DATAMARS

COMPACT MAX RW Scanner

User Manual

Contents:

1 Description

1.1 "ON/Read" button

The "ON/Read" button is used to switch on the COMPACT MAX RW reader, to start and stop a reading session or to select and confirm the various available settings, the settings are described in later chapters of this manual.

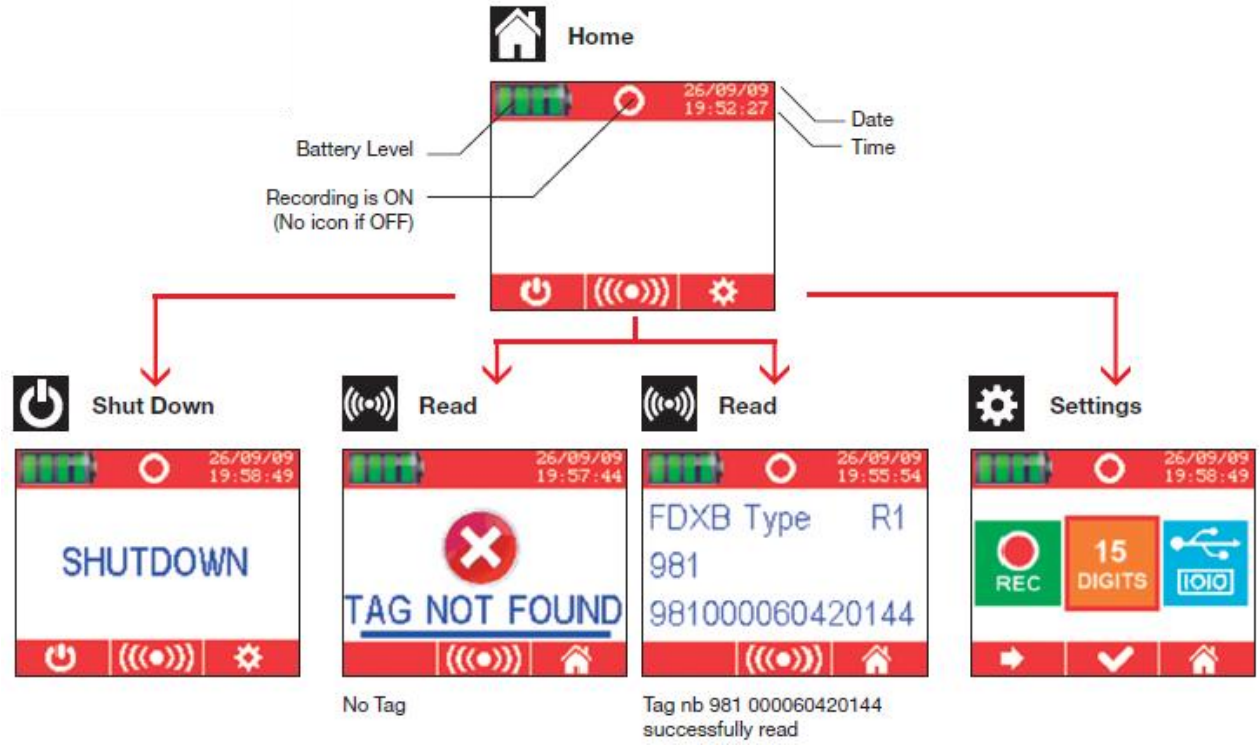
1.2 Left Navigation Button

The Left Navigation Button is used to shut down the reader or to scroll between the various settings.

1.3 Right Navigation Button

The Right Navigation Button is used to access to the Control menu or to return to the previous menu.

2 Screen navigation



2.1 CONTROL MENU

2.1.1 ID Code Dislay Settings

AID format Icon 

A full unique microchip ID code actually contains 23 characters. It's common in many countries to only reference the last 15 digits. You can select whether you would prefer to see the full 23 or only 15 characters of the unique ID code.

- "981000000123456" (15 char)
- "A00000009810000000123456" (23 char)

2.1.2 USB Setting

USB mode Icons 

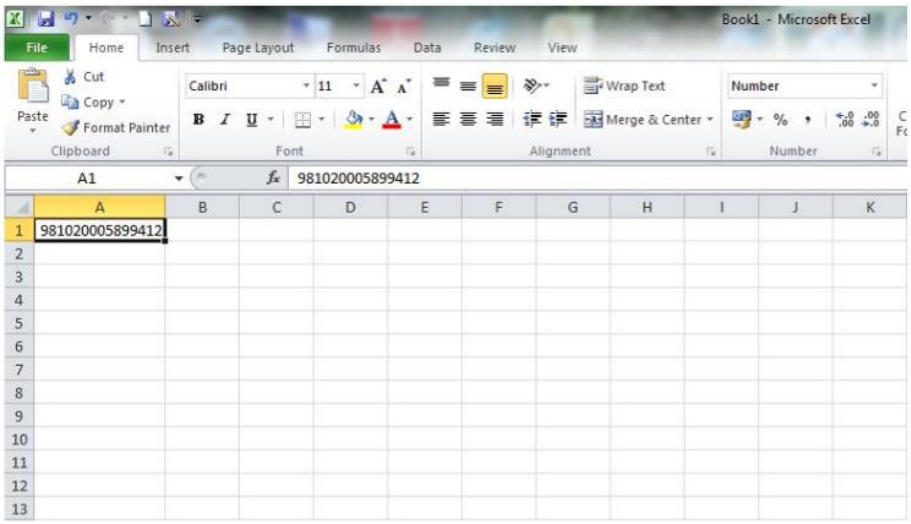

USB/Keyboard Wedge:

The Keyboard Wedge feature allows the reader to enter data on a computer, tablet or smartphone application by simulating the action of a keyboard.

The applications most commonly used with a keyboard wedge are Microsoft Excel, Microsoft Access, and other custom database and applications like microchip search databases or animal welfare management

applications. This is a useful tool to help speed data entry regarding scanned animals and should help speed the reunification process.

When using keyboard wedge, place your cursor where you want the ID code to go in your application, and then press the center button on Compact Max RW to read the microchip. If a microchip can be localized, the unique ID code will appear automatically in the correct field, just as if you typed it in yourself. The example below
shows what a keyboard wedge entry looks like in Microsoft Excel.

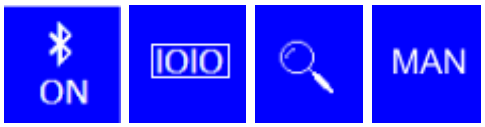


You can also send and receive data through the USB port as though it were a serial/RS232 port. Instructions are outlined in chapter titled “Command Interface”.

2.1.3 Stored UID


This figure shows the number of UID stored in the memory. They can be deleted by clicking on the icon.

2.1.4 Bluetooth settings


Bluetooth mode Icons


Bluetooth settings allow you to establish a connection and communicate via Bluetooth with other devices such as printers, computers and mobile devices. The communication mode are the same of USB connection. The reader has the possibility to automatically reconnect to the last connected device.

2.1.5 Information Menu

 The Information Menu helps you determine which version of OMNI MAX you are using; it will confirm the current firmware, current bootloader and proper license number of your unit.

2.1.6 Time and Date

 2 Display formats are available to show the date and the time:

- Europe: 24-hour clock, DAY/MONTH/YEAR
- North America: 12-hour clock, MONTH/DAY/YEAR

Once in the Date and Time menu, pressing the right navigation button will allow you to switch from Europe to North America formats. Use the left navigation button to proceed to the next value and the right navigation button to change it as desired.
When done, press the center navigation button to save the selected date and time.

2.1.7 Record Setting

Record Icons

Record allows you to enable or disable the recording of unique microchip ID codes to the internal storage. Recorded files can be accessed at a later time for download or reference. To turn the Record setting on, press the center button until the red dot is visible in the green Record icon.

Recorded files are automatically named by the reader and saved in the following folder:
\session\<current year>\<current month>\s<date>.txt

Compact Max RW will save one file per calendar day. Each microchip ID code is saved with date and time stamp.

3 Connect the COMPACT MAX RW to a PC

The PC can be used for many functionalities:

1. To charge the reader's battery
2. To configure the reader with the S-ID
3. To use the reader as a Mass Storage device like a USB storage pen
4. To connect the reader with the USB or Bluetooth in Virtual Com Port to send or receive data
5. To connect the reader with the USB or Bluetooth in Keyboard Wedge mode

4 Command Interface

4.1 Commands Overview

You can transfer data from OMNI MAX to your computer, tablet or smartphone using the USB Virtual Comm Port or Bluetooth connection.

3 command types are possible:

- Get
- Set
- Execute

A “Get” command is used to read a parameter value from the reader and always starts with the letter “G”, e.g “G<CMD>\r\n”.

A “Set” command is used to change a parameter value in the reader and always starts with a dot “.”, followed by the command name and parameter value, e.g “.[CMD]<par>\r\n”.

An “Execute” command is sent to the reader to perform an action. These commands always start with “.”, and do not have any parameters, e.g. “.<CMD>\r\n”.

Execute Commands

Command	Description
.?	Help
.T	Dump signals
.LBT	Simulate press left function
.CBT	Simulate press center function
.RBT	Simulate press right function
.r	Read command remotely

Get/Set Commands

Command	Description
.v	Get reader firmware version
.GB	Get battery level
.YE	Set the Date/Year: .YExx (xx = 0-99)
.MO	Set the Date/Month: .MOxx (xx = 1-12)
.DA	Set the Date/Day: .DAxx (xx = 1-31)
.GDT	Get reader date
.HO	Set the time/hour: .HOxx (xx = 0-23)
.MI	Set the time/minutes: .MIxx (xx = 0-59)
.SE	Set the time/seconds: .SExx (xx = 0-59)
.GTM	Get reader time
.DM	Set output tag format: LONG: .DM0 , SHORT: .DM1
.GDM	Get output tag format
.GRB	Get reading sound status, 1 enabled 0 disabled
.RB	Enable | disable reading sound: 1 enabled 0 disabled
.GKB	Get keyboard sound status, 1 enabled 0 disabled
.KB	Enable | disable keyboard sound: 1 enabled 0 disabled
.RT	Set the reading timeout: .RTxx (xx = 10-60 [s])
.GRT	Get the reading timeout
.ST	Set the auto shutdown timeout: 2Min: .ST0, 5Min: .ST1, 15Min: .ST2, 30Min: .ST3
.GST	Get the shutdown timeout
.DIAG	Set Diagnostic level: NONE: .DIAG0, ERROR: .DIAG1, INFO: .DIAG2, DEBUG: .DIAG3

5 Troubleshooting

- **Not enough reading distance between the reader and the animal**

  The optimal reading distance is obtained with the microchip perpendicular to the reader's antenna and aimed at its center. If the microchip is implanted into an animal, its orientation may not be optimal and therefore the reading distance may be reduced.

  Try to reduce disturbances to RFID like computer equipment, video or TV. Move a few meters away and try again.

  Do not use the reader on a metal table. Metal will reduce the performance of the reader.

  The reading distance will be somewhat reduced if the microchip is still inside the needle.

- **The reader does not read a microchip**

  It takes time and patience to effectively scan an animal. Be sure to change the position and direction of the reader, and try multiple times.

- **The reader does not work**

  Check to ensure that the ambient temperature is between -5ºC and +55º C (23°F-131°F).

  If you're still having problems, please contact your local Datamars dealer for assistance. Compact Max RW is a product developed and produced by DATAMARS.

  If you have any suggestions or require information regarding this or any other DATAMARS products, please contact your local Datamars dealer or email us at animal-id@datamars.com

6 Specifications

1. Storage temperature: -20 to +45 °C, 85% RH, non-condensing
2. Normal operating temperature: -10 to +55 °C, 85% RH non-condensing
3. Standards: ISO11784/5, ISO11784-AMD1, ISO24631-2 and ISO14223
4. External power supply: USB cable
5. Dimensions: 157x82x20 mm
6. TAG compatibility: FDX-A, FDX-B and HDX
7. Transmission frequency: 134.2 kHz
8. Modulation frequency: 10 kHz
9. Modulation index: 100%
10. Battery life: >500 cycles
11. Weight: 180 g
12. Interfaces to host PC: USB
13. Interface with other devices: Bluetooth

7 Certifications

7.1 European directives

Datamars SA, Via ai Prati, CH-6930 Bedano declares, under its own responsibility, that the product COMPACT MAX RW is in accordance with the following standards:

ETSI EN 300 330-1 / ETSI EN 300 330-2	Electromagnetic compatibility and Radio spectrum matters (ERM) - Short Range Devices.
ETSI EN 301 489-1 / ETSI EN 301 489-3	Electromagnetic compatibility (EMC) standard for radio equipment and services.
2013/35/EU EN 50364	Human Exposure
2011/65/UE (RoHS II) EN 50581	Restriction of Hazardous Substances
IEC/EN 61000-4-2 / IEC/EN 61000-4-3/ IEC/EN 61000-4-4/ IEC/EN 61000-4-6	Electrostatic discharge, electromagnetic field, electrical fast transient/burst, radio-frequency fields' immunity.

COMPACT MAX RW satisfies the essential requirements of directives 99/5/EC.

7.2 American directives

Datamars SA, Via ai Prati, CH-6930 Bedano declares, under its own responsibility, that the product COMPACT MAX RW is in accordance with the following standards:

FCC Part 15B	Part 15 Class B Computing Device Peripheral
FCC Part 15C	Part 15 Low Power Transmitter Below 1705 kHz

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.

7.3 Canadian Directives

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:
(1) This device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :
(1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

8 Caring for your Compact Max RW Reader

If properly cared, Compact Max RW should be a valuable tool for electronic animal ID for years to come. Try not to drop it on a hard surfaces. Do not put the reader under water.

If the outer casing of the reader becomes soiled, clean it with a damp cloth.
Be sure that the reader is not connected to the charger before cleaning it.

If for any reason the reader is not working as expected, please do not attempt to repair it. Return it to your local Datamars dealer for repair, or contact us at
animal-id@datamars.com

The Compact Max RW's display may change color if exposed to temperatures higher than 50°C (122°F). To return normal it has to be kept in a cooler place before the normal utilization. At very low temperatures the display may temporarily lose its contrast.

9 End of life

9.1 Disassembly Instructions for COMPACT MAX RW reader

Product Name / Model	Description
COMPACT MAX RW	Universal portable reader

Only authorized recyclers are permitted to use these disassembly instructions. Any attempted disassembly by a user or unauthorized party will void the product warranty and may irreparably damage the product.

9.2 Tools Required

- Nipper
- Screwdriver
- Cutter pliers
- Hot air gun

9.3 Product Disassembly Process

- All external plastics have to be removed from the reader (use the screwdriver to remove all screws).
- The Keypad has to be removed from the top cover casing (use the hot air gun with the cutter pliers in order to easily remove the keypad).
- The Micro USB cable and the battery have to be removed from the bottom cover casing.
- Dispose plastic parts of the reader in accordance with local recycling laws.
- Dispose electronics parts of the reader in accordance with local recycling laws.
- Remove cables from batteries (use the nipper to do this operation).
- Dispose batteries of the reader in accordance with local recycling laws.
- Dispose cables of the reader in accordance with local recycling laws.