

DATAMARS

ANIMAL ID

ISO MAX V

Universal portable reader

USER MANUAL

Version 1.2



DATAMARS

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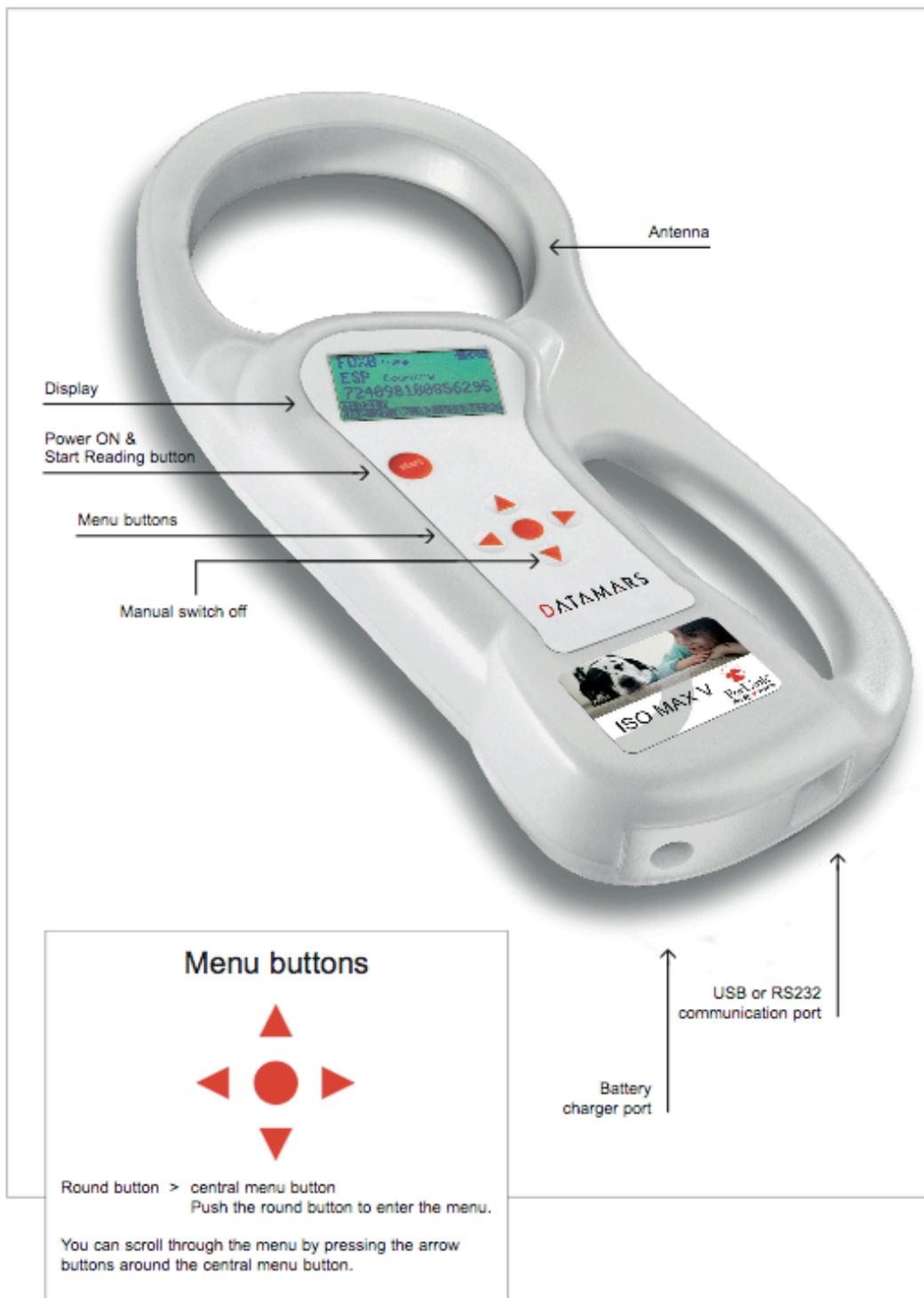
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1 Description



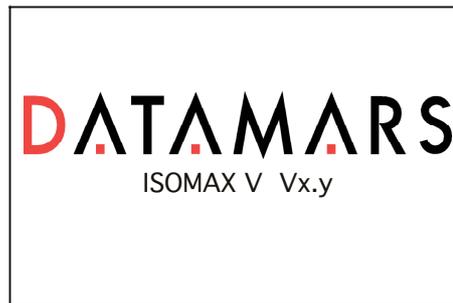
2 Operation

Although the ISO MAX V has been designed to plug and play, we recommend you read this manual carefully in order to take advantage of all its useful features and functions.

2.1 Switch on/off the ISO MAX V

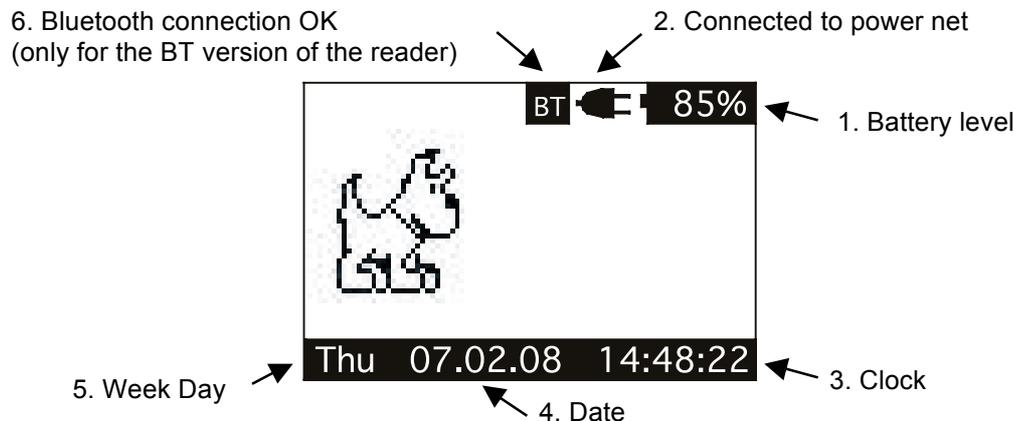
Slide your hand between the base unit and the handle. Use your thumb to press the START button, which is located on the upper left corner of the panel.

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 the main screen shot appears:



1. Check the battery level, which 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.
2. While the reader is connected to the power net, in charging mode, the reader disables the reading mode; therefore it is not possible to read a transponder. The other functions are fully active.
3. Clock time is in 24 hour mode.
4. Date format can be selected between EU/US.
5. Week day.
6. Bluetooth connection established and ready to use.

In order to manually switch off the reader, press the DOWN arrow.

The reader has also an automatic shutdown function activated after a period of non-use (default: 2 minutes).

2.2 Read a transponder

Place the ISO MAX V near the animal to be read, then press the START button in order to activate the reading mode.



During the reading mode, move the reader along the animal 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. There are four main types of transponder: FDX-B and HDX are the ISO standard 11784/5. IDI stands for Destron, Avid, and PETRAC. The last type is TVN which stands for Trovan, AEG and similar transponders. When the reader displays the word "Industry" as transponder type, it means that this transponder is not coded for animals.
2. The Alpha country code is according to ISO 3166, ISO 11784/5.
3. The Identity Code number is according to ISO 11784/5.

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

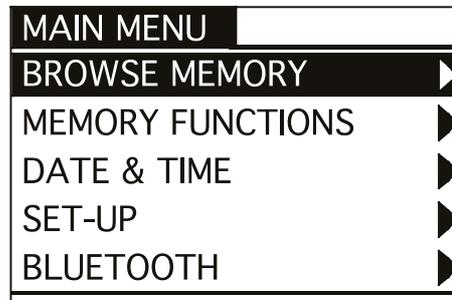


After a while the reading mode times out. The reader stops and shows the message "NO TAG FOUND".

3 Managing the menu

3.1 Find your way in the menu

Switch on the reader by pressing the START button (please refer to chapter 2.1). Press the ENTER button which is the round button in the centre of the arrows pad. The display shows the following figure:

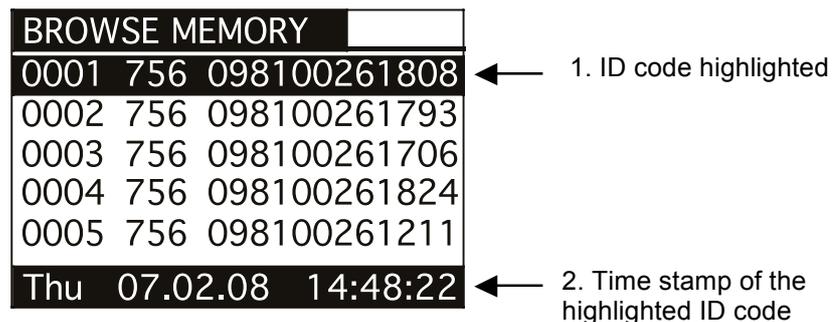


You can scroll through the menu by pressing the UP or DOWN buttons which are the arrows around the central ENTER button. The arrows located on the right of the display means that this menu contains a sub menu. In order to enter the sub menu, you have to press the RIGHT arrow button while it is highlighted.

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 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 action 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 find various features and functions. The following figure shows the 'memory functions' menu:

| | |
|-------------------------|------------|
| MEMORY FUNCTIONS | |
| STORE IN MEMORY | OFF |
| MEMORY HIT | OFF |
| SELECTED HIT | OFF |
| CLEAR ALL MEMORY | ▶ |
| DATA DOWNLOAD | ▶ |

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 in the memory. When this function is OFF the reader does not record an ID code in the memory. While is ON, it stores the data into the memory.

The following figure shows the store in 'memory function' enabled:

At the moment the memory contains 208 ID codes →

| | |
|-----------------|-------------------|
| 85% | |
| FDXB | Type |
| CHE | Country |
| 756098100261809 | |
| M:0208 | |
| Thu | 07.02.08 14:48:22 |

3.3.2 Memory hit

The memory hit function counts and shows on the display 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:

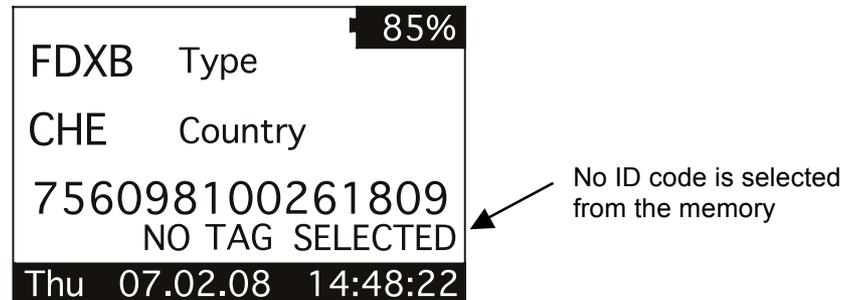
| | |
|-----------------|-------------------|
| 85% | |
| FDXB | Type |
| CHE | Country |
| 756098100261809 | |
| Memory Hit: 3 | |
| Thu | 07.02.08 14:48:22 |

← This ID code has been found 3 times in the memory

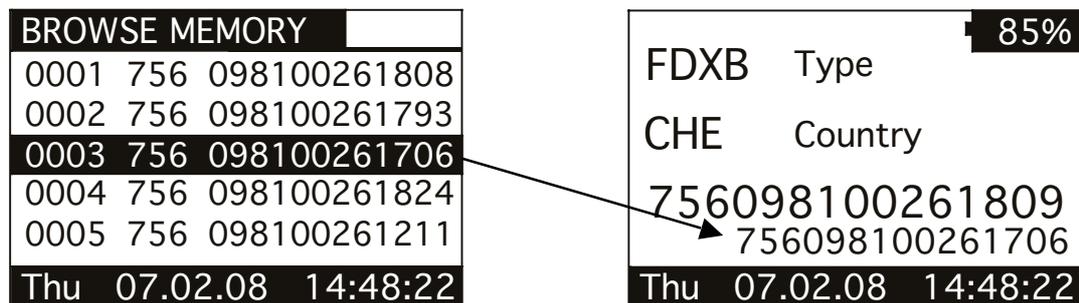
3.3.3 Selected hit

The 'selected hit' function checks and displays the current ID code read present in the memory. This function is useful to identify a specific animal in a large group of animals. When this function is OFF the reader does not show anything. While is ON, it shows the message "TAG ID FOUND" when the tag read is already present in the memory, or it shows the selected tag ID to be found, when the tag ID does not match.

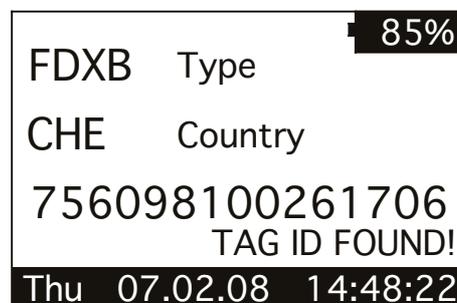
The following figure shows the selected hit function enabled:



In this case, the message "NO TAG SELECTED" appears: this means that you have to select an ID code using the 'browse memory' function (refer to chapter 3.2 for details). Therefore press the round ENTER 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.

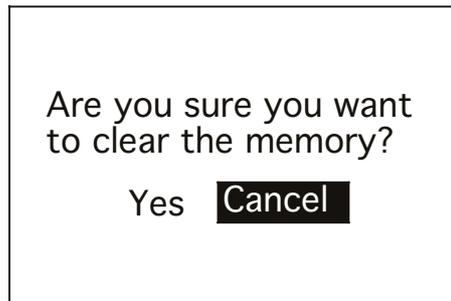


At this point you are ready to search the selected ID code in the large group of animals. When you read an ID code that matches the selected one, the reader displays the message "TAG ID FOUND!" and beeps three times.



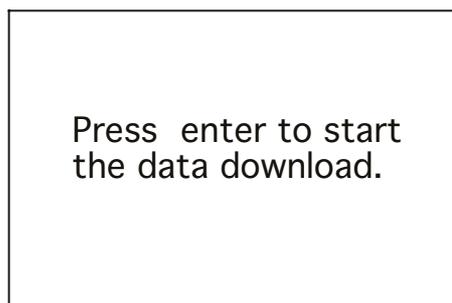
3.3.4 Clear all memory

This function clears all the memory 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

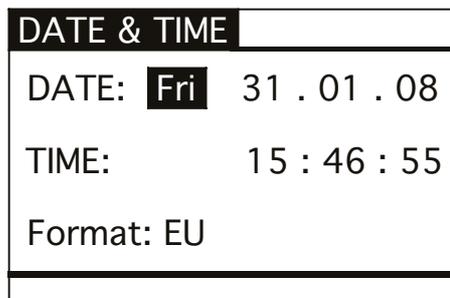
This function downloads the data stored in memory through the USB or Bluetooth interface. First plug the reader into a PC with the USB cable (refer to chapter 4). Then run the HyperTerminal session in order to receive data on this program. At this point enter the 'data download' function by navigating 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 (EU format if you prefer to have the day before the month, US format if you prefer to have the month before the day).

Press the LEFT/RIGHT button to move the highlighted field. Press the UP/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:

| SET-UP | |
|------------------|------|
| READING BEEPS | OFF |
| KEY BEEP | OFF |
| READING TIMEOUT | 10s |
| SHUTDOWN TIMEOUT | 2m |
| SERIAL BAUD RATE | 115k |

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 feature enables or disables the acoustic signal when a TAG is found. When the reading feature is OFF the beep is disabled, while it is ON the beep is enabled.

3.5.2 Key beep

The key beep feature enables or disables the acoustic signal when a 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 that 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

When the Bluetooth is physically installed in the reader, the Bluetooth menu appears on the main menu. The following figure shows the Bluetooth menu (refer to chapter 4.5 for details).

| | |
|-----------------------|------------|
| BLUETOOTH | |
| ACTS AS SERVER | ON |
| ACTS AS CLIENT | OFF |
| | |

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 ISO MAX V to a PC

This section is meant to describe how to connect the ISO MAX V to a personal computer (PC). The ISO MAX V can be connected to a PC in 3 ways: the first is a wired USB connection, the second a RS-232 connection while the third is a wireless Bluetooth connection (optional).

4.1 Where to find the USB driver

Before physically connecting the ISO MAX V to the PC through the USB cable, you have to install the FTDI's virtual com port (VCP) driver. This driver is included in the ISO MAX CD or the latest version 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>

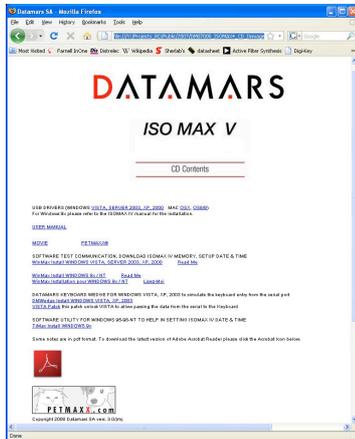
Once the driver is installed and the ISO MAX V is connected to the PC through the USB cable you can open a new HyperTerminal (for Windows) session.

4.2 USB driver installation guide for Windows OS

ATTENTION! First of all install the driver, then plug the ISO MAX into the PC.

The following procedure shows how to install the USB driver for ISO MAX reader:

1. Insert the ISO MAX CD in the PC. The CD will start automatically showing the contents of the CD.



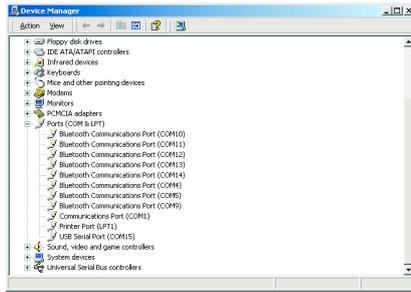
2. Click on the USB driver link corresponding to your PC's operating system.
3. The following dialog box appears. Press **RUN**.



4. Once the driver has been installed, connect the ISO MAX V by plugging the USB cable into the PC. The PC will automatically find the reader.
5. To discover the port number open the System properties. Please refer to the Operating System manual.



6. Select in the Hardware tab the Device Manager to discover the Communication port assigned.



- Open the “Ports” drilldown menu and check the COM number assigned to the USB serial port.

Note: You can use Hyperterminal to test the connection.
Please refer to the section 4.6.

4.3 USB driver installation guide for MAC OS

- Insert the CD in the computer.
- Click on the CD volume.
- Double click on the “ISO MAX.HTML”.
- Double click on the MAC OSX or OS8/9 (according to your operating system).
- Install the extracted data to the System Folder / Extension Folder.

Please refer to your Operating System manual.

4.4 RS-232 installation guide

The RS-232 interface version does not require any software installation. Plug in the RS-232 cable between your reader and the PC. Then refer to chapter 4.6.

4.5 Bluetooth installation guide for Windows XP OS

In order to connect the ISO MAX V reader to a host PC through Bluetooth, a PC equipped with Bluetooth hardware and the ISO MAX V equipped with the Bluetooth module are needed.

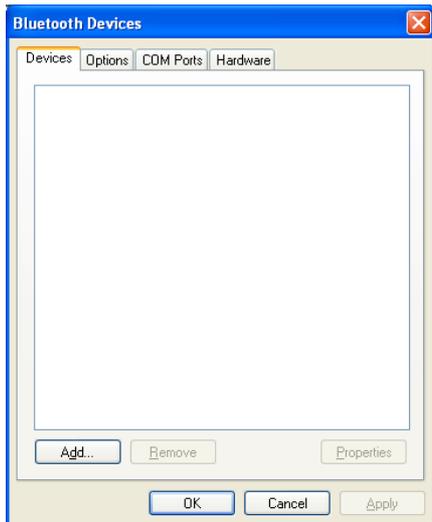
4.5.1 Configure ISO MAX V for the Bluetooth connection

During the Bluetooth discovery process done by the PC, it is important that the ISO MAX V reader is ON. It is therefore advisable to set the shutdown timeout to 5 minutes (Menu -> Setup -> Shutdown timeout). Moreover, press the LEFT and RIGHT arrow button in order to reset the shutdown timeout.

Under the Bluetooth menu, switch on the feature **Act as a Server** while switch off **Act as a Client**.

4.5.2 Search for and recognize the ISO MAX V by a host PC

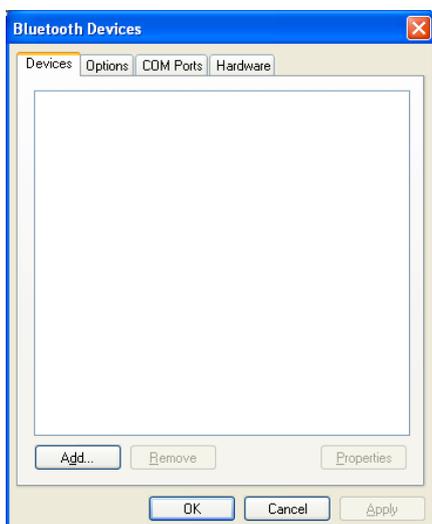
From the control panel choose **Bluetooth Device**. The following dialog window appears.



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



Select the **Devices** tab.

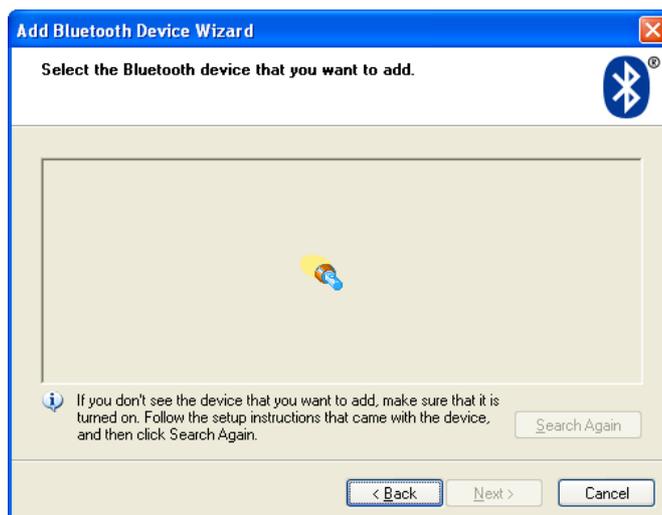


Double check that the ISO MAX V reader is switched on and configured to **Act as a Server** (Menu → Bluetooth), then press the **Add** button.

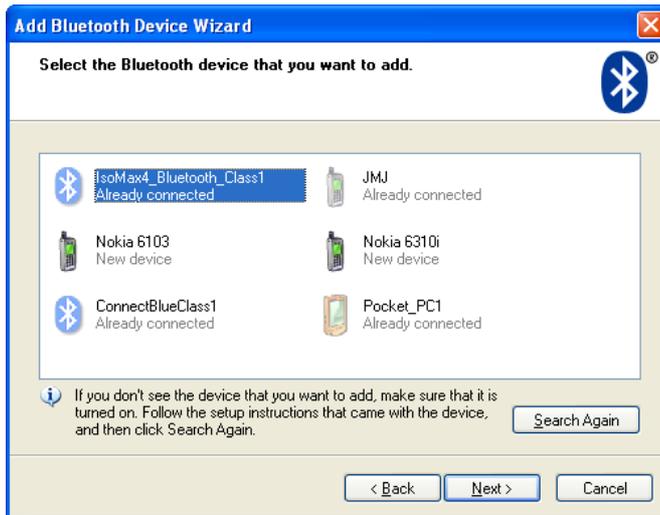


The welcome window for the configuration guide of the new Bluetooth peripheral appears.

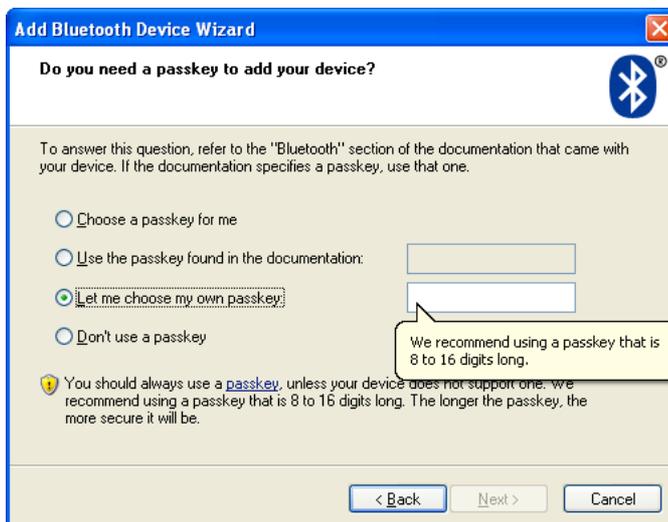
Press **Next** in order to start the search and recognize the procedure.



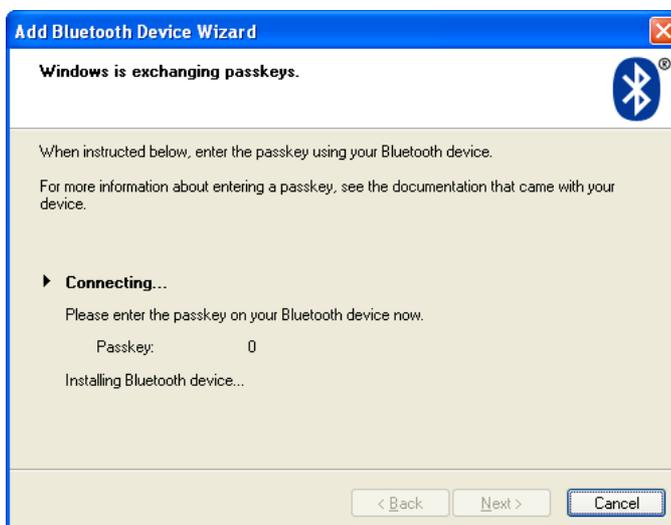
The result of the search and recognition procedure shows all Bluetooth devices which are nearby.



At this point select from the Bluetooth device list the one named “ISO MAX V_BT_Class2_xxx” and press **Next**.



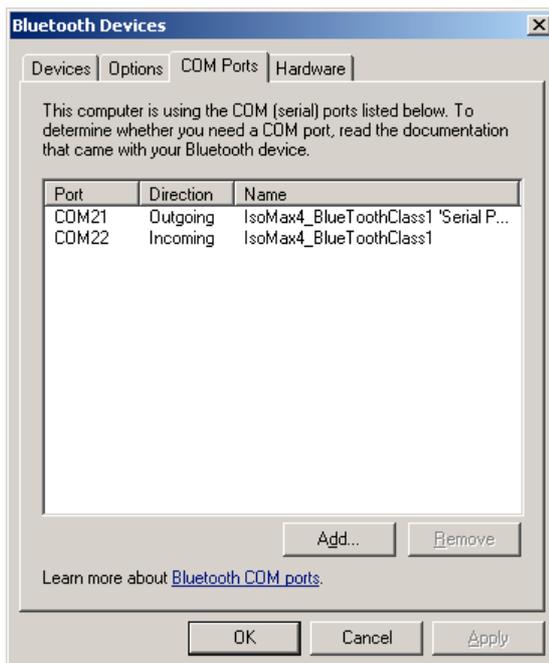
Select the option **Let me choose my own passkey** and input the number zero (just one 0 character). Press **Next** to continue.





Finally the ISO MAX V 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 ISO MAX V reader when it is in **Act as a Server** mode, while the COMxx Ingoing is needed to connect to the ISO MAX V reader when it is in **Act as a Client** mode.

The COM numbering depends on your host PC, this number may be different from the one shown in the example.

4.6 Real-time communication

First install the driver and then connect the ISO MAX V to your PC through the USB/RS-232 cable or Bluetooth wireless link. Now, you can open a new HyperTerminal session (in Windows).

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. ISO MAX V).
8. Press the ok button.
9. Select the COM port assigned to the ISO MAX V.
10. Input the corresponding BAUD rate.
11. Check in the ISO MAX V 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. Now the HyperTerminal session is ready to start, just click on the calling icon or select Call under the Call menu.
15. At this point you are ready to receive the codes read directly on your PC.
16. Press the START button and read a transponder.
17. The ID code will be shown on the HyperTerminal window.

5 Battery management

The ISO MAX V 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

In order to recharge the battery simply plug the charger cable into the corresponding connector on the bottom of the reader. Make sure that the charger is also plugged into the power socket. The reader can be either switched ON or OFF during charge mode.

Once the charger has been plugged in, the ISO MAX V charges the battery in less than 2 hours. After 1 hour the battery is already charged to about 80% of its 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 damp 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 ISO MAX V reader is equipped with a Li-Ion type battery. This battery lasts longer and 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 ISO MAX V 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 its normal contrast.

The ISO MAX V does not synchronize with stationary HDX readers and thus can not be used in conjunction with stationary livestock applications.

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 +45 °C, 95% RH non condensing.
4. Standards: ISO11784/5.
5. Housing material: ABS UL94-HB.
6. External power supply (battery charger): Input: 100 to 240 VAC. Output: 15 VDC, 1A.
7. Dimensions: 330x160x40 mm3.
8. TAG compatibility: FDX-B, HDX, TROVAN/AEG, FDX-A/DESTRON/IDI, Avid encrypted.
9. Transmission frequency: 134.2 kHz.
10. Battery life: >500 cycles.
11. Weight: 450g.
12. IP40 (protection against body larger than 1mm, no protection for liquid).
13. Interfaces to host PC: USB or RS-232 and Bluetooth (optional).

8 Software to remote control the reader

8.1 Introduction

WinMax is a simple software that can be used to check the communication functionality of Datamars' ISO MAX readers.

WinMax is also useful for downloading the data stored in the reader memory on to your PC. This data can be modified or partially saved. WinMax can be used also to erase the ISO MAX memory.

It is also possible to use WinMax to transmit the code to your computer as you see it on the reader.

8.2 How to install WinMax

1. Insert the ISO MAX CD in the PC.
2. The CD will start automatically.
3. Click on the WinMax link corresponding to your PC's operating system.
4. Then follow the installation instructions.

How to run it: Start WinMax, select the serial port to be used with the ISO MAX.

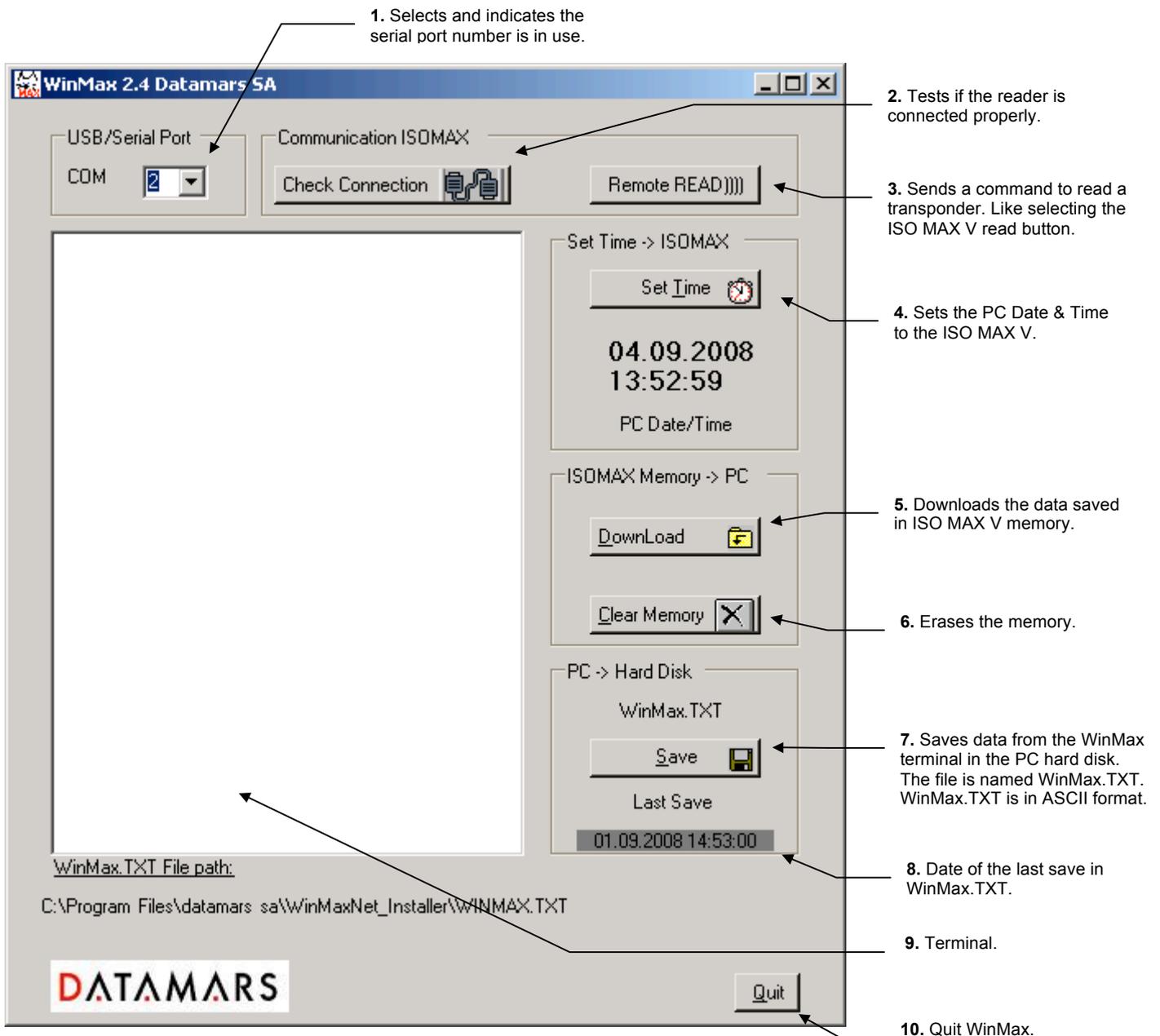
8.3 How to use WinMax

Files in use:

Once saved, you will find in the document **WINMAX.TXT** all the data downloaded from the ISO MAX.

WINMAX.TXT is a text file (ASCII) and can be read by any text editor.

Below is the WinMax utility. The version indication may differ. Some changes may be included in the software and do not require a new manual.



1. **First select USB/Serial Port.**
2. **Check Connection** is used only to check if the ISO MAX is connected, to test if the link is communicating properly. When the communication is correct, the terminal indicates: **ISO MAX V vx.x.**
3. **Remote READ)))))** is used if the user desires to initiate a read transponder from the PC.
4. **Set Time** will get the PC date & time and send it to the ISO MAX.
5. **DownLoad** will download the ISO MAX memory into the terminal. All the transactions are displayed in the terminal. All this information can be edited and modified if necessary. Use the scroll bar to browse up and down.
6. **Clear Memory** will erase the ISO MAX memory.

7. **Save** creates or overwrites a file named **WINMAX.TXT**. This file is an ASCII file and can be open by Notepad, WinWord, Excel etc.

Warning: the information is not saved until you press the **Save** button.

For instance, if you use Excel follow the procedure below, once the data is saved:

1. Open **Excel**.
2. In **File** select "**Open**".
3. In the **Files of Type** (Bottom of Excel pop up Open page) select "**Text Files**".
4. Search and open **WINMAX.TXT** (WINMAX.TXT is located in the same directory as WinMax).
5. Excel will ask some questions regarding the format of the data. It will be possible to delimitate fields such as the code, the date, and the time. For this it is necessary to indicate the format of each of them once requested as text or date etc.
6. Once you arrive at the end, click finish and everything will appear on the worksheet.

It also possible to directly copy the data from the Terminal: select the data, right click on it, choose "**copy**" from the pop-up menu.

Then open a new document (Excel, Word, etc...) and choose "**paste**" from the Edit menu.

8.4 Tip to automatically select the port number

It is possible to "force" a port selection to avoid the port selection.

This is possible by entering a port number in the program command line.

When starting the WinMax.exe file, add a number to indicate the port number. Example for the Com5: **WinMax.exe 5**.

How to proceed on the Windows system:

Create a shortcut to start WinMax and add a number on the target. Create the shortcut from the directory where WinMax is installed (default is "C:\Program Files\Datamars\WinMax\").

The simplest way is to select the WinMax.exe file, click the right key on the mouse and select 'send to desktop'.

On the shortcut, click the right key on the mouse and select the properties.

On the target after the command line WinMax.exe add the number of the port to open.

Ex.: "**C:\Program Files\WinMax\WinMax.exe**" 2 for com2. Note that the number is outside the quotation marks (2 in this example).

The number must be placed outside the quotation marks where quotation marks are present.

9 Do you have a problem identifying an animal?

9.1 The reading distance is too short

The maximum reading distance is obtained with the transponder (tag) perpendicular to the antenna and aimed at the centre of the antenna coil. If the tag is implanted into an animal its orientation may not be optimal and therefore the reading distance may be reduced.

You might be close to a source of electromagnetic disturbances like video or TV. Move a few meters away and try again.

Do not use the reader on a steel table. The metal will reduce the performance of the antenna.

The reading distance is reduced if the transponder is still in the needle.

9.2 The reader does not read the transponder

Change the angle of the reader and try again.

Some types of transponders from other manufacturers are disturbed if placed in the centre of the reader-antenna. It is possible that some tags will not function if placed in parallel and at the centre of the antenna. Change the direction of the tag or of the antenna.

9.3 The reader does not work

Charge the reader for at least 30 minutes and try again (recommended time for full battery recharge = 2 hours).

Check the ambient temperature: It has to be between -5°C and +45° C.

If you're still having problems, please contact your dealer.

The ISO MAX V reader is a product developed and produced by DATAMARS SA, Switzerland.

Should you have any suggestions or require information regarding this or other DATAMARS products, please contact your dealer.

10 Advanced user instructions

10.1 Console commands description

This section is meant to describe the console commands implemented in the ISO MAX V in order to remote control the features and the functions of the reader.

All console commands begin with '.' or '?' and end with a carriage return character ([CR]=13 dec). The ISO MAX V 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]
```

10.1.1 Get firmware version command

- Command syntax: “.v” [CR]
- Command answer: [CR][LF] "ISO MAX V v1.0" [CR][LF]
- Command action: none
- Parameter range: none

Description: this command returns the firmware version.

10.1.2 Read command remotely

- Command syntax: “.r” [CR]
- Command answer: [CR][LF] "981098100607135" [CR][LF]
- Command action: starts a reading session
- Parameter range: none

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

10.1.3 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.

10.1.4 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.

10.1.5 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.

10.1.6 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.

10.1.7 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.

10.1.8 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 gets the current date format.

10.1.9 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.

10.1.10 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.

10.1.11 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.

10.1.12 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.

10.1.13 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 gets the current time.

10.1.14 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.

10.1.15 Downloads the memory's data

- Command syntax: ".rF" [CR]
- Command answer: [CR][LF] "981098100607135 050208 152659" [CR][LF]
[CR][LF] "981098100607135 050208 152701" [CR][LF]
[CR][LF] "981098100607135 060208 113126" [CR][LF] ...
- Command action: downloads the memory's data
- Parameter range: none.

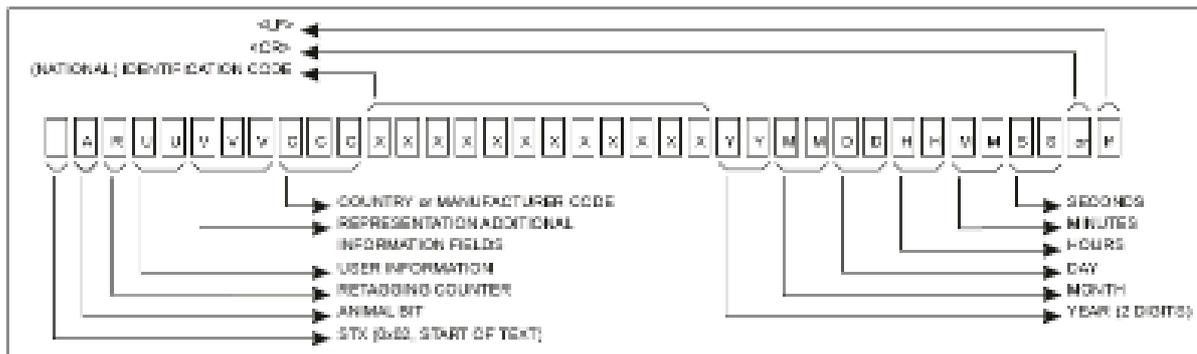
Description: this command downloads the memory's data. If no data is stored in the memory, then the answer is: [LF] [BEL].

10.1.16 Output data format

- Command syntax: ".DM#" [CR]
- Command answer: none
- Command action: changes the output data format on the communication link.
- Parameter range: #= 0 or 1.

Description: this command changes the output data format on the communication link.

DM1= ISO24631-6 format: [STX]1000071981020001790016080829140603[CR][LF]



DM0= Datamars format: [CR][LF] " 981020001790016 290808 140603" [CR][LF]

| | | |
|---------|------|------|
| ID CODE | DATE | HOUR |
|---------|------|------|

10.1.17 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 of the display.

10.1.18 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 max 15 characters. The message can be written on the row 1, 2 or 3 of the display.

10.1.19 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.

10.1.20 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.

10.1.21 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.

10.1.22 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.

10.1.23 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.

10.1.24 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.

10.1.25 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.

10.1.26 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.

10.1.27 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.

10.1.28 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.

10.1.29 Sets the reading timeout

- Command syntax: “.RT##”[CR]
- Command answer: [LF]
- Command action: sets the reading timeout in seconds
- Parameter range: ## = 1 to 99.

Description: this command sets the reading timeout in seconds.

10.1.30 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: ## = 1 to 99.

Description: this command gets the reading timeout in seconds.

10.1.31 Sets the shutdown timeout

- Command syntax: “.ST##”[CR]
- Command answer: [LF]
- Command action: sets the shutdown timeout in minutes
- Parameter range: ##= 1 to 5.

Description: this command sets the shutdown timeout in minutes.

10.1.32 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: ##= 1 to 5.

Description: this command gets the shutdown timeout in minutes.

10.1.33 Sets the VCP baud rate

- Command syntax: “.SB#”[CR]
- Command answer: [LF]
- Command action: sets the shutdown timeout in seconds
- 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.

10.1.34 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 gets the VCP baud rate.

10.1.35 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.

10.1.36 Gets the “auto shutdown” function status

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

Description: this command returns the key beep function status.

10.1.37 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 of all you need a new firmware file (isomax5_1V1.hex). Then type the command and follow the online instructions.

10.1.38 Sets the default parameters

- Command syntax: “.DP” [CR]
- Command answer: [LF]
- Command action: sets the default parameters.
- Parameter range: none.

Description: this command sets the default parameters.

11 Certifications

FCC Part 15

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.

This equipment has been tested and found to comply with the limits for 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 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

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

Canadian directives

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.

European directives

Hereby, Datamars SA via ai Prati 6930 Bedano-Lugano (CH) declares that the ISO MAX V is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.