RFID™

GATE MAX READER

User Manual

This manual describes the use of the GATE MAX reader.

The RFID™ GATE MAX reader is a high-performance Radio Frequency Transponder reader.

The RFID™ GATE MAX reads all ISO 11784/85 FDX/B Transponders for the electronic identification of animals. It helps to reunite the animal with its owner.

The RFID™ GATE MAX reader and the RFID™ Transponders are manufactured according to ISO Standards 11784 & 11785 for the electronic identification of animals and are DATA MARS SA products.

IN ACCORDANCE WITH ISO STANDARD 11784 AND 11785

DATA MARS SA

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0. Important

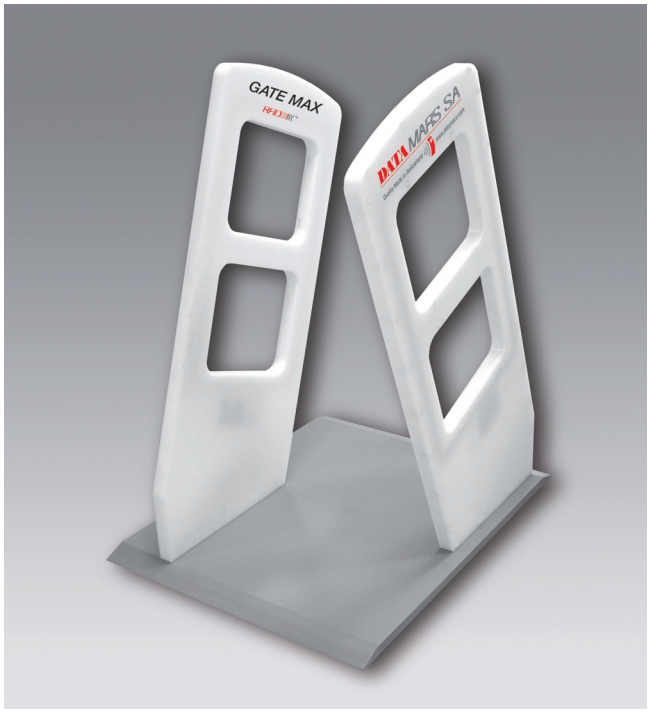
This product is sensitive to any external radio frequency disturbances due to the large size of the antennas.

Therefore, be aware of its surrounding environment. The following objects can cause interference with the GATE MAX reader and for this reason it is recommended to maintain a distance of 2 to 3 meters:

- Large PC/ TV screen (not flat screens)
- Lamps, motors
- Metal objects (scales, tables, gates, cages, etc.)
- Other RFID handheld readers (e.g. ISO MAX IV)

1. Introduction

The GATE MAX reader has been especially designed for shelters, veterinary clinics and borders to facilitate the pet identification process. The GATE MAX system is composed of a reader, a gate antenna and a power supply. The GATE MAX reader allows a hands free direct identification of the pet when passing through the antennas. The pet simply goes through the reader, the ID number gets read automatically and displayed either on the touch screen (optionally provided) mounted on the antenna or on the computer screen of the clinic, shelter or border. No manual tipping is necessary, which avoids human error in typing the 15 digits ID number and eases the process.



2. GATE MAX Reader System

The GATE MAX reader system is in accordance with ISO Standard 11785 and reads the ISO tags FDX-B. The reading range covers the area between the antennas completely. The reader can be connected to a PC: the ID will be displayed either on the touch screen mounted on the antenna (optionally provided) or on the PC screen. The reader includes a RS232 interface for data transmission (ASCII) and can include, alternatively, a USB interface. This system can easily be integrated into an Open Office Package for a database which is used in shelters or veterinary clinics.

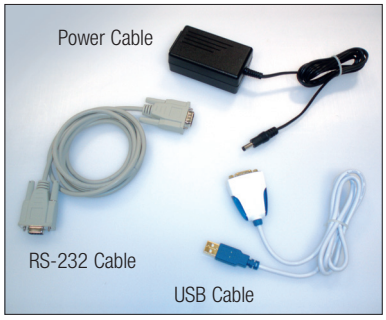
3. Main Advantages

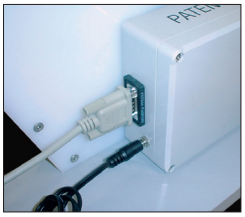
The GATE MAX reader is designed to facilitate pet identification. The main benefits are automatic recognition of the transponder FDX-B (ISO Standard), quick detection (normally no need to scan the pet manually), a safer use for the employees and an automatic process (connection to a database and PC).

4. How to Connect

Before start:

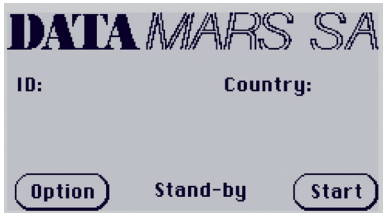
Plug in the RS232 cable from the GATE MAX reader unit connector to the serial communication COM port of your PC. Optionally, you can plug in a USB cable and install its software on your PC. Then plug in the power cable. The reader is automatically powered by using the ON/OFF switch.





5. Operation (for readers with display)

To start reading push the 'Start' button on the touch screen (optionally provided).



The reader turns on the transmission and now is ready to detect transponders. The display shows the status of the reader with a blinking text 'Reading' and with a blinking button.

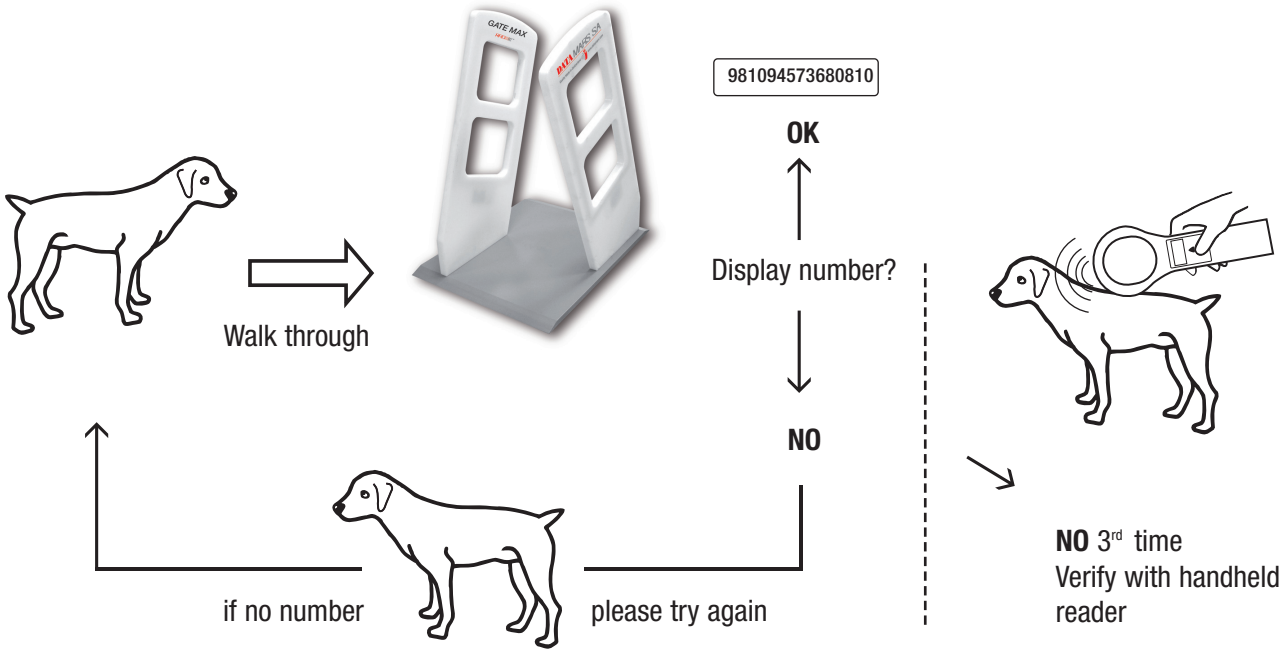
When a transponder is detected, the ID number is shown on the screen. It remains displayed until a new transponder is detected or "Clear ID" is pressed.

To stop the transmission press 'Stop'. The display shows the status writing 'Stand-by'.

6. How to Use the GATE MAX Reader

- When a pet passes through the antennas, the transponder is automatically detected. If not, make the dog walk slowly 2-3 times through the antennas. A short stand still of 2 seconds between the antennas may also help.
- If a transponder is detected between the antennas, the code is automatically read and sent through the RS232 communication cable once. At the same time an ID number is written on the screen.
- If no transponder is present, the read cycle continues. The system reads 30 times per second.
- The GATE MAX reader system detects around 80% of the ISO transponders during the first passage.
- If the pet's transponder is still not detected after the 3rd passage, we recommend using a hand-held multi reader with a large antenna (example ISO MAX IV) in order to determine or exclude the presence of an animal identification transponder.

GATE MAX Reader



1. Let the pet walk through the reader. The transponder is automatically detected.

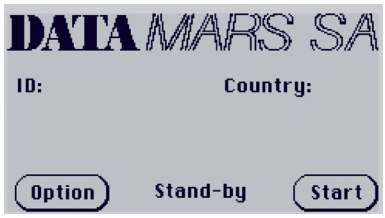
2. If no number is displayed, please try again. The reader did not detect a transponder this time.

3. If no number is displayed after three times, please verify that a transponder exists with a portable reader.

7. Settings and User Interface

7.1 Main Screen

7.1.1 Reading OFF



Start Button: Turns on the transmission and reads continuously.
Option Button: Go to the 'option' menu.

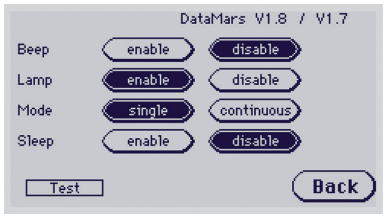
7.1.2 Reading ON

Stop Button: Turns off the transmission and stops the reader.

Clear ID Button: Clears the ID on the display screen to allow an easier visualization of the next ID. When Single Mode is selected, it reads another time the same ID.

The ID is shown below the 'ID:' text. It is composed of 15 numbers.
The Country Code is written with 3 numbers or 3 characters according to the ISO 3166 country code table.

7.2 Option Menu



Beep Enable / Disable:
Set the status of the internal beeper. If enabled, a sound of about 1 second is generated when a new ID is detected

Lamp Enable / Disable:
Set the status of the light. If enabled, a light of 2 seconds is generated when a new ID is detected

Single / Continuous Mode:
If 'continuous', the system sends the ID continuously (about 30 times per second) to the PC/Display, if 'single', it sends the ID only when it is a new one.

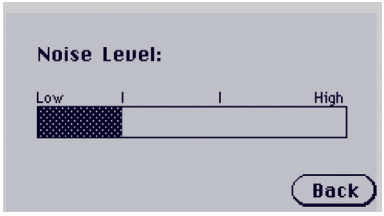
Sleep Mode Enable / Disable:
If enabled, the reading mode is turned off after 5 minutes when no TAG has been detected. If disabled, the reader is permanently in transmission.

Test Button: Goes to the noise level screen.

Back Button: Comes back to the main screen.

On the top right corner of the screen there is the company name followed by the display firmware's version followed by the reader firmware's version.

7.3 Noise Level



This screen shows the noise level detected by the antenna.
The noise level must be low to have the maximum performance.

Back Button: Come back to the Option Menu.

If noise is high, please check the surroundings to detect possible sources of interference (see under "Important")
If noise = 0, there is a transmission problem. Try to restart the GATE MAX antenna and check the surroundings for possible sources of interference. If the problem persists, please contact Datamars / After Sales Service.

8. Reader Connected to a PC or a Data Recording System

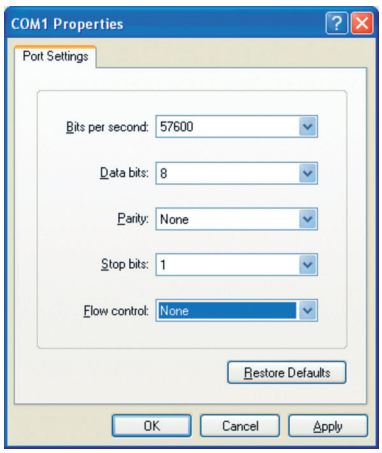
The system has a RS232 interface which communicates with the PC via a serial port (COM) sending all data in ASCII. HyperTerminal can be used as a communication program.

Start > Programs > Accessories > Communications > Hyper Terminal

Set the communication parameters as follows:

Where 'Name' is a customer choice.

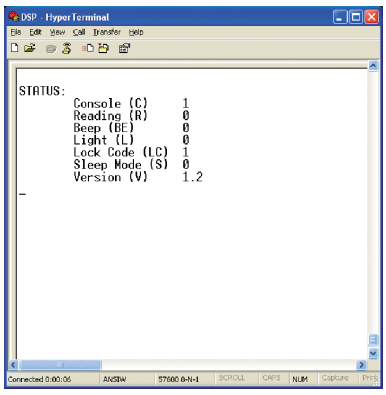
Select the corresponding serial port (COM).
Note: In general, the COM 1 port is the first one and the USB port the last one in the list.



8.1 PC Commands

To send a command to the reader simply type the following characters:

'.x'	Call the status of the reader	
Answer	>	
STATUS:	Console (C)	1
	Reading (R)	0
	Beep (BE)	0
	Light (L)	0
	Lock Code (LC)	1
	Sleep Mode (S)	0
	Version (V)	1.2



'.r1'	Turn on the transmission and the reading mode
Answer	> READING ON
'.r0'	Turn off the reader (stand-by).
Answer	> READING OFF

'.be1'	Beeper ON, set the status of the internal beeper (optional). If enable, a sound of about 1 second is generated when a new ID is detected
Answer	> BEEP ON
'.be0'	Beeper OFF, disable the beep.
Answer	> BEEP OFF
'.li1'	Light Indicator on when a TAG is detected. The light stay on for about 2 s.
Answer	> LIGHT INDICATOR ON
'.li0'	Light Indicator off.
Answer	> LIGHT INDICATOR OFF
'.lc1'	Lock code mode, Lock the same code forever. This will unlock only when another TAG is read
Answer	> LOCK CODE
'.lc0'	Unlock code, no lock code. Every code read is send to the PC.
Answer	> UNLOCK CODE
'.s1'	Sleep mode ON, turn off the reader after 5 minutes when no TAG has been detected.
Answer	> SLEEP MODE ON
'.s0'	Sleep mode OFF, the reader is permanently in transmission.
Answer	> SLEEP MODE OFF
'.c1'	Console ON, reader answer with the text of the command which is show on the terminal
Answer	> CONSOLE TURNED ON
'.c0'	Console OFF, only the IDs are send by the reader to PC (no command's texts)
Answer	> CONSOLE TURNED OFF
'.v'	Give the firmware version of the Reader
Answer	> VERSION: 1.2
'.cr1'	Carriage return at the end of the telegram
Answer	> WITH CARRIAGE RETURN
'.cr0'	No carriage return at the end of the telegram
Answer	> NO CARRIAGE RETURN
'.nl1'	Line feed (new line) at the end of the telegram
Answer	> WITH LINE FEED
'.nl0'	No line feed (new line) at the end of the telegram
Answer	> NO LINE FEED
'.rd'	restore default parameters
Answer	> DEFAULT PARAMETERS RESTORED

9. Cleaning

Clean the antennas with a wet cloth. No water contact on the display or any outer cable.

10. Regulations

10.1. 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.

10.2. EN 300330-1/-2 (europe)

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

10.3. FCC (usa)

To comply with FCC part 15 rules in the United States, the system must be professionally installed to ensure compliance with the Part 15 certification. It is the responsibility of the operator and professional installer to ensure that only certified systems are deployed in the United States. The use of the system in any other combination (such as co-located antennas transmitting the same information) is expressly forbidden.

10.4. CE certification

The system GATE MAX reader is in accordance with the requirements of protection, which are defined in the regulation concerning the electro-magnetic tolerability EN301 489-1, -3, emitted by the council for the harmonisation of regulations in the member countries. The European Community regulation for Low Frequency, EN 60950, is respected.

The GATE MAX reader system fulfils the requirements of this regulation.

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.