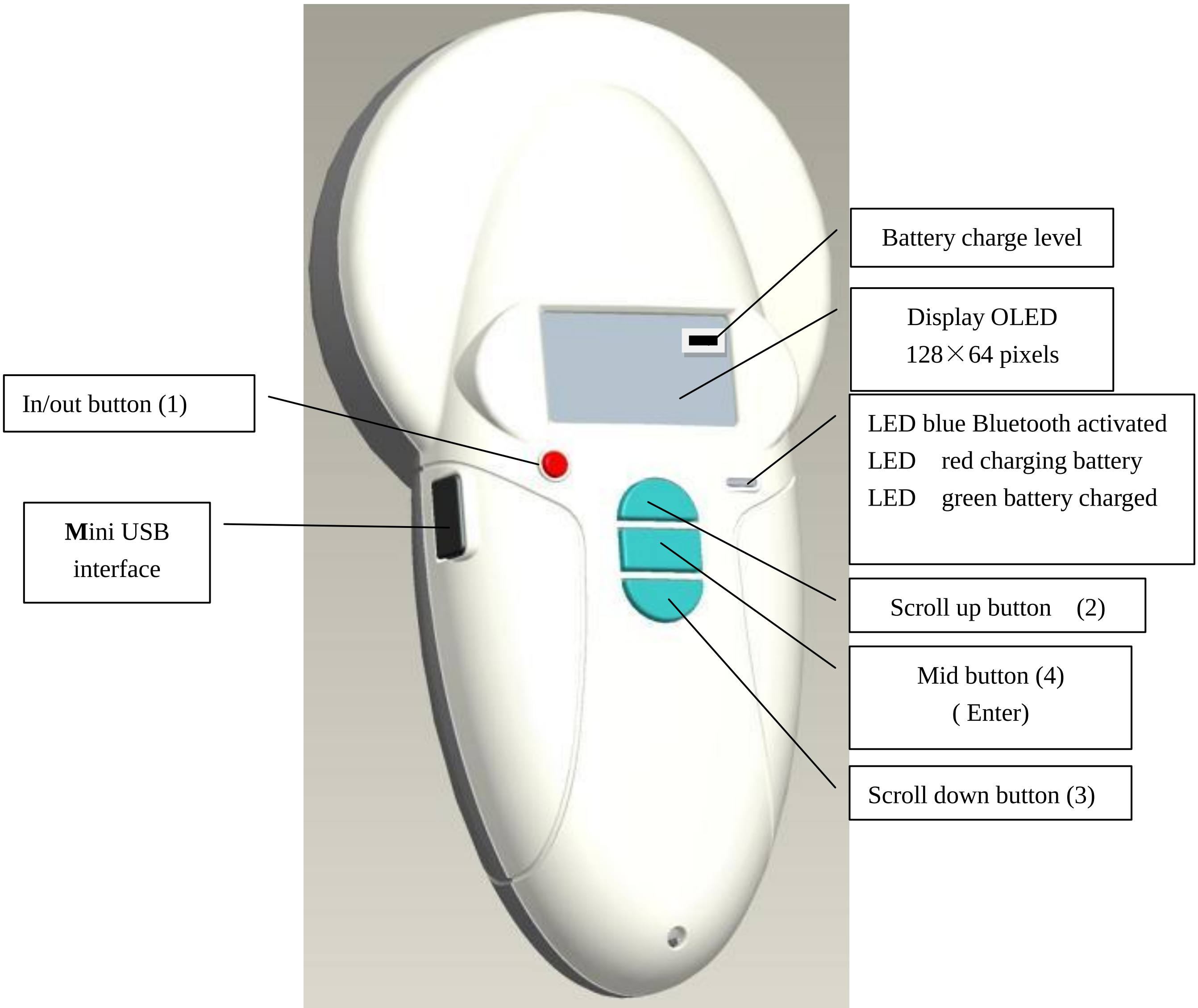
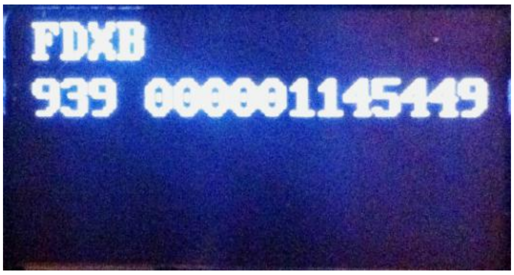
V8BT - RT100

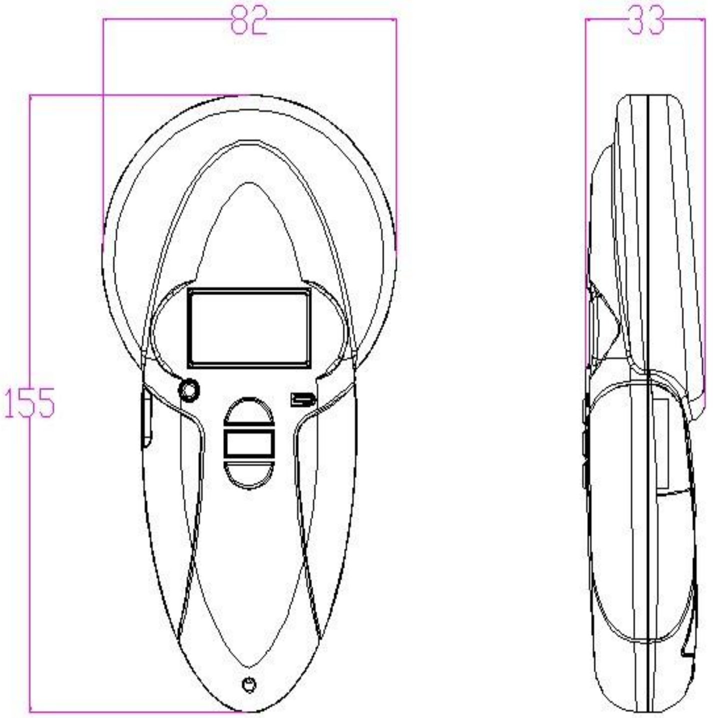




FDXB
939 000001145449

ISO FDXB tag

26/02/2013



Reader characteristics

Frequency	134.2kHz Read and write ISO 14223
Protocol	ISO11784/5 FDX-A, FDX-B, EM4102, HDX
Reading range	≥8 cm（12mm×2mm, glass tag）
Display	128×64，black and white，OLED
Keys	4 buttons
Indication	Battery charge control and Bluetooth . Buzzer
USB port	USB virtual comport，bluetooth virtual com.port
Power supply	Lithium battery，1400mAh，3.7V ; 5.18 Watts/hr
Dimension	155mm (L)×82(W)×33(H)
Net weight	155g
Charging mode	Mini USB
Accessories	Mini USB cable, Product instructions. Battery.
Compliance certifications	FCC、CE certification
Memory	Up to 1000 ID numbers

26/02/2013

Bluetooth RT 100 V8 Reader

Externally, nothing distinguishes the Bluetooth version of the V8 reader from the basic version.

To find the version of a reader, the user must switch on the V8 and then select the “Bluetooth” menu and activate the function. If the reader is equipped with Bluetooth transmission, a blue LED will flash. If not, the command will have no effect.

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 deactivate the function or else switch off the reader.

Communication via Bluetooth is limited to around ten metres and depends on the environment of your PC. To activate Bluetooth on your PC, please consult your computer user manual. Don’t forget to deactivate the security of Bluetooth on your PC because the V8 don’t ask a security code.

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 1200), via Bluetooth or using the USB cable, the user needs to have installed the appropriate driver* on his PC (Pl2303_Prolific_Driver Installer_v1210.exe). This driver can be downloaded free of charge from our website or from www.4shared.com/zip/wpeAz3PT/file.html

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 Datatransfer (Felixcan) or Realtrace Terminal with XP or Windows 7. Firstly, you will need to enter the communication parameters and the number of the USB port that your reader will be connected to. Please consult below the section in the chapter entitled: “How to find out which USB port the V8 is connected to”.

The data to be entered are:

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

* A driver is a program enabling an operating system, in this case Windows XP or Windows 7 on a PC, to recognise a hardware peripheral and use it.

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 V8 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.

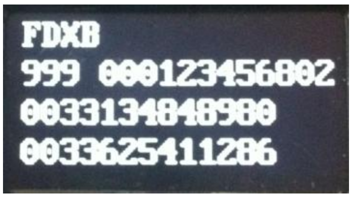
Realtrace has developed a system called “WOOSIT®” which is comprised of:

- 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 V8 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 V8 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.

.



```
FDXB
999 000123456802
0033134848980
0033625411286
```

ID number and phones numbers

(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.*

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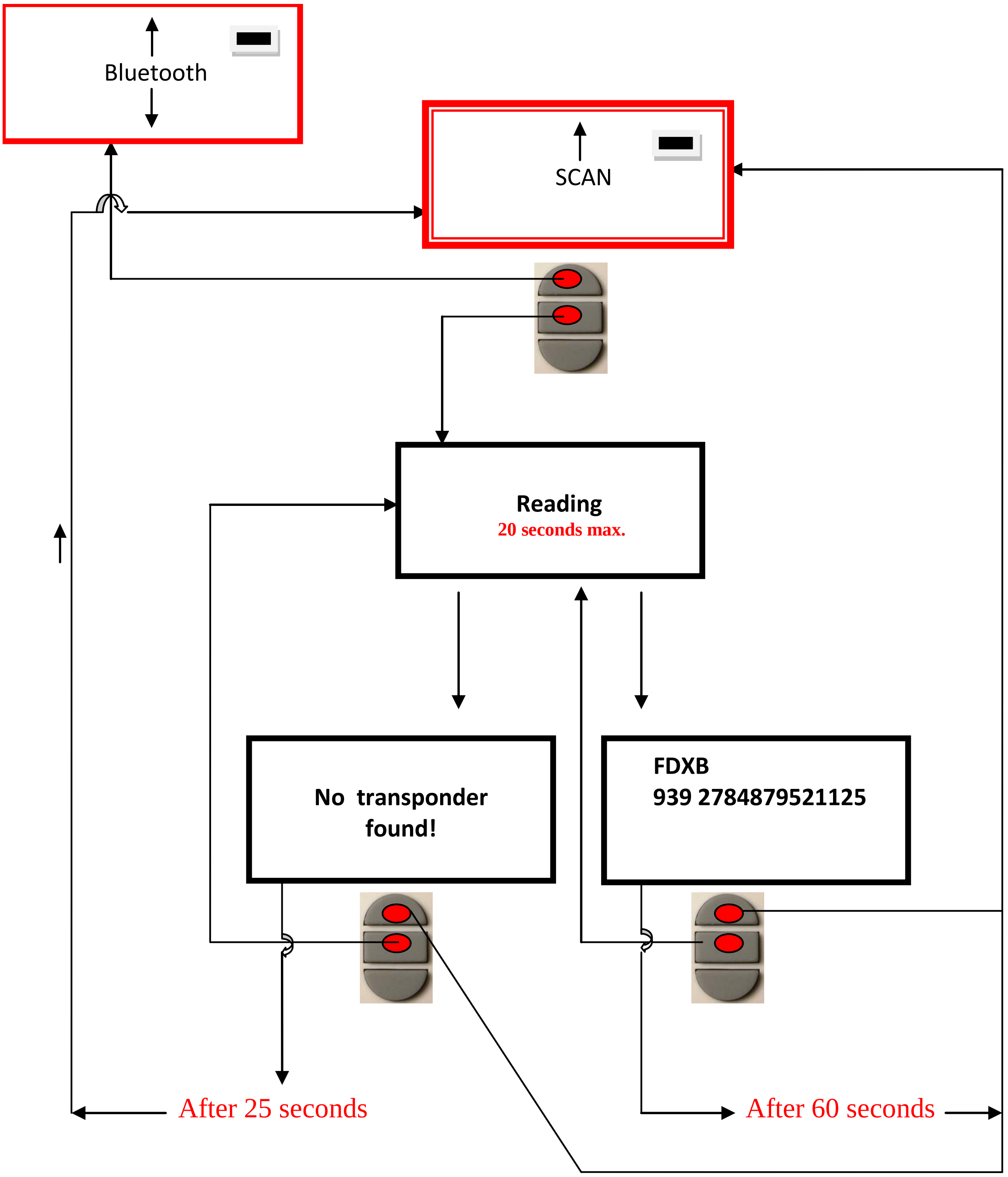
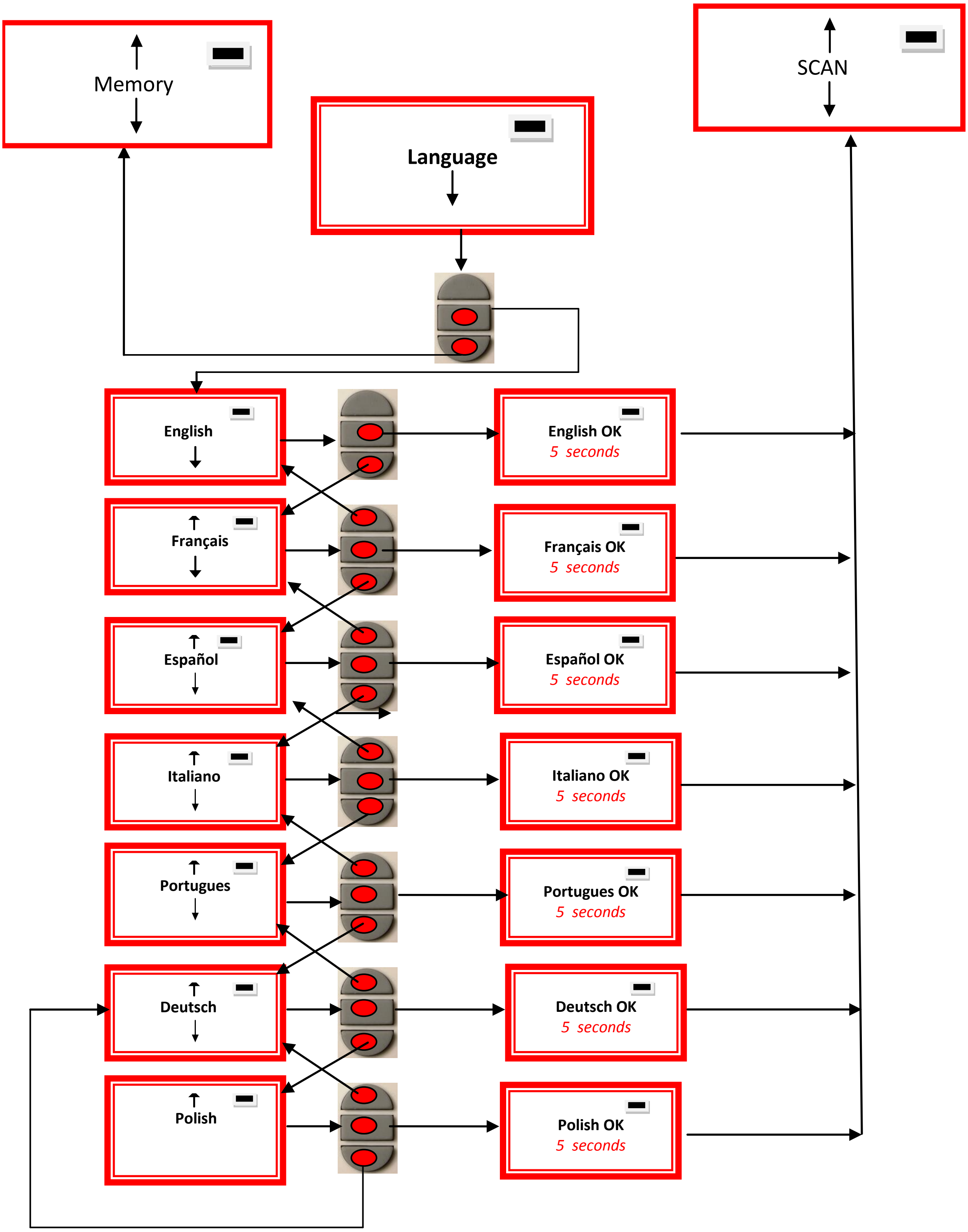
Synoptic Menu SCAN



▬ Charging indicator light

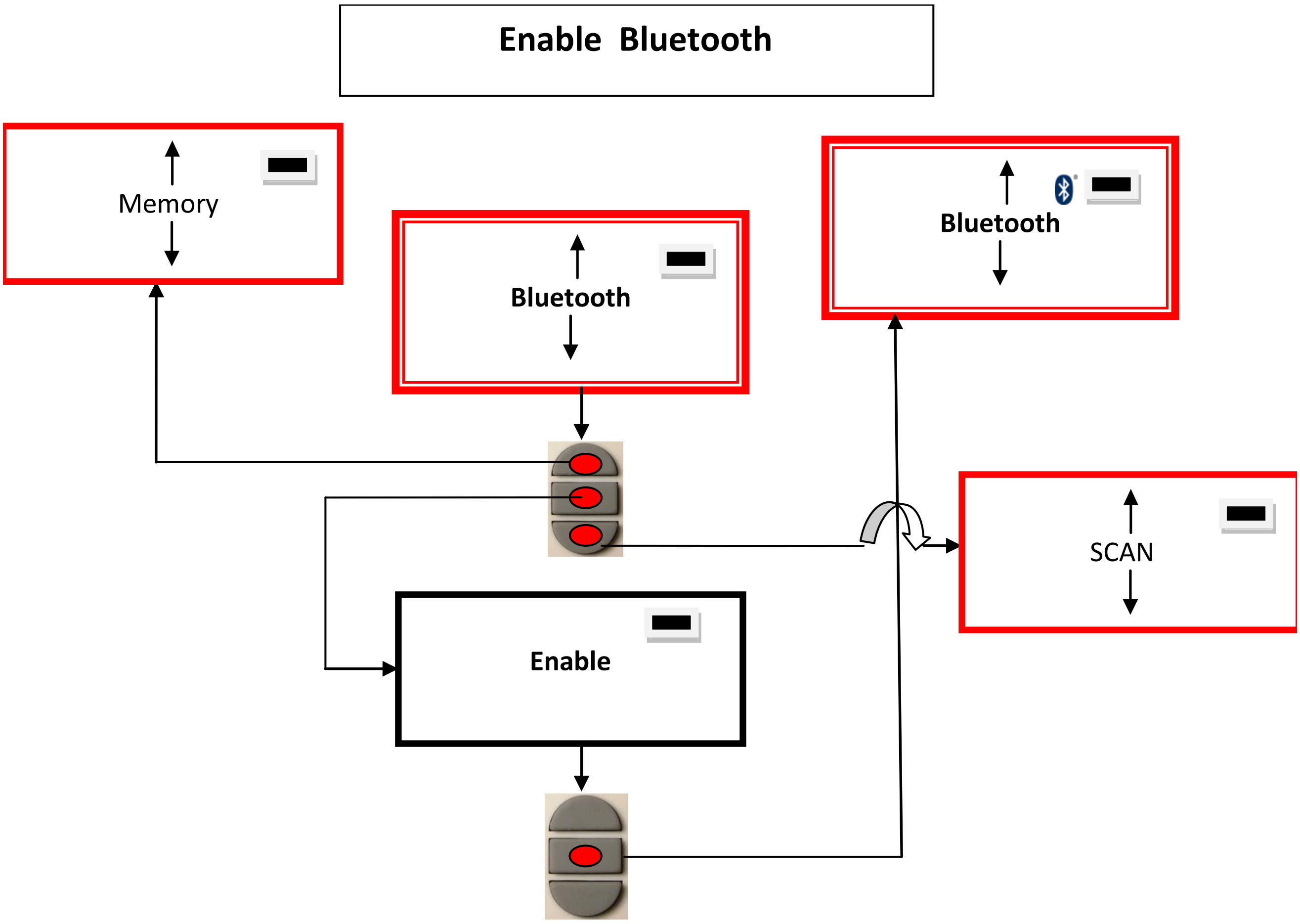
26/02/2013

Synoptic Menu “Language”



26/02/2013

Synoptic Menu “Bluetooth 1”



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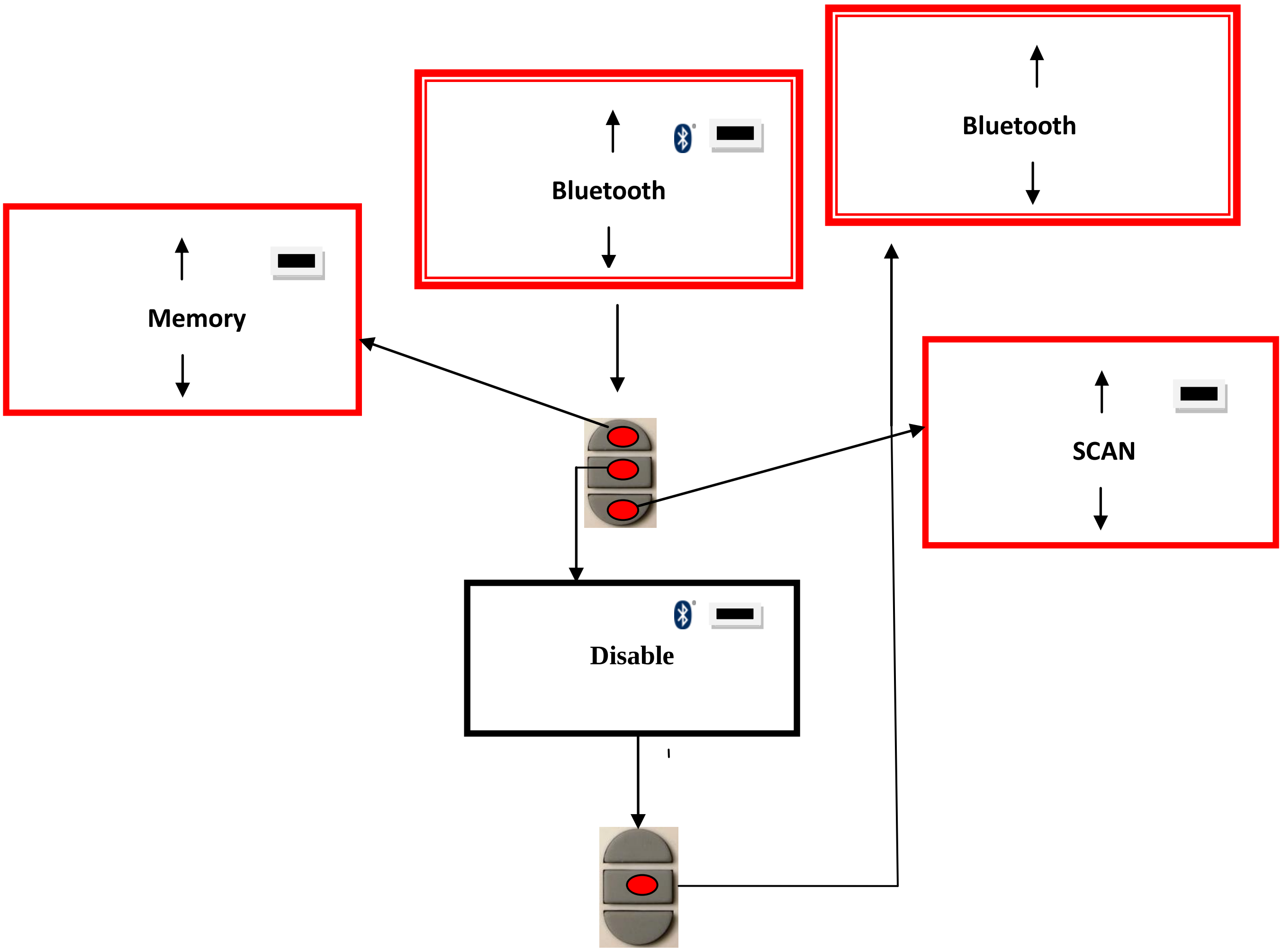
Synoptic Menu « Bluetooth 2 »

Disable Bluetooth



▬ Charging indicator light

▬ Bluetooth indicator light

26/02/2013

Reader “Memory” function

The V8 reader has a memory enabling it to store 1200 identifiers (tag numbers).
This function must be activated by the user if he wishes to use it.

Storage of numbers read by the V8 reader

The V8 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.
To use this function, you must first activate the “Memory” function (see block diagram: “Memory 1”).
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 (see Block Diagram: Memory 2)

Second case:

The memory has been previously activated but no number has been recorded.

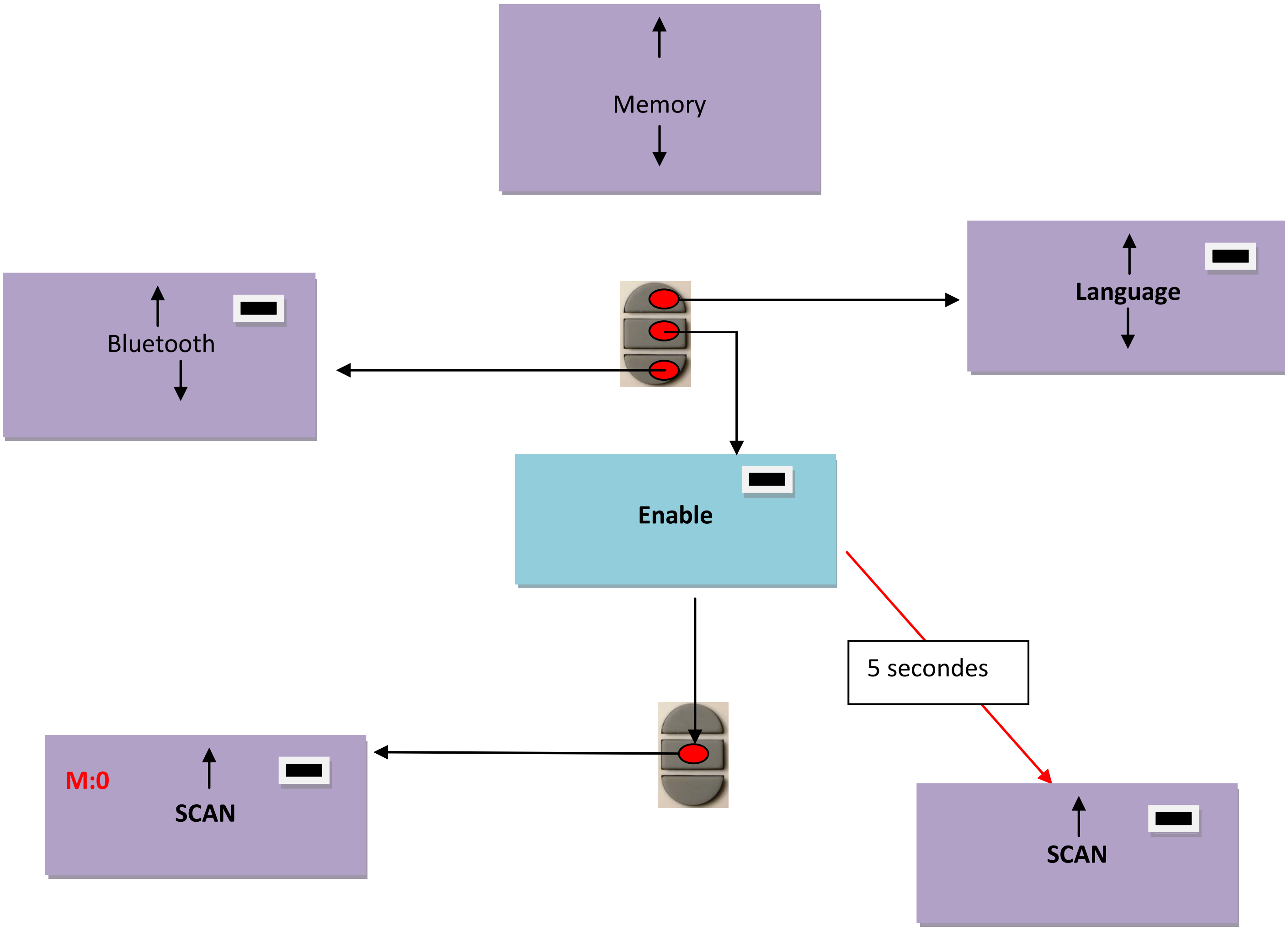
In this case simply “deactivate” the memory (block diagram: “Memory 2”

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).

Synoptic Menu « Memory 1 »

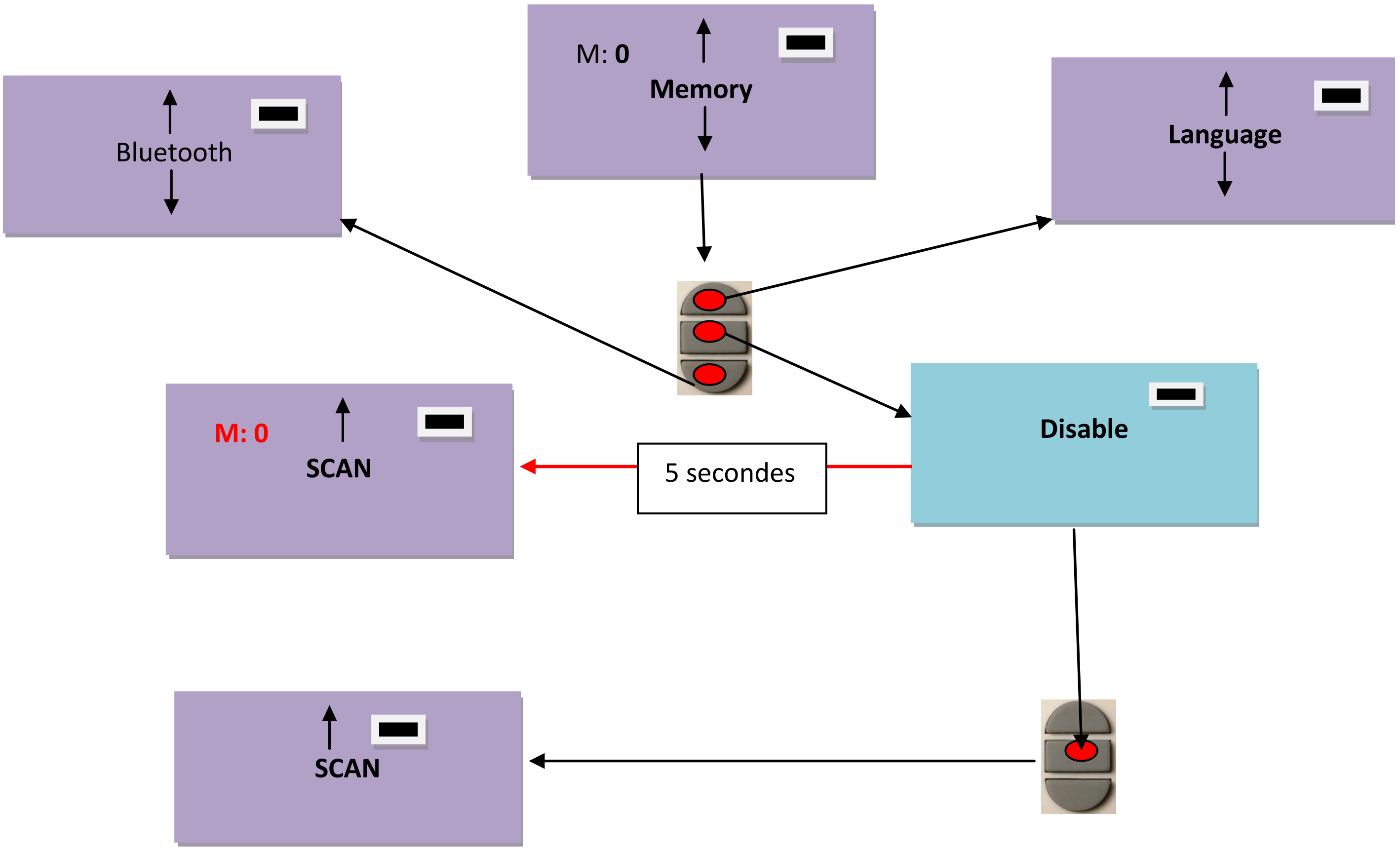
Enable the « Memory »



Synoptic   Menu « Memory 2 »

Disable the "Memory"

Memory is enable but there is no registration of ID numbers



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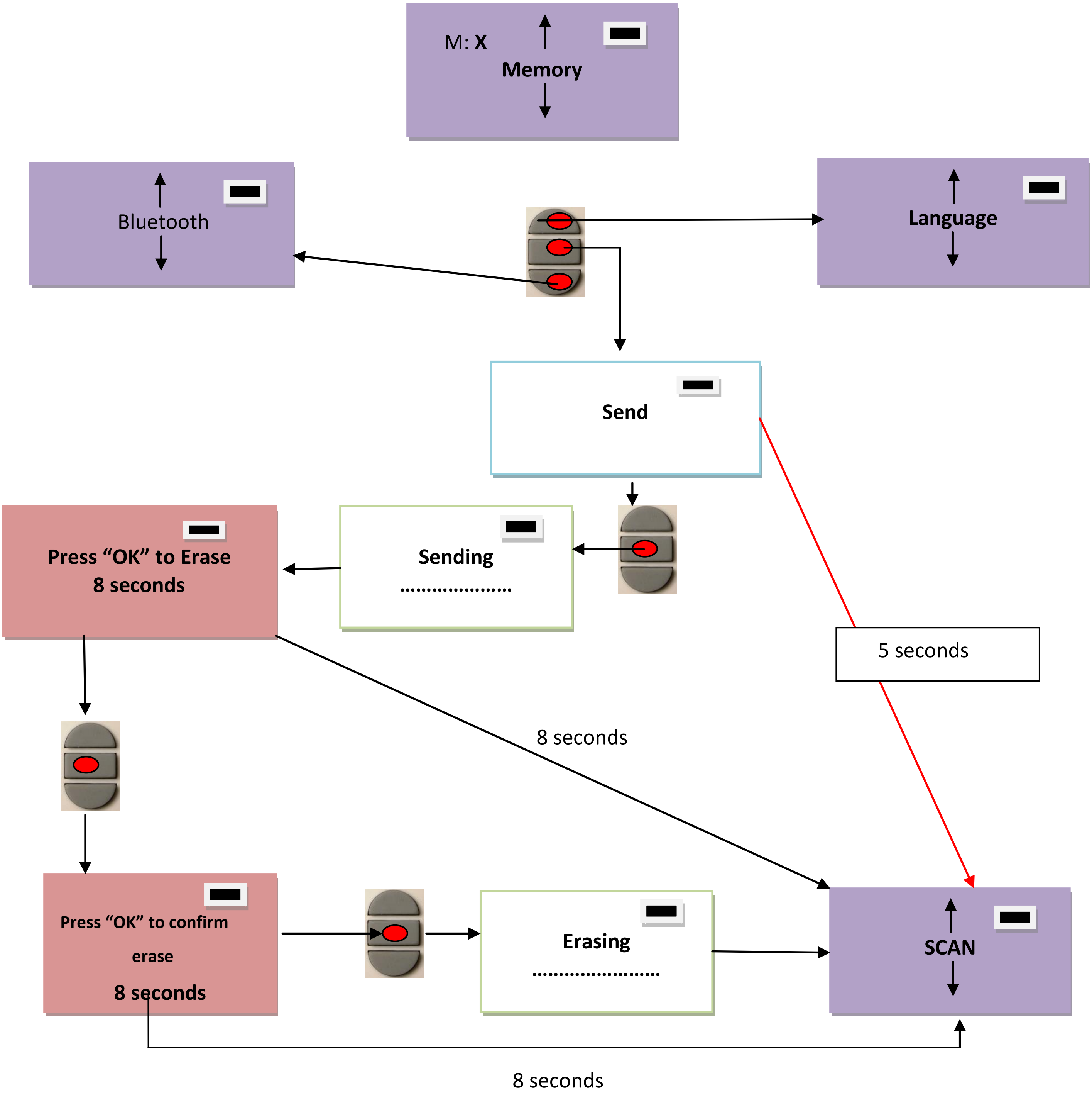
Synoptic Menu « Memory 3 »

Memory « Enable » but there are datas registered



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Communication between V8 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 driver and have software such as Hyperterminal (Windows XP), Datatransfer (Felixcan), Realtrace Terminal, etc. which enables the data to be displayed on the computer screen and processed if necessary.

PetScan RT100 V8

Serial link: use of the Windows « Hyperterminal »

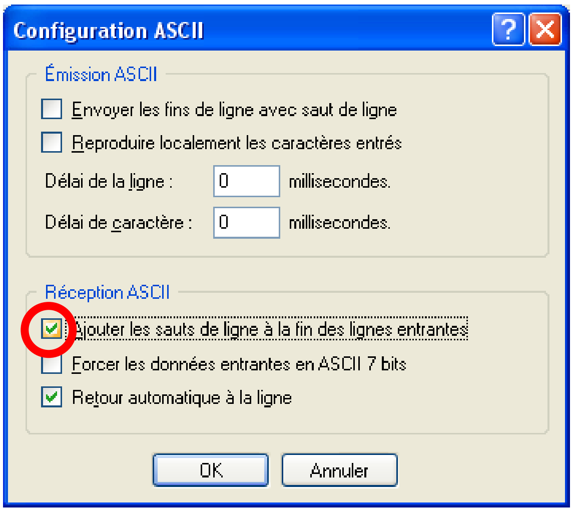
The current version of the PetScan RT100 V8, transmits the read identifiers to the PC it is connected to, either via the USB cable or its wireless link (Bluetooth). The PetScan does not wait for any order or acknowledgement from the PC.

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… » :



Configuration ASCII

Émission ASCII

☐ Envoyer les fins de ligne avec saut de ligne

☐ Reproduire localement les caractères entrés

Délai de la ligne : 0 millisecondes.

Délai de caractère : 0 millisecondes.

Réception ASCII

☑ Ajouter les sauts de ligne à la fin des lignes entrantes

☐ Forcer les données entrantes en ASCII 7 bits

☑ Retour automatique à la ligne

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: ″/x 0D″

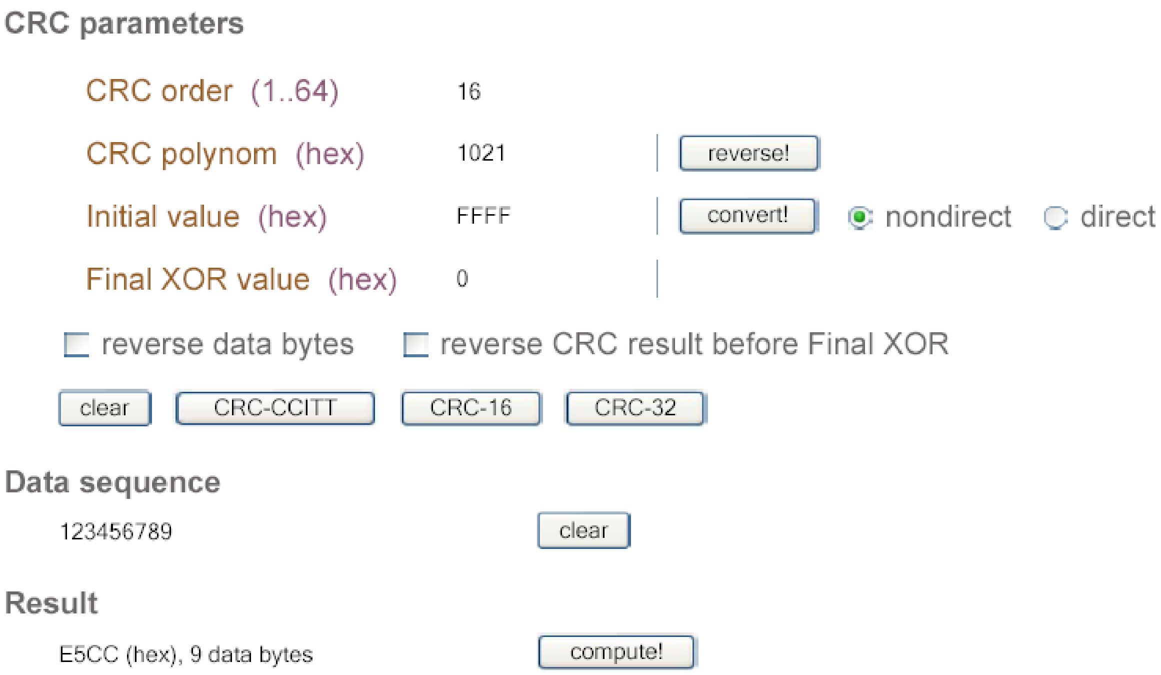
← Data used to calculate the CRC →

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);
}
```

http://www.zorc.breitbandkatze.de/crc.html



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

Data sequence

123456789 [clear]

Result

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

How to know what USB port the V8 is connected to.

Windows XP

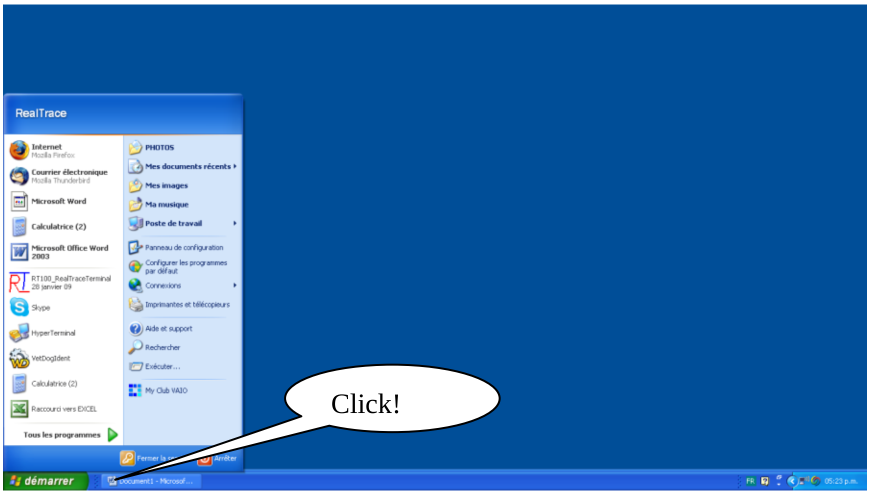
When you connect a peripheral to a USB port on a PC, the PC automatically assigns it a port number. The peripheral is often automatically recognised by the application software, thus it is not necessary to configure it. This is the case with printers, scanners, etc.

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.

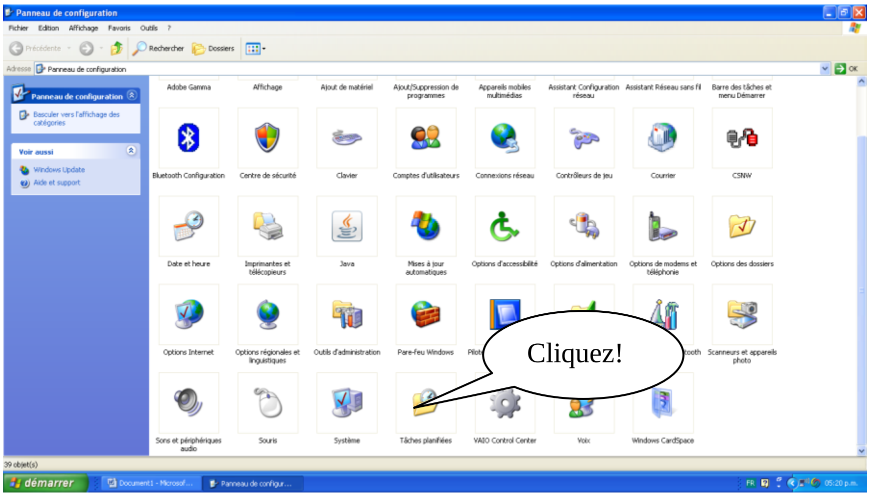
As regards the V8, it is possible that the right port will be automatically assigned by the PC to the application software, but it is also quite likely that you will have to choose it yourself from all the ports offered to you. You can of course try them one after the other, but in some cases the PC's 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 V8's driver is correctly installed.

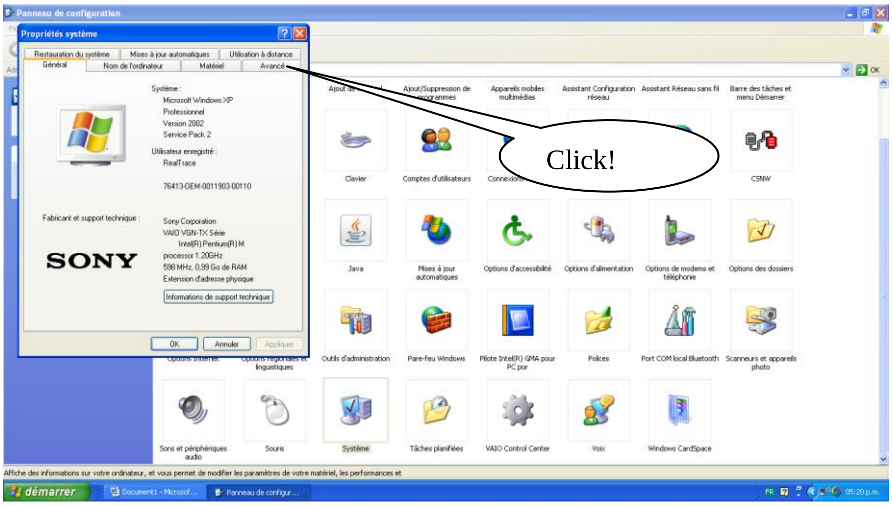
Select as shown below.



Then select « System »



Then select « Device »


Propriétés système

Restauration du système | Mises à jour automatiques | Utilisation à distance | Général | Nom de l'ordinateur | Matériel | Avancé

Système :
Microsoft Windows XP
Professionnel
Version 2002
Service Pack 2

Utilisateur enregistré :
RealTrace

76413-OEM-0011903-00110

Fabricant et support technique :
Sony Corporation
VAIO VGN-TX Série
Intel(R) Pentium(R) M
processor 1.20GHz
598 MHz, 0,99 Go de RAM
Extension d'adresse physique

Affiche des informations sur votre ordinateur, et vous permet de modifier les paramètres de votre matériel, les performances et

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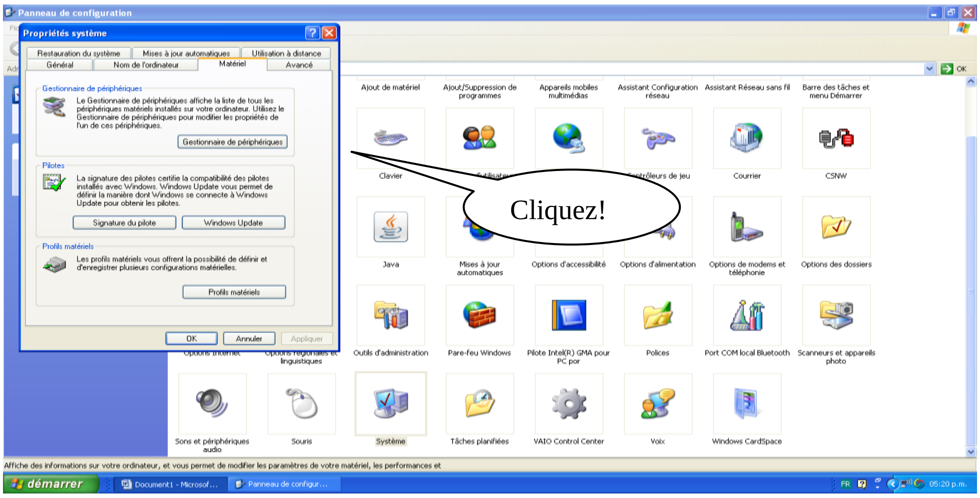
Then Select « Device Manager »



Gestionnaire de périphériques

Le Gestionnaire de périphériques affiche la liste de tous les périphériques matériels installés sur votre ordinateur. Utilisez le Gestionnaire de périphériques pour modifier les propriétés de l'un de ces périphériques.

Gestionnaire de périphériques

Pilotes

La signature des pilotes certifie la compatibilité des pilotes installés avec Windows. Windows Update vous permet de définir la manière dont Windows se connecte à Windows Update pour obtenir les pilotes.

Signature du pilote | Windows Update

Profils matériels

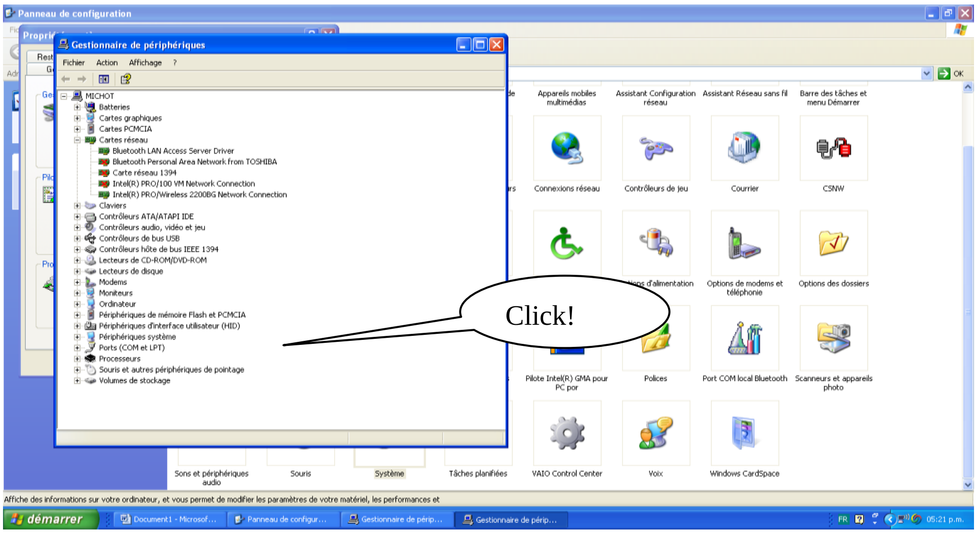
Les profils matériels vous offrent la possibilité de définir et d'enregistrer plusieurs configurations matérielles.

Profils matériels

OK | Annuler | Appliquer

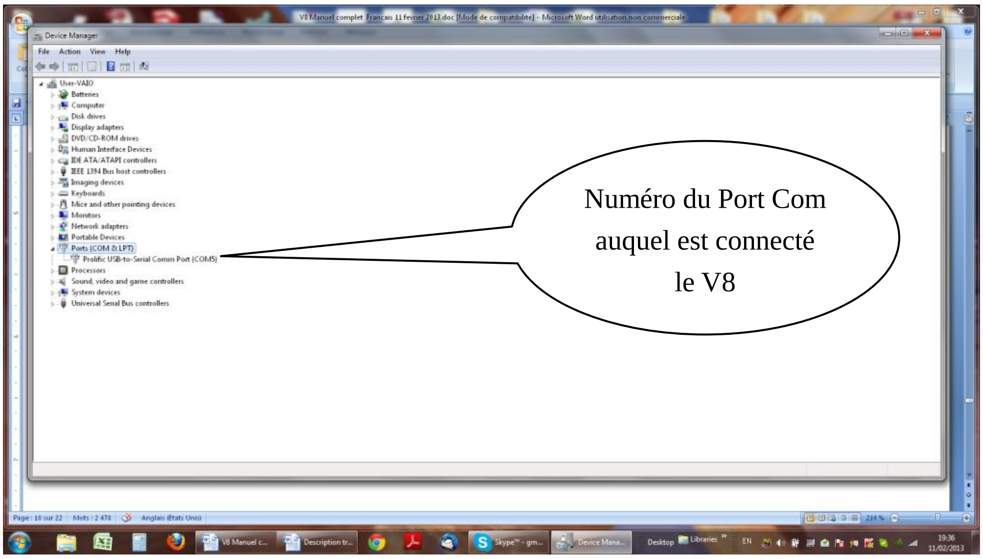
Affiche des informations sur votre ordinateur, et vous permet de modifier les paramètres de votre matériel, les performances et

Then select « Ports (com et LPT) »



```
MICHOT
  Batteries
  Cartes graphiques
  Cartes PCMCIA
  Cartes réseau
    Bluetooth LAN Access Server Driver
    Bluetooth Personal Area Network from TOSHIBA
    Carte réseau 1394
    Intel(R) PRO/100 VM Network Connection
    Intel(R) PRO/Wireless 2200BG Network Connection
  Claviers
  Contrôleurs ATA/ATAPI IDE
  Contrôleurs audio, vidéo et jeu
  Contrôleurs de bus USB
  Contrôleurs hôte de bus IEEE 1394
  Lecteurs de CD-ROM/DVD-ROM
  Lecteurs de disque
  Modems
  Moniteurs
  Ordinateur
  Périphériques de mémoire Flash et PCMCIA
  Périphériques d'interface utilisateur (HID)
  Périphériques système
  Ports (COM et LPT)
  Processeurs
  Souris et autres périphériques de pointage
  Volumes de stockage
```

The number of the Com port is shown.

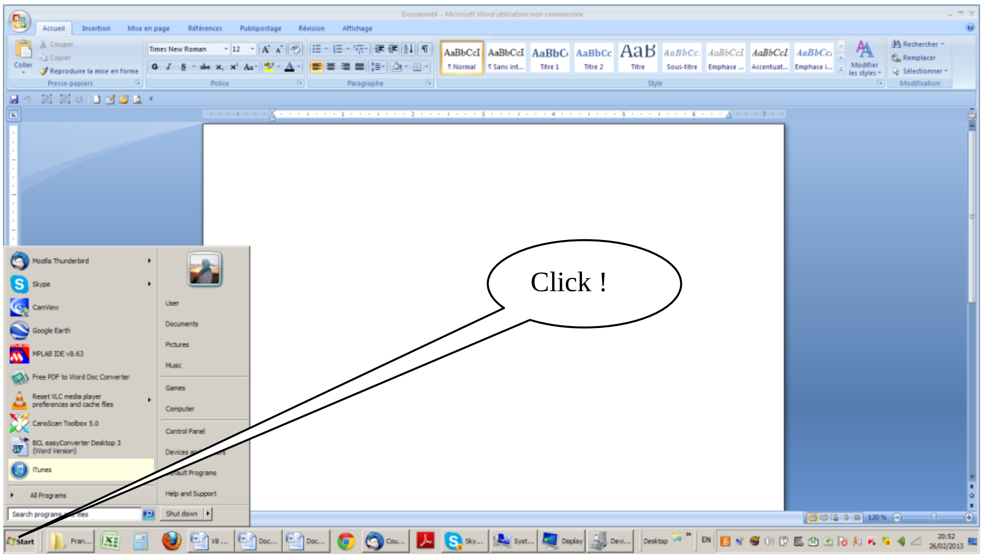


```
User-VAIO
  Batteries
  Computer
  Disk drives
  Display adapters
  DVD/CD-ROM drives
  Human Interface Devices
  IDE ATA/ATAPI controllers
  IEEE 1394 Bus host controllers
  Imaging devices
  Keyboards
  Mice and other pointing devices
  Monitors
  Network adapters
  Portable Devices
  Ports (COM & LPT)
    Prolific USB-to-Serial Comm Port (COM5)
  Processors
  Sound, video and game controllers
  System devices
  Universal Serial Bus controllers
```

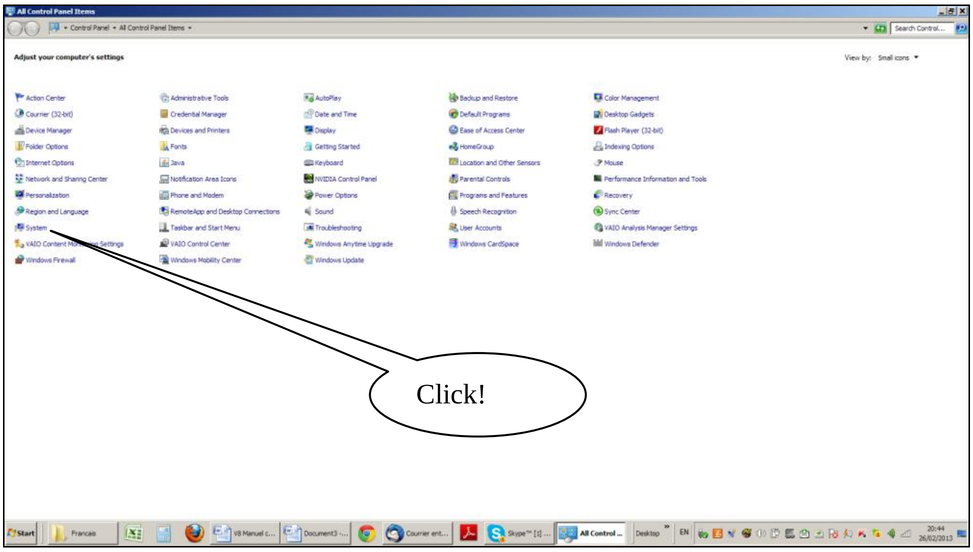
How to know what USB port the V8 is connected to.

Windows 7

Select as shown below.



Then select « System »



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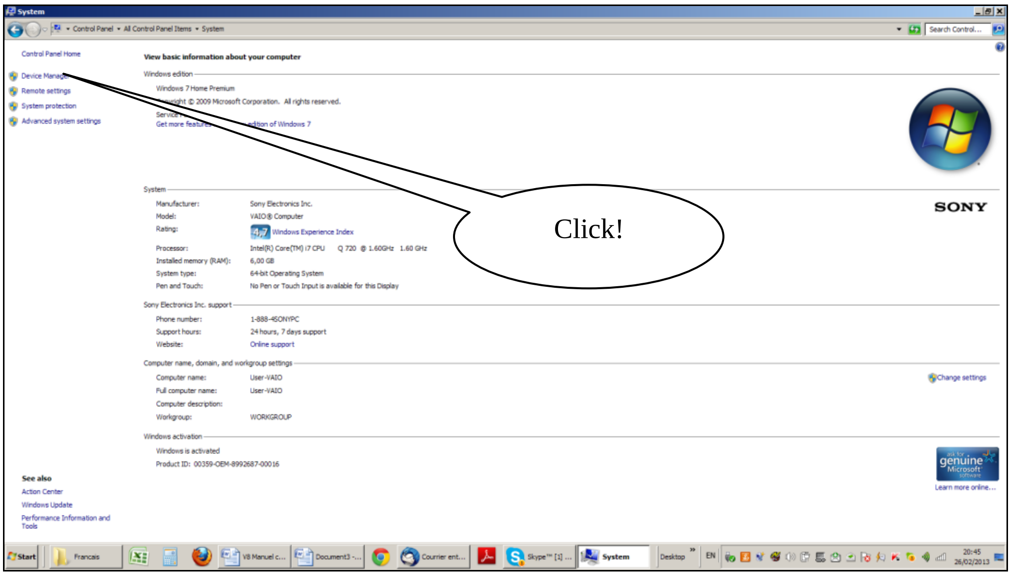
Then select « Device Manager »



View basic information about your computer

Windows edition

Windows 7 Home Premium

Copyright © 2009 Microsoft Corporation. All rights reserved.

Service P

Get more features ... edition of Windows 7

System

Manufacturer: Sony Electronics Inc.

Model: VAIO® Computer

Rating: 4,7 Windows Experience Index

Processor: Intel(R) Core(TM) i7 CPU Q 720 @ 1.60GHz 1.60 GHz

Installed memory (RAM): 6,00 GB

System type: 64-bit Operating System

Pen and Touch: No Pen or Touch Input is available for this Display

Sony Electronics Inc. support

Phone number: 1-888-4SONYPC

Support hours: 24 hours, 7 days support

Website: Online support

Computer name, domain, and workgroup settings

Computer name: User-VAIO

Full computer name: User-VAIO

Computer description:

Workgroup: WORKGROUP

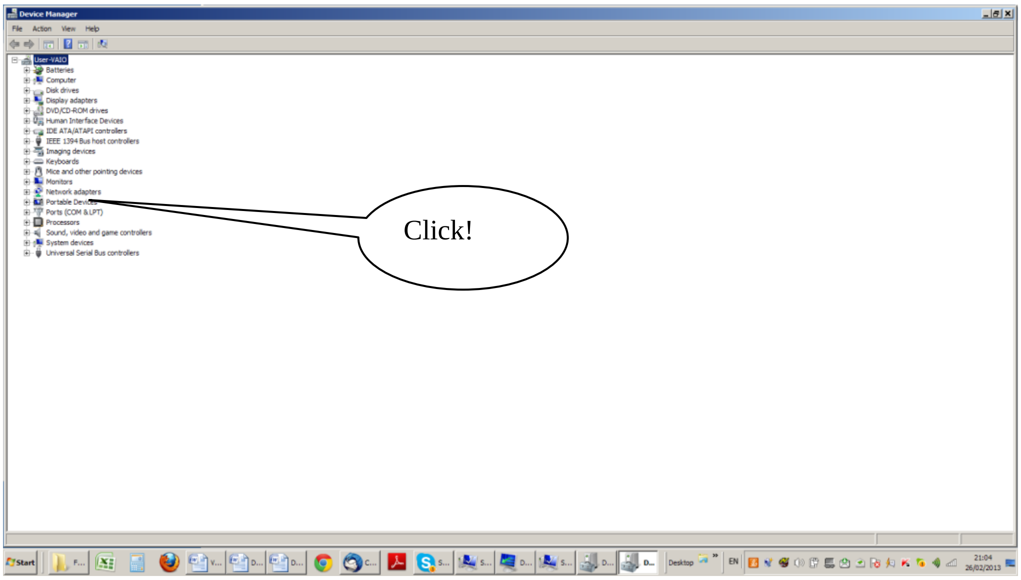
Windows activation

Windows is activated

Product ID: 00359-OEM-8992687-00016

Click!

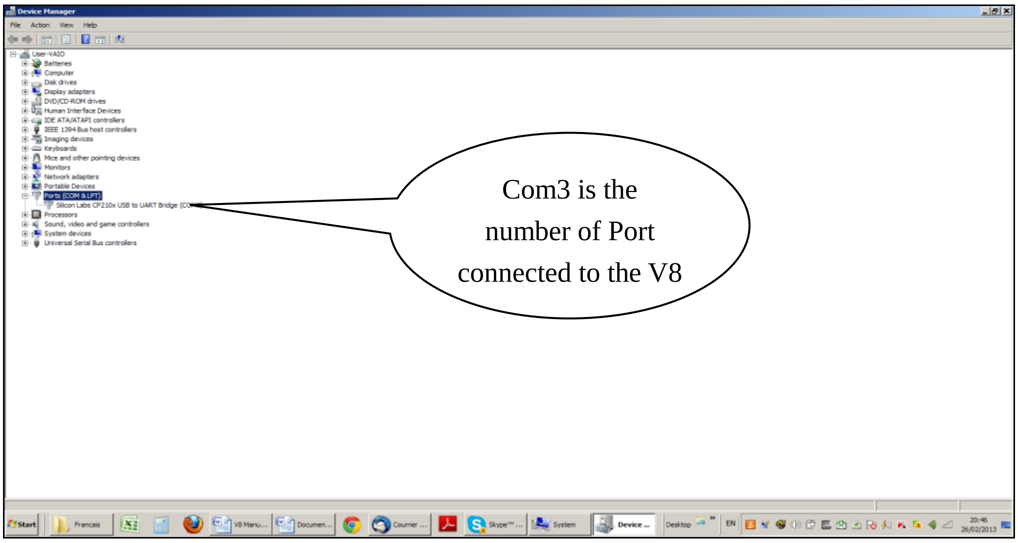
Then select « Port COM et LPT»



User-VAIO
- Batteries
- Computer
- Disk drives
- Display adapters
- DVD/CD-ROM drives
- Human Interface Devices
- IDE ATA/ATAPI controllers
- IEEE 1394 Bus host controllers
- Imaging devices
- Keyboards
- Mice and other pointing devices
- Monitors
- Network adapters
- Portable Devices
- Ports (COM & LPT)
- Processors
- Sound, video and game controllers
- System devices
- Universal Serial Bus controllers

Click!

The number of the Com port is shown.



User-VAIO
- Batteries
- Computer
- Disk drives
- Display adapters
- DVD/CD-ROM drives
- Human Interface Devices
- IDE ATA/ATAPI controllers
- IEEE 1394 Bus host controllers
- Imaging devices
- Keyboards
- Mice and other pointing devices
- Monitors
- Network adapters
- Portable Devices
- Ports (COM & LPT)
  - Silicon Labs CP210x USB to UART Bridge (CO
- Processors
- Sound, video and game controllers
- System devices
- Universal Serial Bus controllers

Com3 is the
number of Port
connected to the V8

The screens may be differents. It depends of the Windows version.

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