DATAMARS

TEXTILE ID

R-PO7470

Portable reader

USER MANUAL

Version 1.1

DATAMARS

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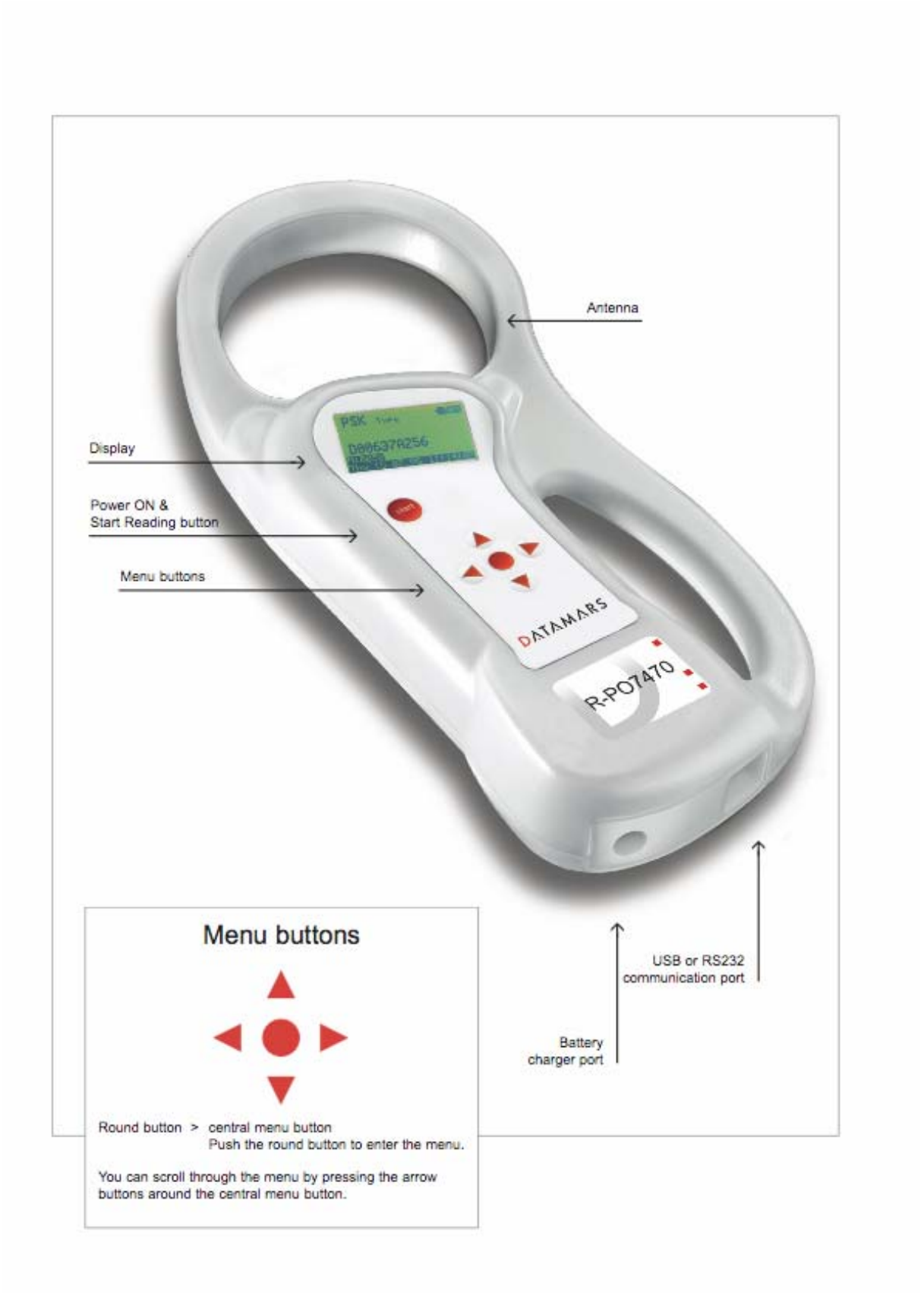
Contents:

1 Description



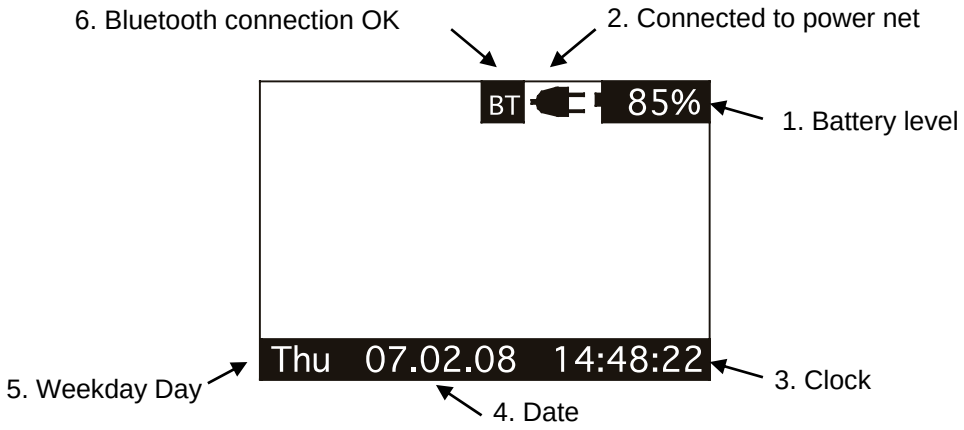
2 Operation

Although the R-PO7470 has been designed to plug and play, we recommend you read this manual carefully in order to take advantage of all its features and functions.

2.1 Power on the R-PO7470

Slide your hand between the base unit and the handle. Use your thumb to press the START button which is located on the upper left corner of the panel.
The display shows the following start-up figure:

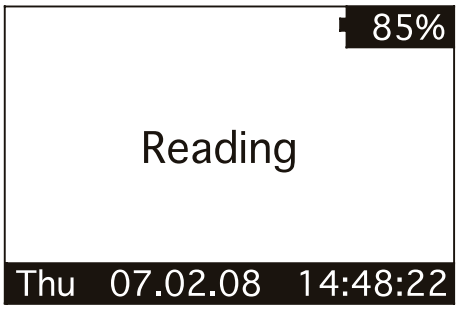
Under the Datamars logo you can see the name of the reader and the firmware version.
After a few seconds this main screen shot appears:



1. Check the battery level, which should read more than 6% vitality to read a transponder. The battery level shows the discharge level as well as the charge level during charge mode.
2. While the reader is connected to the power net, in charge mode, the reader disables the reading mode; therefore it is not possible to read a transponder. The other functionalities are fully active.
3. Clock time is in 24 hour mode.
4. Date format can be selected between EURO/USA.
5. Clock weekday.
6. Bluetooth connection established and ready to use.

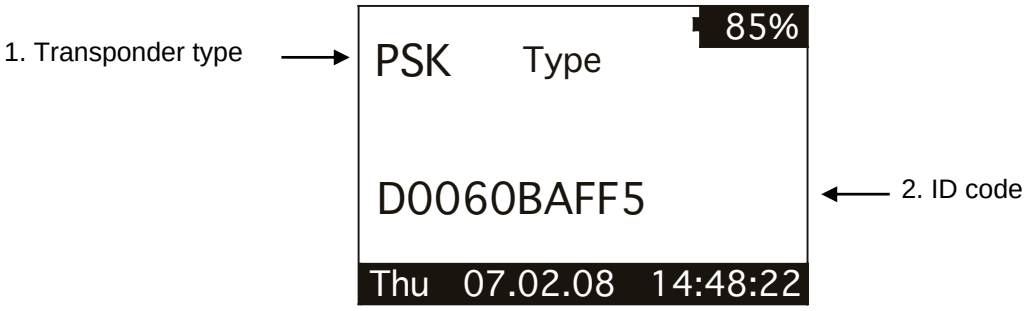
2.2 Read a transponder

Place the R-PO7470 near the item to be read then press the START button to activate the reading mode.



Reading mode

During reading mode; move the reader along the item to scan the transponder ID.
To stop the reading mode press the START button again.
The following figure shows the result of a successful reading session:



1. The transponder type for Industrial application is PSK and it is a Datamars transponder
2. Identity Code number.

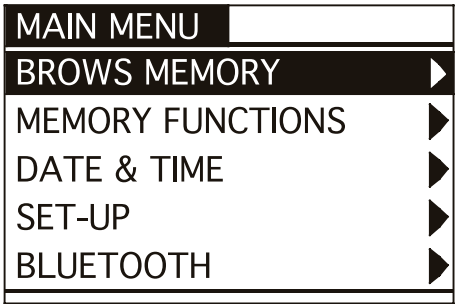
The following figure shows the result of an unsuccessful reading session:

After a while the reading mode times out. The reader stops and shows the message “NO TAG FOUND”.

3 Managing the menu

3.1 Navigating the menu

Power up the reader by pressing the STRAT button (please refer to chapter 2.1).
Press the ENTER button which is the round button in the center of the arrows pad.
The display shows the following figure:

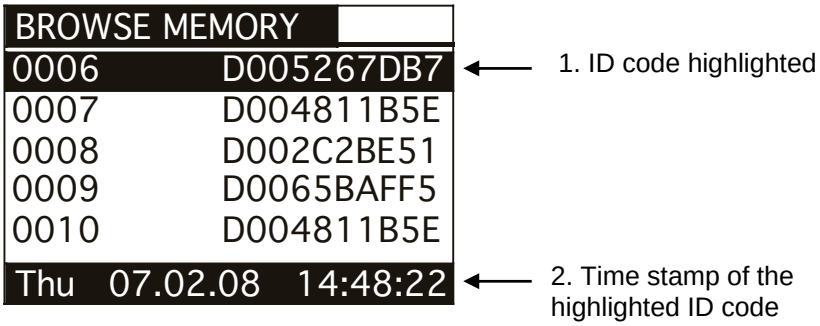


You can scroll through the menu by pressing the UP or DOWN buttons which are the arrows around the central ENTER button. The arrows located on the right of the display means that this menu contains a sub menu. In order to enter a sub menu you have to press the RIGHT arrow button while it is highlighted.

Generally the ENTER round button is used to confirm the changes made through the parameters of the menu. The START button is used to cancel the changes and go back to a previous menu level to exit the main menu.

3.2 Browse memory

In the browse menu you will find the ID code stored in the memory of the reader.
The following figure shows the browse memory menu:



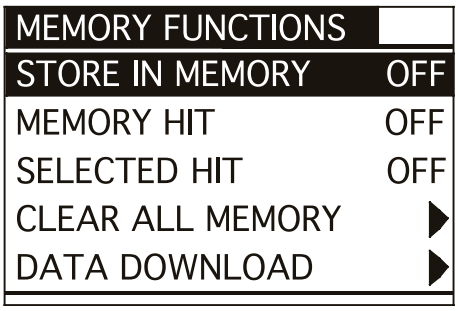
You can scroll through the ID codes by pressing the UP or DOWN buttons or skip a page by pressing the LEFT or RIGHT arrow button. You can scroll quickly through the ID codes by holding down one of the arrow buttons.

You can select an ID code by pressing the ENTER button while it is highlighted. This function stores the corresponding ID code in the selected ‘hit function’ (please refer to chapter 3.3.3 for more details).

You can exit the current menu by pressing the START button.

3.3 Memory functions

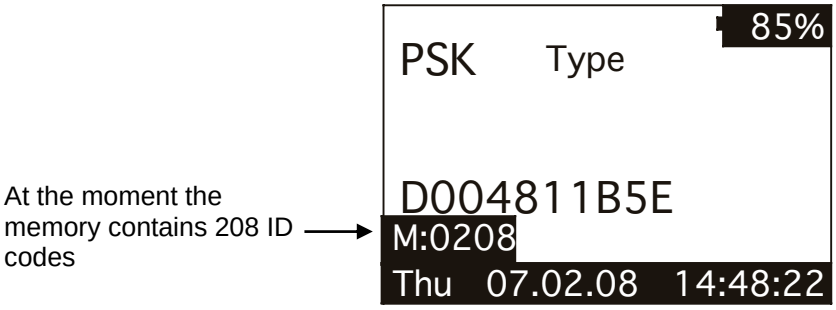
In the ‘memory functions’ menu you will find various features and functions.
The following figure shows the ‘memory functions’ menu:



You can scroll through the ‘memory functions’ by pressing the UP or DOWN button. You can change the parameter highlighted by pressing the LEFT or RIGHT button

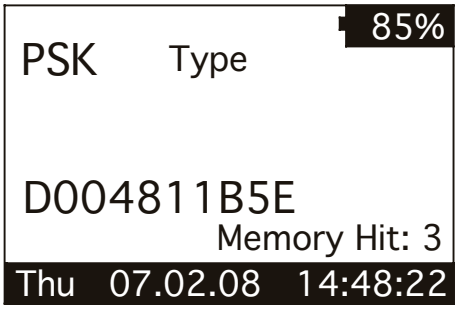
3.3.1 Store in memory

The ‘store in memory’ function enables or disables the function to store ID codes read into the memory. When this function is OFF, the reader does not record an ID code in the memory. While it is ON, it stores the data into the memory.
The following figure shows the store in ‘memory function’ enabled:



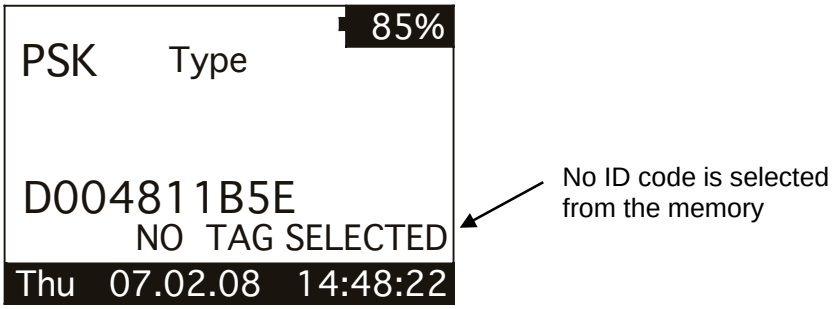
3.3.2 Memory hit

The ‘memory hit’ function counts and displays how many times the current ID code read is present in the memory. When this function is OFF, the reader does not show anything. While it is ON, it shows the ‘memory hit’ counter on the display.
The following figure shows the memory hit function enabled:

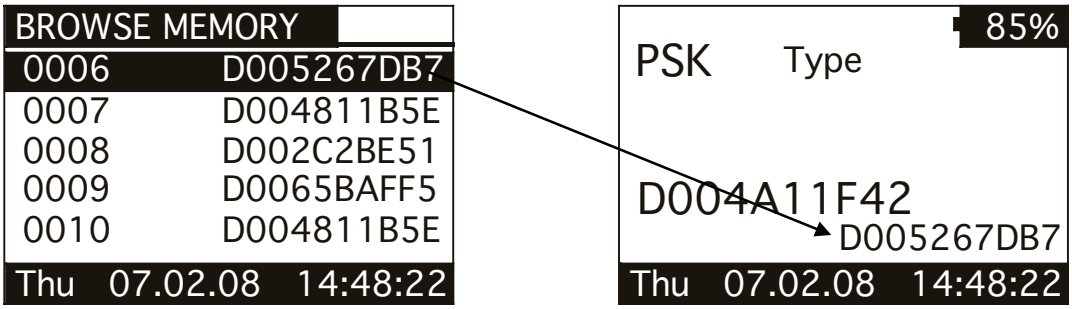


3.3.3 Selected hit

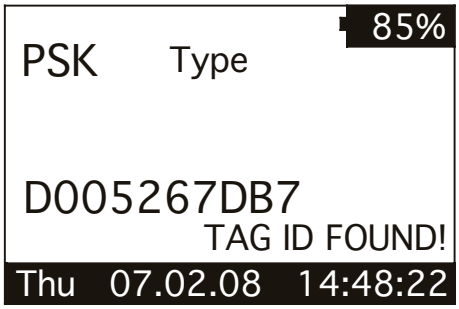
The ‘selected hit’ function checks and displays the current ID code read is present in the memory. This function is useful to identify a specific item in a large group of items. When this function is OFF, the reader does not show anything. While it is ON, it shows the message “TAG ID FOUND” when the tag read **match the selected ID**, or the selected tag ID to be found when the tag ID does not match.
The following figure shows the selected hit function enabled:



In this case; the message “NO TAG SELECTED” appears. This means that you have to select an ID code thanks to the ‘browse memory’ function (refer to chapter 3.2 for details). Therefore, press the ENTER round button to enter the main menu, then press the RIGHT button to enter the browse menu. Scroll through the ID codes list until you find the needed ID code. When highlighted, press the ENTER button so that it is selected for the ‘selected hit’ function.

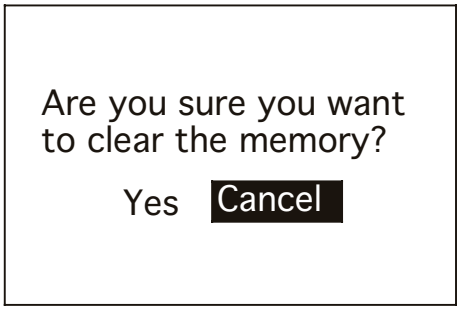


At this point you are ready to search the selected ID code in a large group of items. When you read an ID code, which matches the selected one, the reader displays the message “TAG ID FOUND!” and beeps three times.



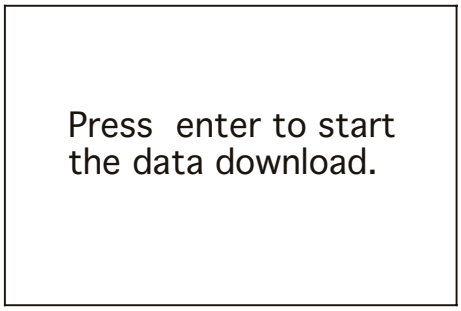
3.3.4 Clear all memory

This function clears the memory's contents. Press the LEFT button to highlight the Yes answer. Then press the ENTER button to confirm the action to clear the memory.



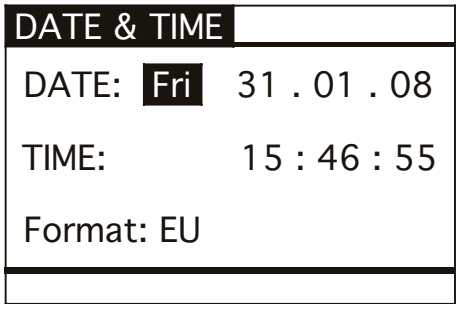
3.3.5 Data download

This function downloads the data stored in memory through the USB or Bluetooth interface.
First plug the reader to a PC with the USB cable (refer to chapter 4). Then run the HyperTerminal session to receive data on this program. At this point enter the 'data download' function by navigating through the menus. When the following message appears; press the ENTER button.



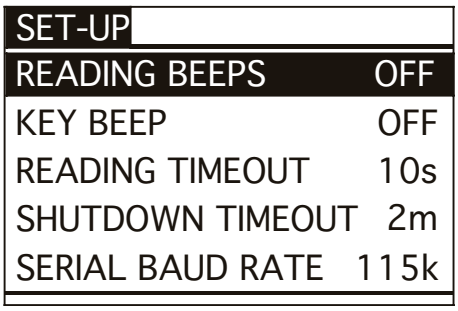
3.4 Date & Time

This menu allows you to adjust the date and time including the date format (EURO/USA).
Press the LEFT/RIGHT button to move the highlighted field. Press the UP or DOWN button to change the highlighted parameter.



3.5 Set-up

There are various features in the ‘set-up’ menu.
The following figure shows the ‘set-up’ menu:



You can scroll through the ‘set-up’ features by pressing the UP or DOWN button. You can change the highlighted parameter by pressing the LEFT/RIGHT button.

3.5.1 Reading beeps

The reading beep features enable or disable the acoustic signal when a TAG is found. When the reading feature is OFF the beep is disabled, while is ON the beep is enabled.

3.5.2 Key beep

The key beep enables or disables the acoustic signal when the button is pressed. When the key feature is OFF, the beep is disabled. When it is ON, the beep is enabled.

3.5.3 Reading timeout

The reading timeout is the maximum period of time that the reader scans for a TAG. After this period the reader switches from reading mode to idle mode automatically showing the message “NO TAG FOUND”.

3.5.4 Shutdown timeout

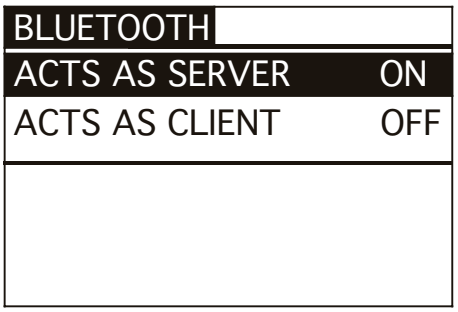
The shutdown timeout is the maximum period of time the reader stays on while no buttons are pressed. After this period the reader switches off automatically.

3.5.5 Serial baud rate

This parameter sets the speed of the serial communication through the USB interface. This parameter must be the same in the reader and on the PC program that attempts to receive data from the reader.

3.6 Bluetooth

The following figure shows the Bluetooth menu (refer to chapter 4.4 for details).



3.6.1 Act as a server

This command sets the default server profile. The default server profile is the profile that other devices can connect to when the Serial Port Adapter is in data mode.

3.6.2 Act as a client

This command sets the default client profile. The default client profile is the profile that the Serial Port Adapter uses when it establishes a connection, in data mode, to the default remote peer.

4 Connect your R-PO7470 to a PC

4.1 USB driver installation guide for Windows OS

Note: This example has been made using Windows 2000. It is the same for Windows XP as well as older operating systems. The template may change from one system to another but the procedure is the same. For more information, please refer to the Operating system manual.

1. Insert the R-PO7470 CD in the PC. The CD will start automatically.
   It is possible to close the application. It is not necessary to have it running at this point.

2. Insert the USB cable in the reader and the PC. The PC will found a new hardware

3. Follow the instructions. See the example below

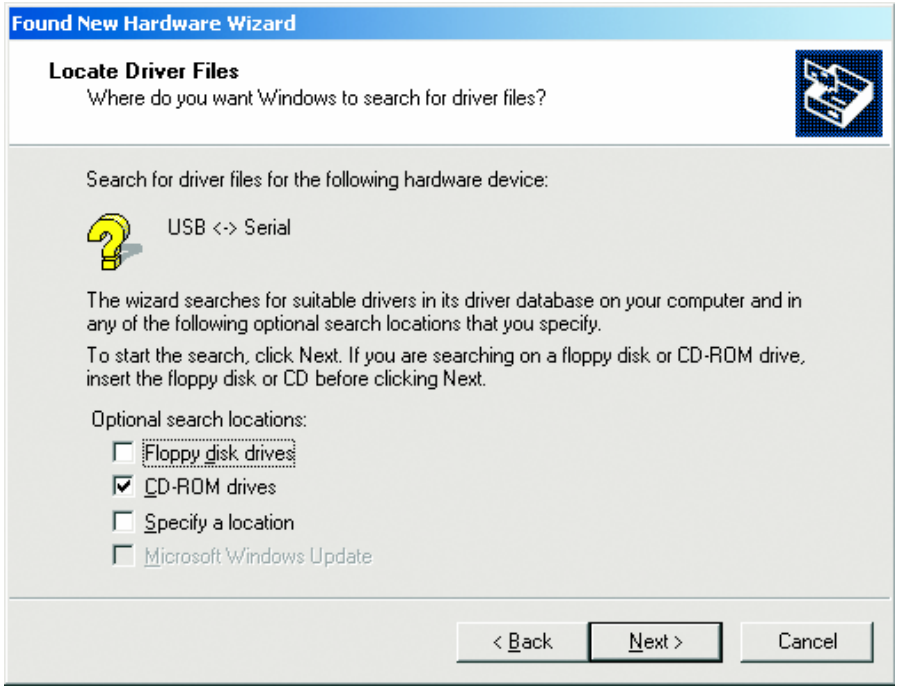
USB <-> Serial

Welcome Message

Click next

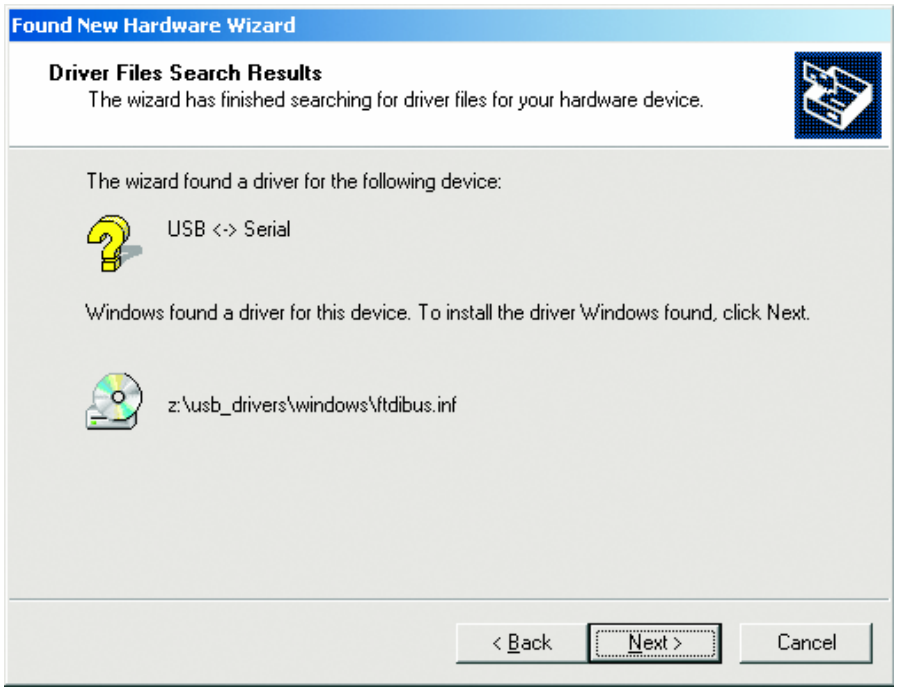
Found New Hardware

Click Next



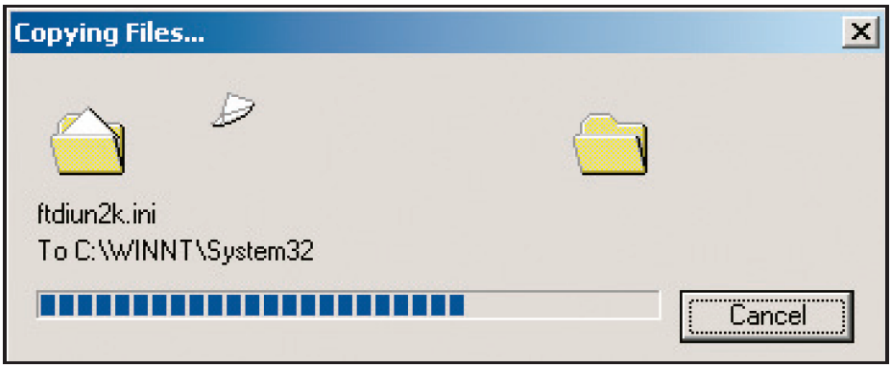
CD ROM

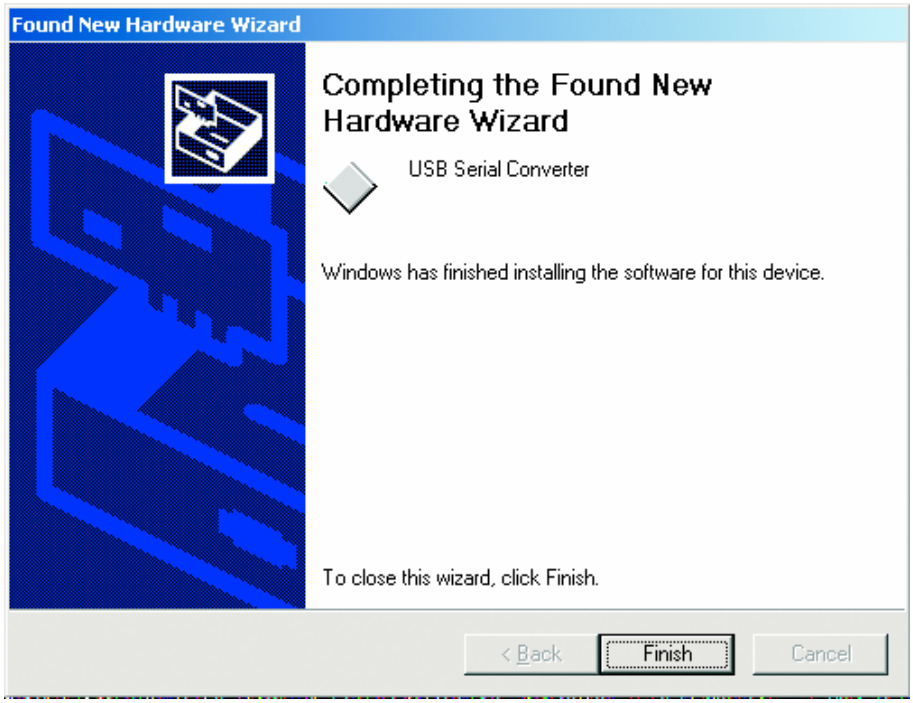
Click Next



Wizard Found a Driver

Click Next





Completing

Click Finish

Welcome to the found new hardware wizard

Click Next

4.2 USB driver installation guide for MAC OS

1. Insert the CD in the computer.
2. Click on the CD volume
3. Double click on the ”R-PO7470.HTML”
4. Double click on the MAC OSX or OS8/9 (according for your operating system).
5. Install the extracted data to the System Folder / Extention folder

Please refer to your Operating system manual

Note: To test the application it is possible to use a Terminal emulator such as Zterm. You can find this Terminal at http://www.coolstf.com/.

A Beta version is available in the CD directory MAC_Terminal.

4.3 Bluetooth installation guide for Windows XP OS

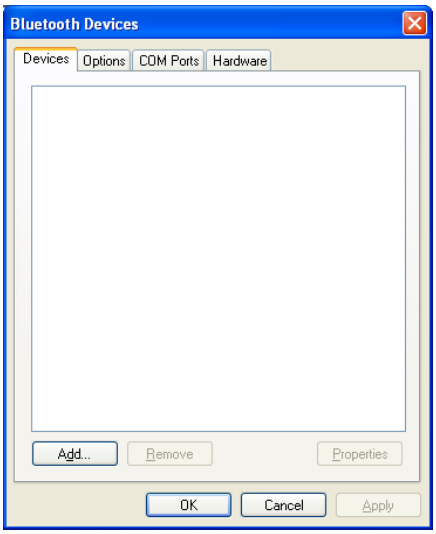
In order to connect the R-PO7470 reader to a host PC through Bluetooth, a PC equipped with Bluetooth hardware as well as the R-PO7470 equipped with the Bluetooth module are needed.

4.3.1 Configure R-PO7470 for the Bluetooth connection

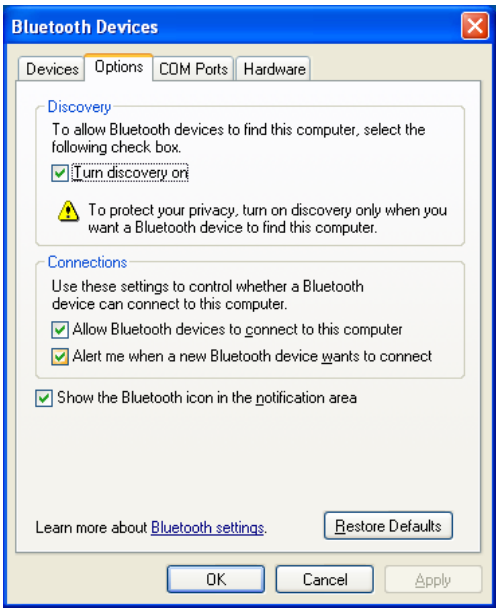
During the Bluetooth discovery process done by the PC, it is important that the R-PO7470 reader keeps itself ON. Therefore it is suggested to set the shutdown timeout to 5 minutes (Menu -> Setup -> Shutdown timeout). Moreover, periodically press the LEFT or RIGHT arrow button in order to reset the shutdown timeout.
Under the Bluetooth menu, switch on the feature ***Act as a Server*** and switch off ***Act as a Client***.

4.3.2 Search for and recognize the R-PO7470 by a host PC

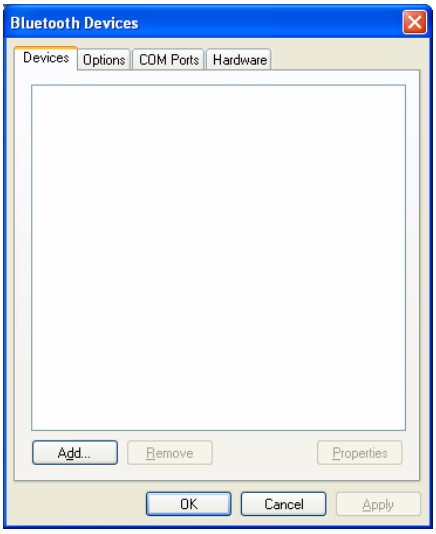
From the control panel choose ***Bluetooth Device***. The following dialog window appears.



Select the ***Options*** tab, then check the box featuring ***Turn discovery on***.

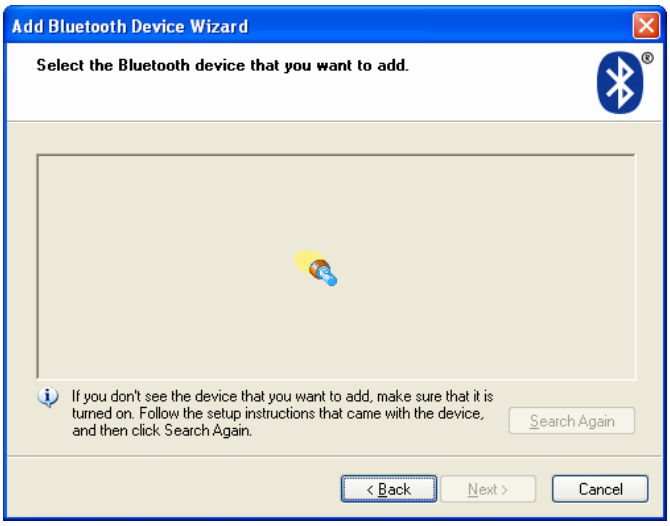


Select the ***Devices*** tab.

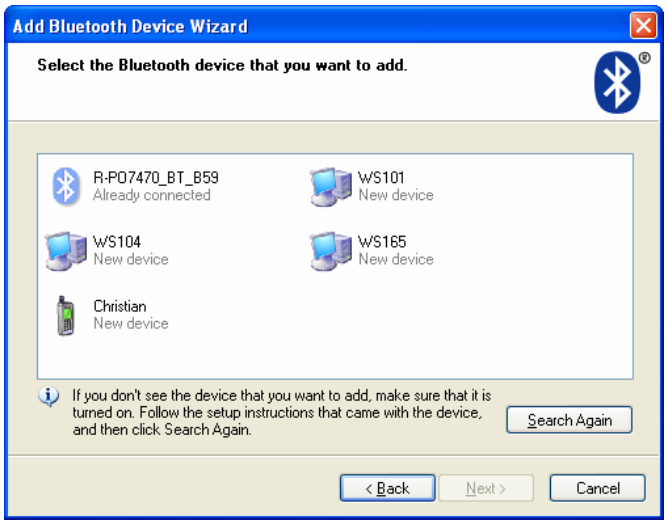


Double check that the R-PO7470 reader is switched on and configured to ***Act as a Server*** (Menu -> Bluetooth), then press the ***Add*** button.

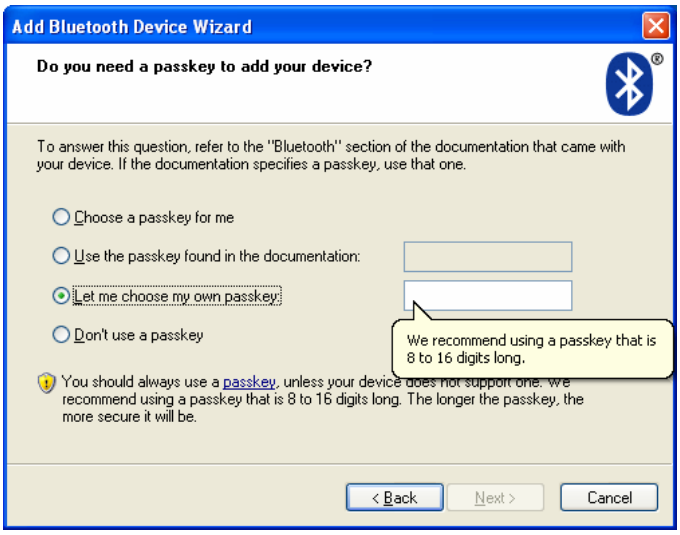
The welcome window for the configuration guide of the new Bluetooth peripheral appears. Press ***Next*** in order to start the search and recognize procedure.



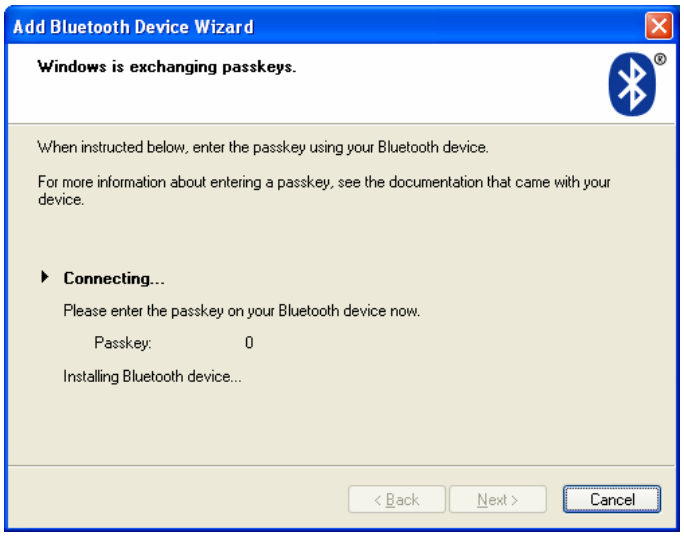
The result of the search and recognize procedure shows all the Bluetooth devices which are in the nearby area.

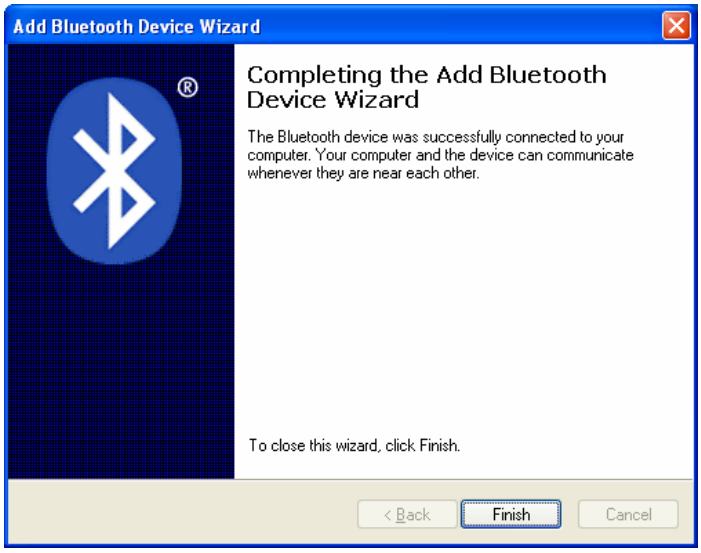


At this point select from the Bluetooth device list “R-PO7470_BT_Class2_xxx”, then press ***Next***.



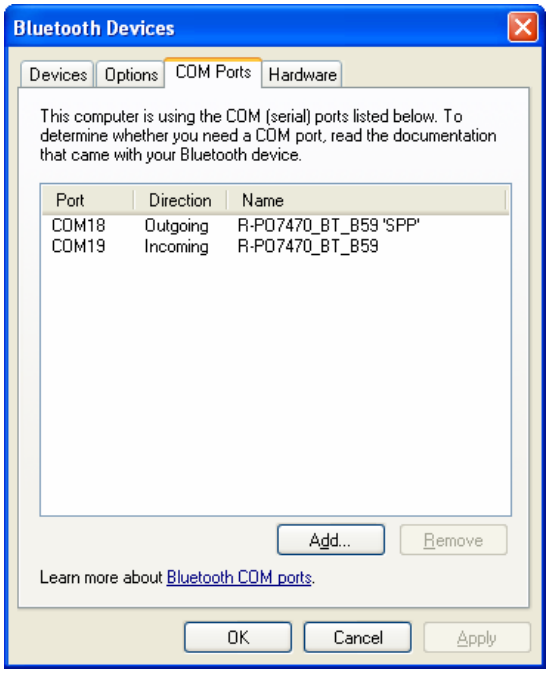
Select the option ***Let me choose my own passkey***, then input the number zero (just one 0 character). Press ***Next*** to continue.





Finally the R-PO7470 reader has been recognized and installed in your PC as a Bluetooth device. Press the ***Finish*** button.

At this point select the ***COM Ports*** tab and verify that two COM ports have been created: one called Outgoing and the other called Incoming.



The Outgoing COMxx is needed to connect to the R-PO7470 reader when it is in ***Act as a Server*** mode, while the COMxx Ingoing is needed to connect to the R-PO7470 reader when it is in ***Act as a Client*** mode.
The COM numbering depends on your host PC, this number can be different compared to this example.

4.4 Communication on the fly

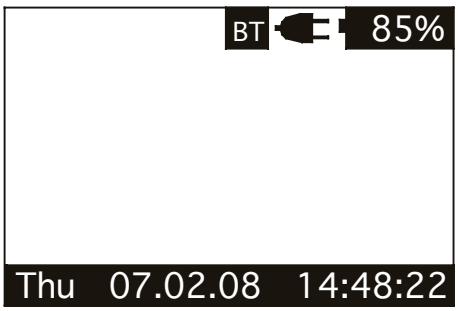
First install the driver and then connect the R-PO7470 to your PC through the USB–cable or BLUETOOTH wireless link. Now you can open a new HyperTerminal session (in Windows).
In the R-PO7470's CD you will find a pre-programmed HyperTerminal session. Copy it to your desktop (or where you prefer) and run it. If you do not have the CD with pre-programmed a HyperTerminal session, continue with the following:

To open a new HyperTerminal session

1. Select the Start menu
2. Choose Programs
3. Choose Accessories
4. Choose Communication
5. Launch HyperTerminal
6. A dialog box appears
7. Input a session name, (i.e. R-PO7470)
8. Press the ‘ok’ button
9. Select the COM port assigned to the VCP driver (usually COM2)
10. Input the corresponding BAUD rate
11. Check in the R-PO7470 menu, under ‘set-up’ menu, which BAUD rate is selected (default is 115200)
12. Select the following options: data bits= 8, parity= none, stop bits= 1, Flow control=none
13. Press the ‘ok’ button
14. At this point the connection starts, but the configuration is not finished yet
15. Stop the communication by selecting disconnect under the menu ‘Call’
16. Select ‘Properties’ under the File menu
17. A dialog box appears
18. Select the ‘Settings’ tab
19. Press the ‘ASCII Setup’ button
20. A dialog box appears
21. Select the Echo Typed Characters Locally features
22. Close the two dialog boxes by pressing the ‘ok’ button
23. Now the HyperTerminal session is ready to start
24. Select ‘Call’ under the Call menu
25. At this point you are ready to receive the ID codes read directly to your PC
26. Press the START button and read a transponder
27. The ID code will be shown on the HyperTerminal window

5 Battery managment

The R-PO7470 is equipped with 3 high quality Li-Ion cells battery.



5.1 Battery level indicator

The battery level should be more than 6% vitality to read a transponder. The battery level shows the discharge level as well as the charge level during charge mode.

5.2 How to recharge the battery

To recharge the battery simply plug the charger cable to the corresponding connector at the bottom of the reader. Make sure that the charger is also plugged in a power socket. The reader can be either switched ON or OFF during charge mode.
Once the charger has been plugged in, the R-PO7470 charges the battery in less than 2 hours. After 1 hour the battery is charged to about 80% of capacity.

6 Take care of your reader

Ensure that the reader does not get damaged. Do not drop it onto a hard surface or subject it to very wet conditions.

If the outer casing of the reader becomes soiled it can be cleaned with a slightly humid cloth. First ensure that it is not connected to the charger.

If for any reason the reader is not working, please do not attempt to repair it, but return it for repair to your local dealer.

The R-PO7470 reader is equipped with a Li-ion type battery. This battery lasts longer, does not contain Cadmium or lead, which makes it much safer for the environment. If the reader is to be destroyed, please return it to a battery specialist, for battery recycling.

The display of the reader R-PO7470 may change colour if exposed to temperatures higher than 50°C. It will return to its original colour as soon as the temperature gets below 50°C.

At very low temperatures the display may lose its contrast but at normal temperatures it will return to the normal contrast.

7 Specifications

1. Storage temperature: -40 to +70 °C, 95% RH, non condensing.
2. Operating temperature while battery under charge: 0 to +40 °C, 95 % RH non condensing.
3. Normal operating temperature: -5 to +50 °C, 95% RH non condensing.
4. Housing material: ABS UL94-HB.
5. External power supply (battery charger): Input: 100 to 240 VAC. Output: 15 VDC, 1A.
6. Dimensions: 330x160x40 mm3.
7. TAG compatibility: T-BT 7700; T-BT 7711; T-BT 7720; T-BT 7755; T-BH 7550; T-IA 7711 Datamars Low Frequency Single Read transponder only
8. Transmission frequency: 110 KHz.
9. Battery life: >500 cycles.
10. Weight: 450g (TBD).
11. IP40 (protection against dust, no protection for liquid).
12. Interfaces to host PC: USB and BLUETOOTH.

8 Regulations

8.1 Equipment Modification

Equipment modifications not expressly approved by Datamars SA, CH-6930 Bedano, the party responsible for FCC compliance, are forbidden. Such modifications could void the user's warranty and authority to operate the equipment and cause hazardous conditions.

8.2 10.2. EN 300330-1/-2 (Europe)

The R-PO7470 reader system is a sending and receiving equipment and is in accordance with the R & TTE directive EN 300 330-1/-2.
The R-PO7470 reader system fulfils the requirements of this regulation.

8.3 10.3. FCC (USA)

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more 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.

8.4 10.4. IC (Canada)

This Class B digital apparatus complies with Canadian ICES-003.
Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

8.5 10.4. CE certification

The R-PO7470 reader is in accordance with the requirements of protection, which are defined in the regulation concerning the electromagnetic tolerability EN301 489-1, -3, emitted by the council for the harmonization of regulations in the member countries. The European Community regulation for Low Frequency, EN 60950, is respected.
The R-PO7470 reader system fulfils the requirements of this regulation.

8.6 10.5. Warranty

If the reader is opened by not certified personnel by mistake the warranty is voided and we cannot guarantee the fulfillments of the above-mentioned regulations.

9 Technical supplement – Console commands

9.1 Introduction

This chapter describes how to connect the R-PO7470 to a personal computer (PC). The R-PO7470 can be connected to a PC in two ways: the first is a wired USB connection, while the other is a wire less Bluetooth connection (optional).
Moreover it describes the console commands implemented in the R-PO7470, in order to remotely control the features and the functions of the reader.

9.2 How to connect the R-PO7470 to a PC through USB

Before physically connecting the R-PO7470 to the PC through the USB cable, you first have to install the FTDI's virtual com port (VCP) driver. This driver is included in the R-PO7470 CD, or can be downloaded from the following link:

http://www.ftdichip.com/Drivers/VCP.htm

An installation guide is also available at the following link:

http://www.ftdichip.com/Documents/InstallGuides.htm

Once the driver is installed and the R-PO7470 is connected to the PC through the USB cable you can open a new HyperTerminal (for Windows) session.
In the R-PO7470's CD you can find a pre-programmed HyperTerminal session: copy it to the desktop (or where you prefer) and run it. If you do not have the CD with pre-programmed HyperTerminal session follow the next description.

To open a new HyperTerminal session, select the Start menu, then Programs, then Accessories, then Communication and then lunch HyperTerminal. A dialog box appears, input a session name, (i.e. R-PO7470), then press the ok button. Select the COM port assigned to the VCP driver (usually COM2). Input the corresponding BAUD rate: check in the R-PO7470 menu, under set-up menu, which BAUD rate is selected (default is 115200). Select the following options: data bits= 8, parity= none, stop bits= 1, Flow control=none. Press the ok button. At this point the connection starts, but the configuration is not finished yet: stop the communication by selecting disconnect under the menu Call, then select Properties under the menu File. A dialog box appears: select the Settings tab and press the ASCII Setup button. A dialog box appears: select the Echo Typed Characters Locally features. Close the two dialog box by pressing the ok button.
Now the HyperTerminal session is ready to start: select Call under the menu Call.

9.3 How to connect the R-PO7470 to a PC through BlueTooth

Please refer to the specific installation description.

9.4 Console commands description

All console commands begin by '.' or '?' while ending by clicking the return function ([CR]=13 dec). The R-PO7470 answers with a bell character ([BEL]=7 dec) followed by line feed characters ([LF]=10 dec) if the command is wrong or not executable, while it answers with just a line feed [LF] when the command is correct and executed. Some commands give an answer: the answer is formatted in the following mode:

[CR][LF] "answer string" [CR][LF]

9.4.1 Get firmware version command

- Command syntax: ".v" [CR]
- Command answer: [CR][LF] "R-PO7470 V1.0" [CR][LF]
- Command action: none
- Parameter range: none

Description: this command returns the firmware version.

9.4.2 Read remotely command

- Command syntax: ".r" [CR]
- Command answer: [CR][LF] "D004811B5E" [CR][LF]
- Command action: starts a reading session
- Parameter range: none

Description: this command starts a reading session and answers the ID number. If no TAG is found the command answer [LF][BEL].

9.4.3 Sets the date's year

- Command syntax: ".YE##" [CR]
- Command answer: [LF]
- Command action: Sets the date's year
- Parameter range: ##= 00 to 99

Description: this command sets the date's year.

9.4.4 Sets the date's month

- Command syntax: ".MO##" [CR]
- Command answer: [LF]
- Command action: Sets the date's month
- Parameter range: ##= 01 to 12

Description: this command sets the date's month.

9.4.5 Sets the date's day of the month

- Command syntax: ".DA##" [CR]
- Command answer: [LF]
- Command action: Sets the date's day of the month
- Parameter range: ##= 01 to 31

Description: this command sets the date's day of the month.

9.4.6 Sets the date's day of the week

- Command syntax: ".WD#" [CR]
- Command answer: [LF]
- Command action: Sets the date's day of the week
- Parameter range: #= 0 to 6. Where 0=Sunday, 1=Monday, …

Description: this command sets the date's day of the week.

9.4.7 Sets the current date format

- Command syntax: ".DF#" [CR]
- Command answer: [LF]
- Command action: Sets the date format
- Parameter range: #= 0 or 1. where 0=Europe, 1=USA

Description: this command sets the date format.

9.4.8 Gets the current date format

- Command syntax: "?DF" [CR]
- Command answer: [CR][LF] "DF=#" [CR][LF]
- Command action: Gets the current date format
- Parameter range: #= 0 or 1. where 0=Europe, 1=USA

Description: this command retrieves the current date format.

9.4.9 Gets the current date

- Command syntax: "?DT" [CR]
- Command answer: [CR][LF] "DT=mon 28.01.08" [CR][LF]
- Command action: Gets the current date
- Parameter range: none

Description: this command gets the current date.

9.4.10 Sets the time's hour

- Command syntax: ".HO##" [CR]
- Command answer: [LF]
- Command action: Sets the time's hour
- Parameter range: ##= 0 to 23.

Description: this command sets the time's hour.

9.4.11 Sets the time's minute

- Command syntax: ".MI##" [CR]
- Command answer: [LF]
- Command action: Sets the time's minute
- Parameter range: ##= 0 to 59.

Description: this command sets the time's minute.

9.4.12 Sets the time's second

- Command syntax: ".SE##"[CR]
- Command answer: [LF]
- Command action: Sets the time's second
- Parameter range: ##= 0 to 59.

Description: this command sets the time's second.

9.4.13 Gets the current time

- Command syntax: “?TM” [CR]
- Command answer: [CR][LF] ”TM=14.58.45” [CR][LF]
- Command action: Gets the current time
- Parameter range: none

Description: this command retrieves the current time.

9.4.14 Clears the memory’s data

- Command syntax: “.rX” [CR]
- Command answer: [LF]
- Command action: Clears the memory’s data
- Parameter range: none.

Description: this command clears the memory’s data.

9.4.15 Downloads the memory’s data

- Command syntax: “.rF” [CR]
- Command answer: [CR][LF] ” D004815B5E” [CR][LF]
  [CR][LF] ” D0048A1B5E” [CR][LF]
  [CR][LF] ” D00481C51” [CR][LF] …
- Command action: downloads the memory’s data
- Parameter range: none.

Description: this command downloads the memory’s data. If no data is stored in the memory, then the answer is: [LF] [BEL].

9.4.16 Clears the message area

- Command syntax: “.m0” [CR]
- Command answer: [LF]
- Command action: clears the message area
- Parameter range: none.

Description: this command clears the message area on the display.

9.4.17 Write a message to the display

- Command syntax: “.m#” [**max 15 char**][CR]
- Command answer: [LF]
- Command action: writes a message to the display at the row #
- Parameter range: #= 1 to 3.

Description: this command writes a message to the display at the row #. The message string has to be a maximum of 15 characters. The message can be written on row 1, 2 or 3 on the display.

9.4.18 Sets the “store in memory” function

- Command syntax: “.SM#” [CR]
- Command answer: [LF]
- Command action: sets the “store in memory” function
- Parameter range: #= 0 or 1.

Description: this command stores in memory the TAG’s ID correlated with the current date and time.
1: enable function. 0: disable function.

9.4.19 Gets the “store in memory” function status

- Command syntax: “?SM” [CR]
- Command answer: [CR][LF] ”SM=#” [CR][LF]
- Command action: gets the “store in memory” function status
- Parameter range: #= 0 or 1.

Description: this command returns the store in memory function status.

9.4.20 Sets the “memory hit” function

- Command syntax: “.MH#” [CR]
- Command answer: [LF]
- Command action: sets the “memory hit” function
- Parameter range: #= 0 or 1.

Description: this command enables and disables the memory hit function.
1: enable function. 0: disable function.

9.4.21 Gets the “memory hit” function

- Command syntax: “?MH” [CR]
- Command answer: [CR][LF] ”MH=#” [CR][LF]
- Command action: gets the “memory hit” function status
- Parameter range: #= 0 or 1.

Description: this command returns the memory hit function status.
1: enable function. 0: disable function.

9.4.22 Sets the “selected hit” function

- Command syntax: “.SH#” [CR]
- Command answer: [LF]
- Command action: sets the “selected hit” function
- Parameter range: #= 0 or 1.

Description: this command enables and disables the selected hit function.
1: enable function. 0: disable function.

9.4.23 Gets the “selected hit” function

- Command syntax: “?SH” [CR]
- Command answer: [CR][LF] ”SH=#” [CR][LF]
- Command action: gets the “selected hit” function status
- Parameter range: #= 0 or 1.

Description: this command returns the selected hit function status.
1: enable function. 0: disable function.

9.4.24 Sets the “reading beep” function

- Command syntax: “.RB#” [CR]
- Command answer: [LF]
- Command action: sets the “reading beep” function
- Parameter range: #= 0 or 1.

Description: this command sets the reading beep function. 1: enable function. 0: disable function.

9.4.25 Gets the “reading beep” function status

- Command syntax: “?RB” [CR]
- Command answer: [CR][LF] ”RB=#” [CR][LF]
- Command action: gets the “reading beep” function status
- Parameter range: #= 0 or 1.

Description: this command returns the reading beep function status.

9.4.26 Sets the “key beep” function

- Command syntax: “.KB#” [CR]
- Command answer: [LF]
- Command action: sets the “key beep” function
- Parameter range: #= 0 or 1.

Description: this command sets the key beep function. 1: enable function. 0: disable function.

9.4.27 Gets the “key beep” function status

- Command syntax: “?KB” [CR]
- Command answer: [CR][LF] ”KB=#” [CR][LF]
- Command action: gets the “key beep” function status
- Parameter range: #= 0 or 1.

Description: this command returns the key beep function status.

9.4.28 Sets the reading timeout

- Command syntax: ".RT##"[CR]
- Command answer: [LF]
- Command action: sets the reading timeout in seconds
- Parameter range: ##= 0 to 99.

Description: this command sets the reading timeout in seconds.

9.4.29 Gets the reading timeout

- Command syntax: "?RT##"[CR]
- Command answer: [CR][LF] "RT=##" [CR][LF]
- Command action: gets the reading timeout in seconds
- Parameter range: ##= 0 to 99.

Description: this command retrieves the reading timeout in seconds.

9.4.30 Sets the shutdown timeout

- Command syntax: ".ST#"[CR]
- Command answer: [LF]
- Command action: sets the shutdown timeout in minutes
- Parameter range: #= 1 to 9.

Description: this command sets the shutdown timeout in minutes.

9.4.31 Gets the shutdown timeout

- Command syntax: "?ST"[CR]
- Command answer: [CR][LF] "ST=#" [CR][LF]
- Command action: gets the shutdown timeout in minutes
- Parameter range: #= 0 to 9.

Description: this command retrieves the shutdown timeout in minutes.

9.4.32 Sets the VCP baud rate

- Command syntax: ".SB#"[CR]
- Command answer: [LF]
- Command action: sets the serial VCP baud rate.
- Parameter range: #= 0 to 4.
  0= 9600 baud
  1= 19200 baud
  2= 38400 baud
  3= 57600 baud
  4= 115200 baud

Description: this command sets the VCP baud rate.

9.4.33 Gets the VCP baud rate

- Command syntax: "?SB#"[CR]
- Command answer: [CR][LF] "SB=#" [CR][LF]
- Command action: gets the current VCP baud rate
- Parameter range: #= 0 to 4.

Description: this command retrieves the VCP baud rate.

9.4.34 Sets the "auto shutdown" function

- Command syntax: ".ES#" [CR]
- Command answer: [LF]
- Command action: sets the "auto shutdown" function
- Parameter range: #= 0 or 1.

Description: this command sets the auto shutdown function. 1: enable function. 0: disable function.

9.4.35 Gets the "auto shutdown" function status

- Command syntax: "?ES" [CR]
- Command answer: [CR][LF] "ES=#" [CR][LF]
- Command action: gets the "key beep" function status
- Parameter range: #= 0 or 1.

Description: this command returns the key beep function status.

9.4.36 Firmware update function

- Command syntax: ".uF" [CR]
- Command answer: [LF]
- Command action: downloads and installs the up-dated firmware version.
- Parameter range: none.

Description: this command allows the user to update the firmware of the reader. First you need a new firmware file (R-PO7470_R1V1.hex). Type the command and follow the online instructions.

9.4.37 Character length function

- Command syntax: ".cl#" [CR]
- Command answer: [LF]
- Command action: sets the character length function
- Parameter range: #= 0 or 1 or d.

Description: this command sets the UID character length. The Datamars transponders have a UID of 10 hexadecimal characters (i.e. D0060BC5D3). 0: standard format of 10 characters. 1: 12 characters (add '00' at the begin of the UID). D: decimal format of 10 characters.