# SRU6880 USB

## Installation & User Manual

Ref : SRU6880 USB–UM–1.0-E

**BALOGH SA**
189, rue d'Aubervilliers - C.P. 97 75886 PARIS Cedex 18 – France ▪ Tel : 33 (0)1 44 65 65 00
▪ Fax : 33 (0)1 44 65 65 10 ▪ e-mail : contact@balogh-rfid.com ▪ web : balogh-rfid.com

*Public Limited Company with board of directors and a capital of 800,000 € - RCS B Paris 582 061 073*

# TABLE OF CONTENTS





**BALOGH SA,** 189 rue d'Aubervilliers C.P. 97 75886 PARIS Cedex 18 FRANCE

# FOREWORD

## The purpose of this manual

This technical manual describes the installation and use of SRU6880 programmer equipment.

## Manual reference

The manual's generic reference is :

<name of equipment> - UM - x.y - L where

UM means User Manual

x designates the equipment's version number

y designates the document issue/revision number.

L is the language used.

## Update

| Version | Revision/Issue No. | Date | Nature of the modification |
|---|---|---|---|
| 1 | 0 | 24/01/14 | Creation |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

## Note

The information contained in this manual are subject to being changed without notice.
BALOGH cannot be held responsible for the possible consequences of any errors or omissions, nor of interpretation of the information therein.

# 1 DESCRIPTION OF SRU6880 USB PROGRAMMER

The SRU6880 USB tag programmer is composed of:

- a PC application (Windows) supplied on CD-ROM,
- a programming box in ABS for placing on a table,
- an USB cord.

The SRU6880 USB programmer casing is a peripheral capable of encoding a UHF tag without contact.

The SRU6880 USB can be used with both passive and semi-passive UHF tags and labels corresponding to ISO 18000-63 standard (EPC C1G2 compliant).

The front elevation contains a slot for the insertion of the USB cord and an indicator light

The programming box is power up through the USB (5 Vdc) via the PC.
It communicates with the PC in point-to-point via USB.

The SRU6880 USB programmer is able to detect tags up to 10cm; a security distance of at least 10cm is to be respected to avoid random reading/writing of non desired UHF tags or labels.




**BALOGH SA,** 189 rue d'Aubervilliers C.P. 97 75886 PARIS Cedex 18 FRANCE

# 2 INSTALLATION AND CONNECTION

To use USB interface to communicate with the SRU 6880 programmer from a PC, the appropriate driver must be installed first

The programming software, Balogh UHF encoder, will be installed then.

## 2.1 INSTALLATION OF VCP DRIVER

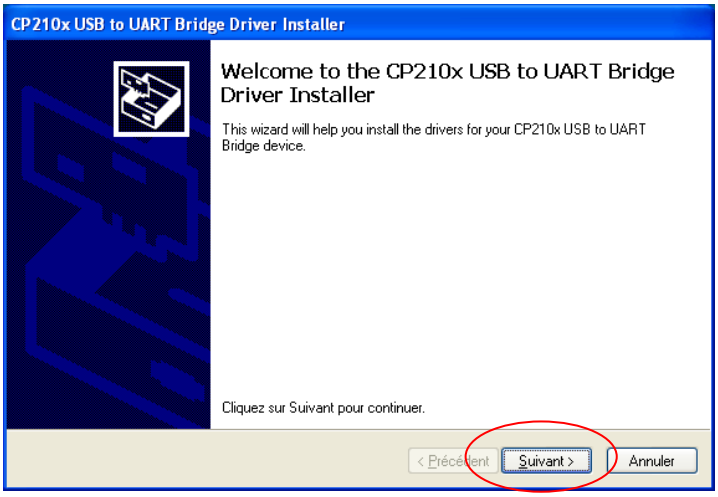
Communication with the SRU6880 is achieved via implementation of a virtual port COM, communication is then carried out as an RS interface.

The procedure under Windows XP is detailed below:

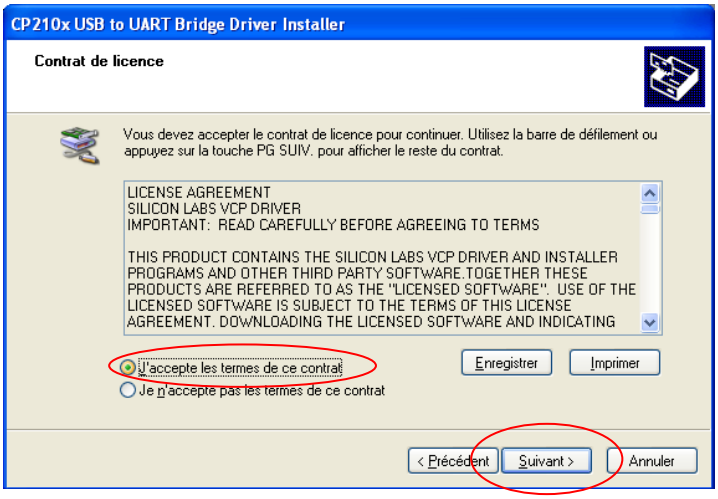
- **Step 1** : Use the VCP Installation files given on the CDROM, or download the latest available CP210x USB to UART Bridge Virtual COM Port (VCP) driver from the Silabs web site (http://www.silabs.com/products/mcu/Pages/USBtoUARTBridgeVCPDrivers.aspx ).

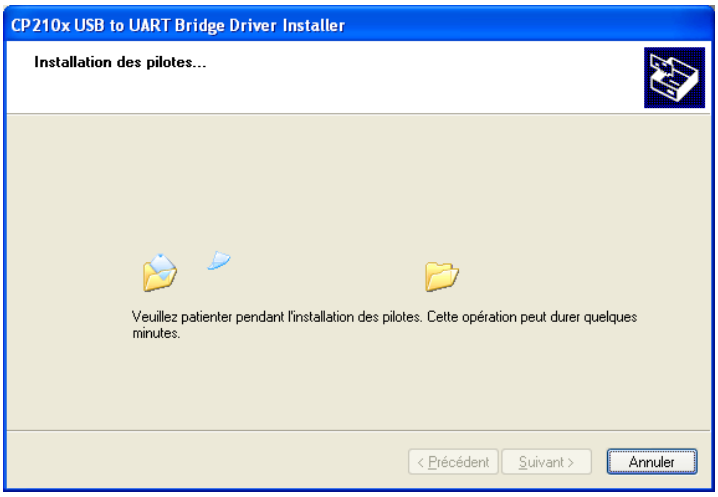
  Copy the VCP Installation file on the PC and
  - for 32 bits Windows OS, lauch “CP210xVCPInstaller_x86.exe”;
  - or for 64 bits Windows OS, lauch “CP210xVCPInstaller_x64.exe”.

The following window will appears, then click on Next



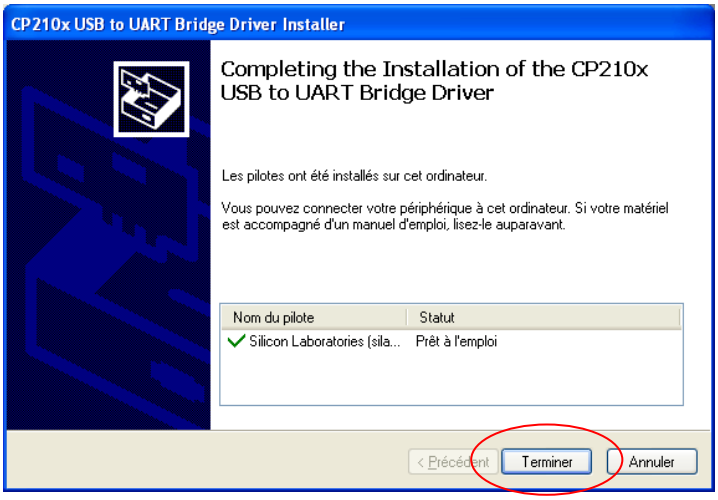

- **Step 2** : If you are agree with license conditions, check “I agree” and then click on Next




Note: It take a while for installing the driver files

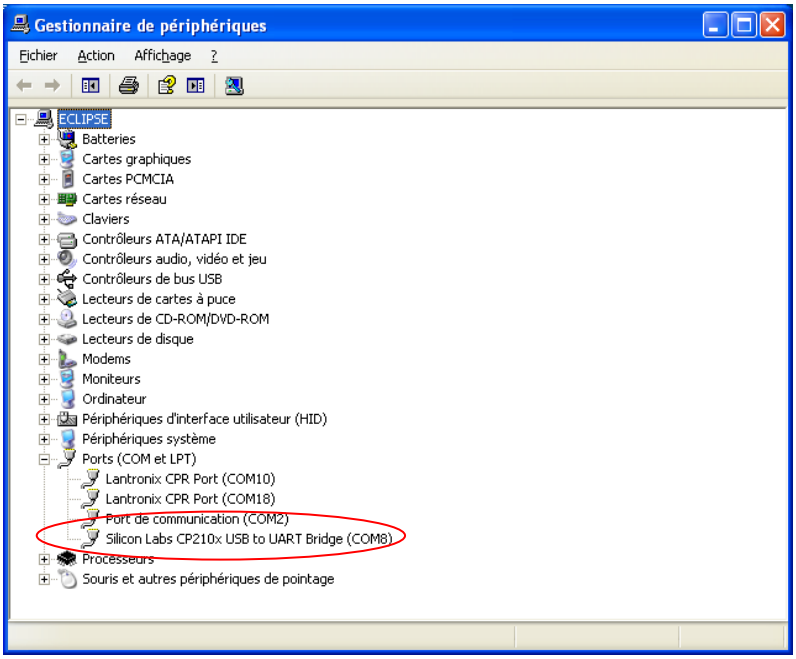
➢ **Step 3** : Complete the installation by clicking on Finish



## 2.2 CONNECTION OF SRU6880 PROGRAMMER

Simply connect the SRU6880 programmer to an USB port on your PC.
At power up, the main LED is to be red and the buzzer sounds once.

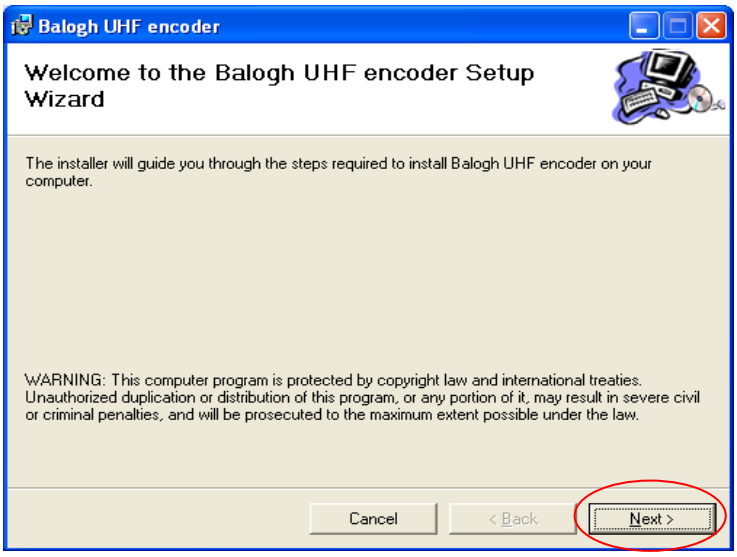
Verify if the equipment is correctly detected by the PC by opening the « Device Manager »:
It appears as « Silicon Labs USB to UART Bridge (COMx) »




**Note:** The port number (eg COM8) will be asked when use the programming application. (see 3.1.3)

## 2.3 INSTALLATION OF BALOGH UHF ENCODER SOFTWARE

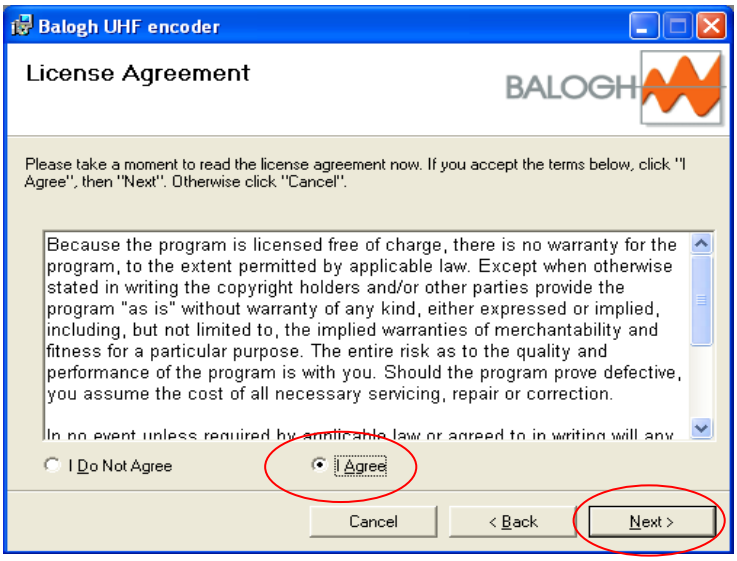
- **Step 1** : Use the installation files given on the CDROM, double click on setup.exe.
  The following window will appears, click on Next



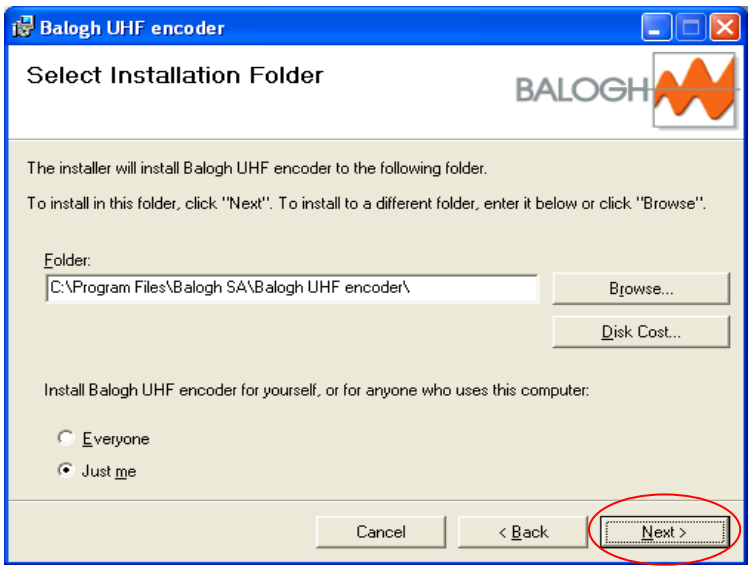



**BALOGH SA,** 189 rue d'Aubervilliers C.P. 97 75886 PARIS Cedex 18 FRANCE

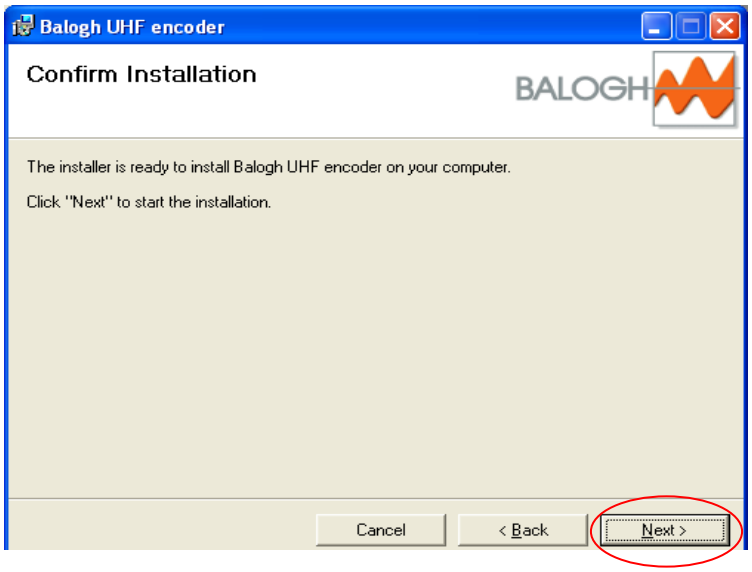
➢ **Step 2** : If you are agree with license conditions, check “I Agree” and then click on Next

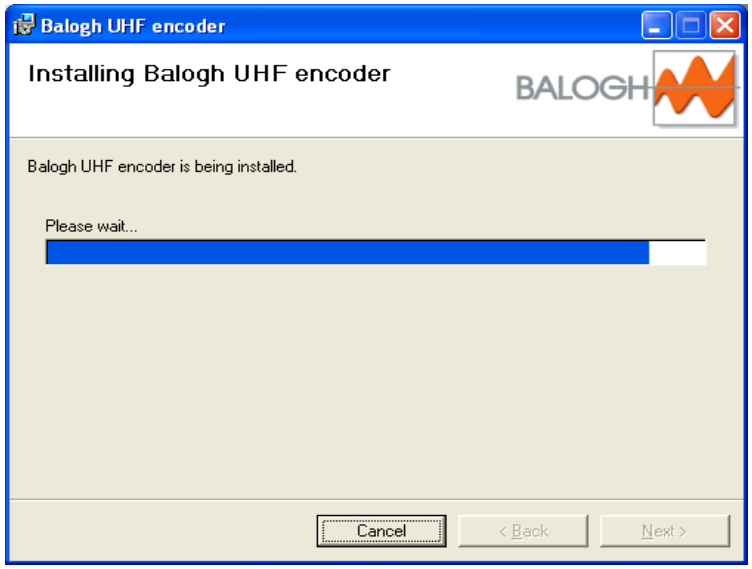



➢ **Step 3** : Verify the installation folder, and the option available.
Modify if necessary, and then click on Next

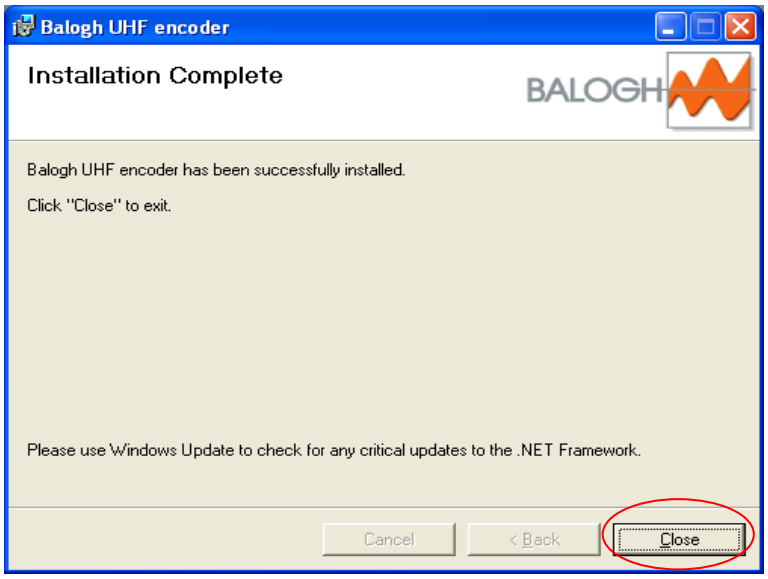



➢ **Step 4** : Confirm the installation, click again on Next




➢ **Step 5** : Balogh UHF encoder is now installed, complete the installation, click on Close



# 3 BALOGH UHF ENCODER SOFTWARE.

## 3.1 GENERAL CONFIGURATION & CONNECTION

The SRU6880 USB programmer allows programming of any UHF EPC C1G2 compatible tag or label.

Connect the SRU6880 programmer to any USB port on your PC

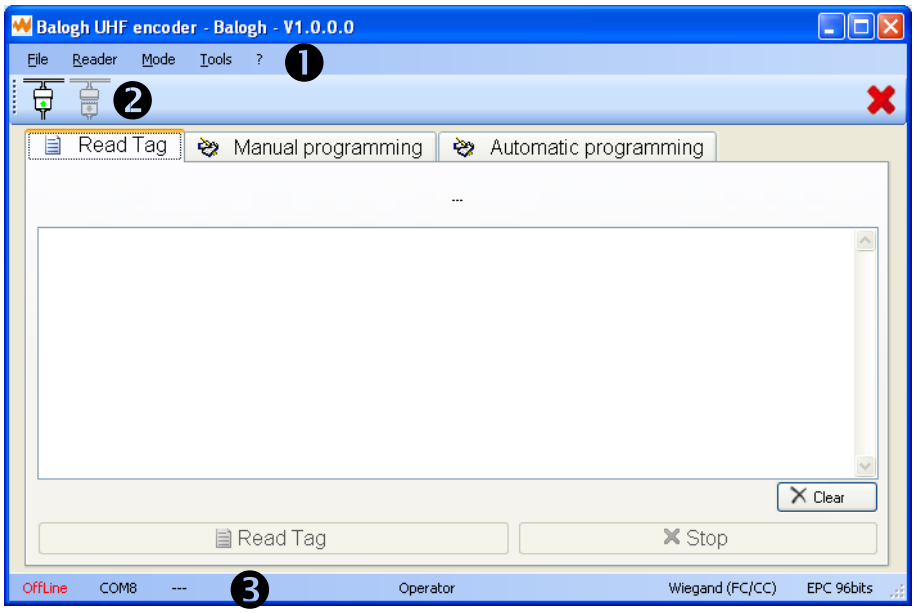
Note : SRU6880 programmer is to be connected prior to launch Balogh UHF encoder software.

At power up, the main LED is to be red and the buzzer sounds once.

## 3.2 USE OF BALOGH UHF ENCODER SOFTWARE

Launch the Balogh UHF encoder software.

The software presents as shown:



### 3.2.1 CONFIGURE THE APPLICATION LANGUAGE

Click on the "**Tool**" menu in zone ① :

- Select the desired language (French or English)

### 3.2.2 CONFIGURE THE PC'S SERIAL PORT

Click on the "**Reader**" menu in zone ① :

- Select the serial port where is connected the SRU6880 USB programmer.
  (see § 2.2 to retrieve the Comport number.)

### 3.2.3 CONNECT THE DEVICE

Click on the "**Connect"** button in zone ②
or
Click on the "**Reader**" menu in zone ① :

- Select "**connection**".

Verify the "**Offline**" is replaced by "**Online**" in zone ③

## 3.3 PREPARE THE PROGRAMMING

### 3.3.1 OPERATOR AND INTEGRATOR MODE

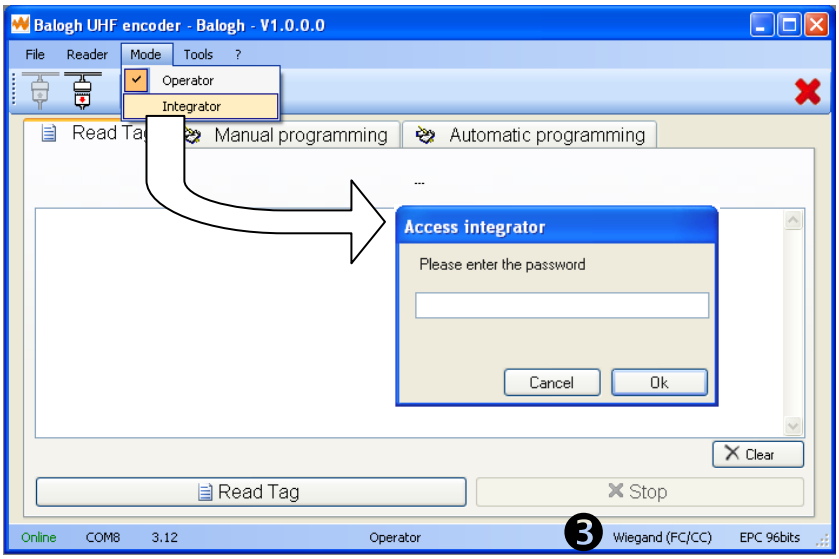
Balogh UHF encoder software disposes of two operating modes:

- **Operator mode**: this mode only allows programming the tags in the define format which appears in zone ③.
- **Integrator mode**: this mode allows programming the tags, to modify the configuration of the programmer: encoding format, tag memory format, etc.

Note: The software always starts on Operator mode.

Click on the "**Mode"** menu, and select desired mode.

A password is requested for accessing the "Integrator mode".
By default password is : **balogh**

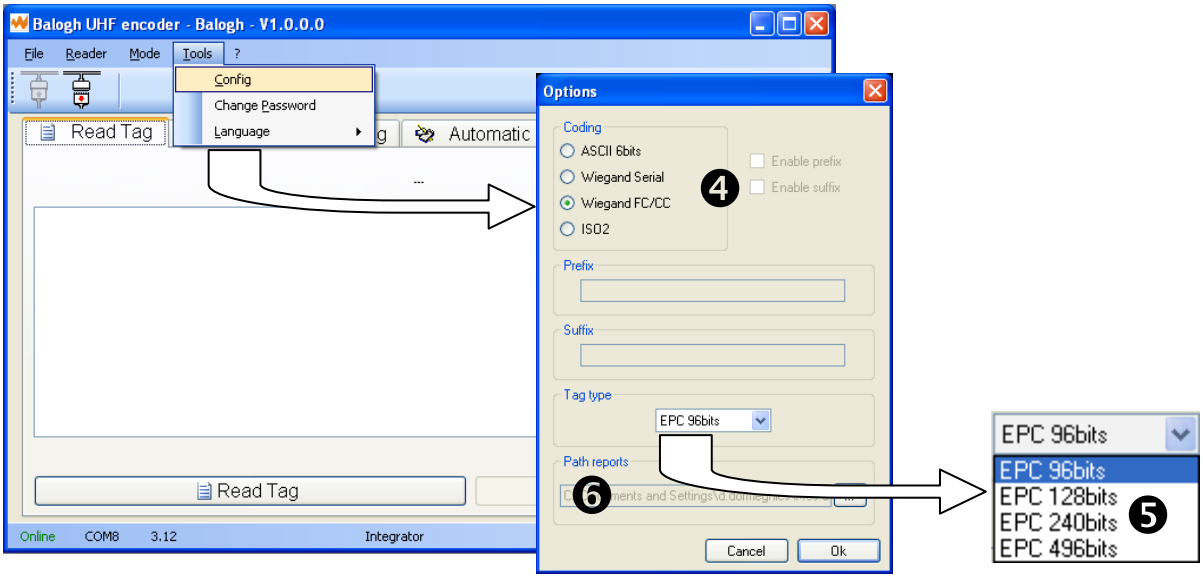



Note: password can be changed in the "**Tools**" menu.

If modify it, keep the new password securely as it cannot be retrieved if lost.

### 3.3.2 CONFIGURE THE ENCODING FORMAT

This capability is only available when logged in Integrator Mode




④ Choose the desired encoding format by click on the corresponding coding option :

- **ASCII 6 bits**: allows coding the UHF tag using an ASCII frame, as for a Balogh UHF reader data transmission configured in RS232, RS 422 or RS 485 data transmission.

- **Wiegand serial**: allows coding the UHF tag using a Wiegand 26bit frame, as for a BALOGH UHF reader configured in Wiegand26bit data transmission.
  Using this mode , the data is formatted as a plain binary code of 24bits length

- **Wiegand FC/CC**: allows coding the UHF tag using a Wiegand 26bit frame, as for a BALOGH UHF reader configured in Wiegand26bit data transmission.
  Using this mode, the data is formatted as a FC (facility code) and a CC (card code).

- **ISO2**: allows coding the UHF tag using an ISO2 frame, as for a BALOGH UHF reader configured in ISO2 data transmission.

Note: when select ASCII or ISO2, a prefix and/or suffix can be specified, and are to be entered in the corresponding zone. The prefix and/or suffix will be added to the tag code.

⑤ Allows modifying the EPC tag length.
EPC length depends directly on the tag chip characteristic.
By default, EPC length is set to 96bits which correspond to all tags supplied by Balogh.
Before modifying EPC tag length, be sure your tag product characteristics comply with the chosen lenght.

⑥ Specify the destination of the programming report file.
The report file is presented as a text file (.txt), which keeps track of the encoding operations performed.

When you exit the application, ("**Exit**" button), the configuration is saved and automatically remembered at the next session.

## 3.4 PROGRAMMING

### 3.4.1 READ A TAG

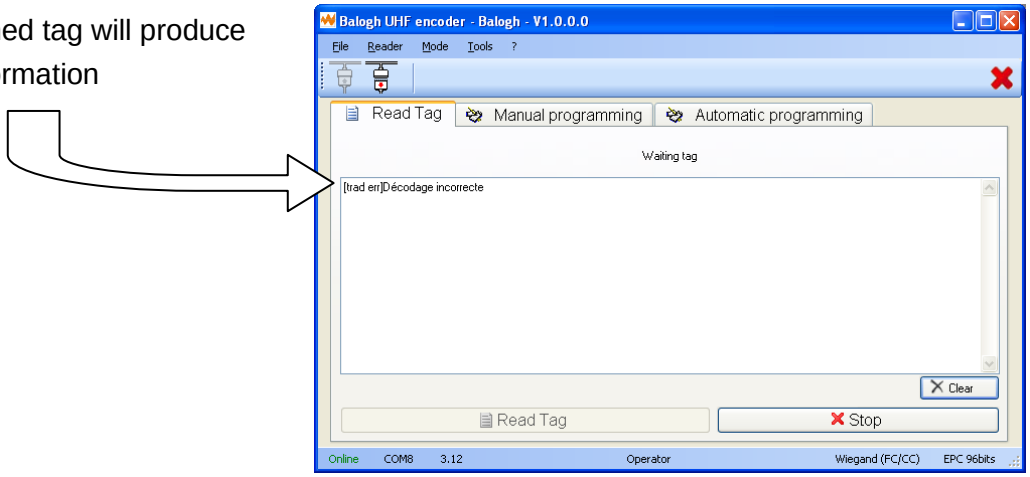
Select the "**Read Tag**" folder

Click on the "**Read Tag**" button to enable tag reading, and present a tag to the SRU6880 USB programmer.

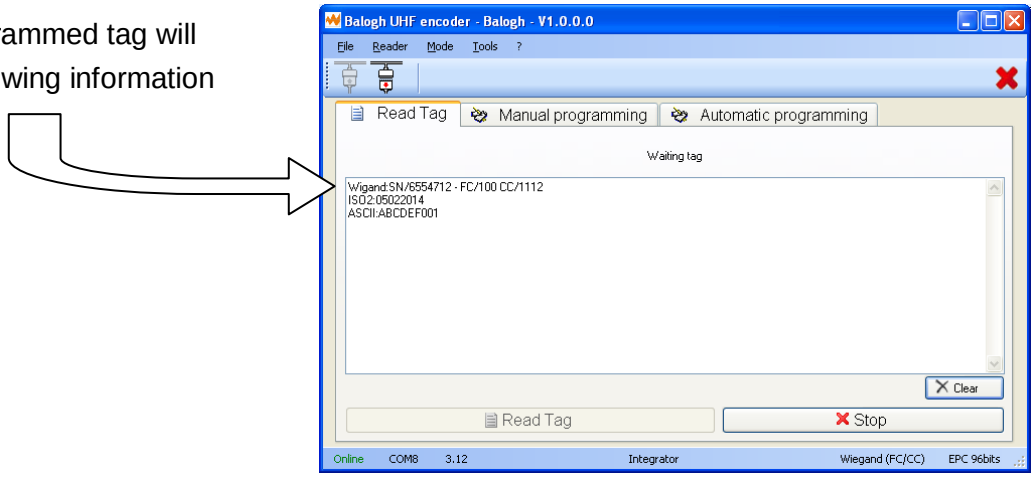
Click on the "**Stop"** button to disable tag reading.

The application serves only as a human-reader interface.
The codes of tags successively presented to the reader are displayed there one after the other:

A non programmed tag will produce the following information




An already programmed tag will produce the following information




Note: The encoding format is displayed before the tag code, as shown in the example.

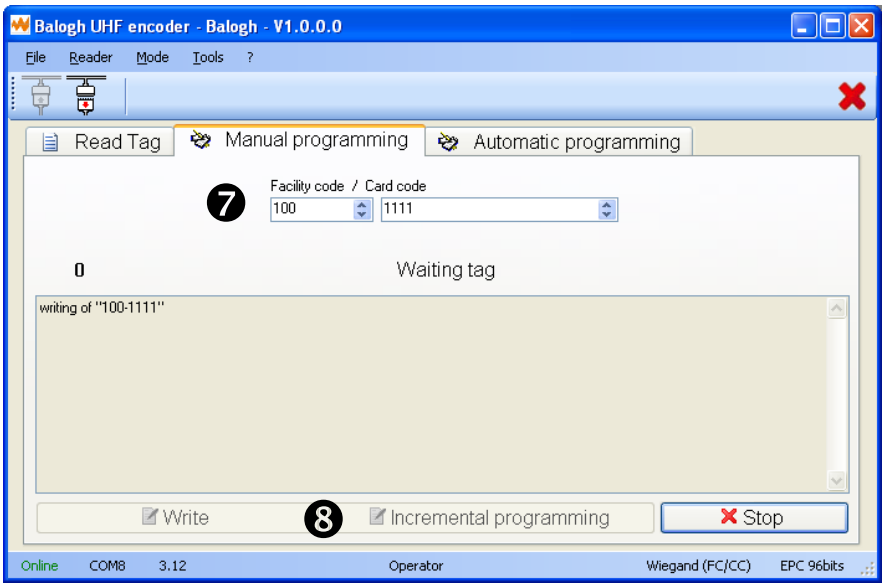
### 3.4.2 PROGRAM A TAG

Select the "**Manual Programming**" folder

Enter the tag code to program in zone ⑦

Click on one of the two writing option possible in zone ⑧ : Write or Incremental programming

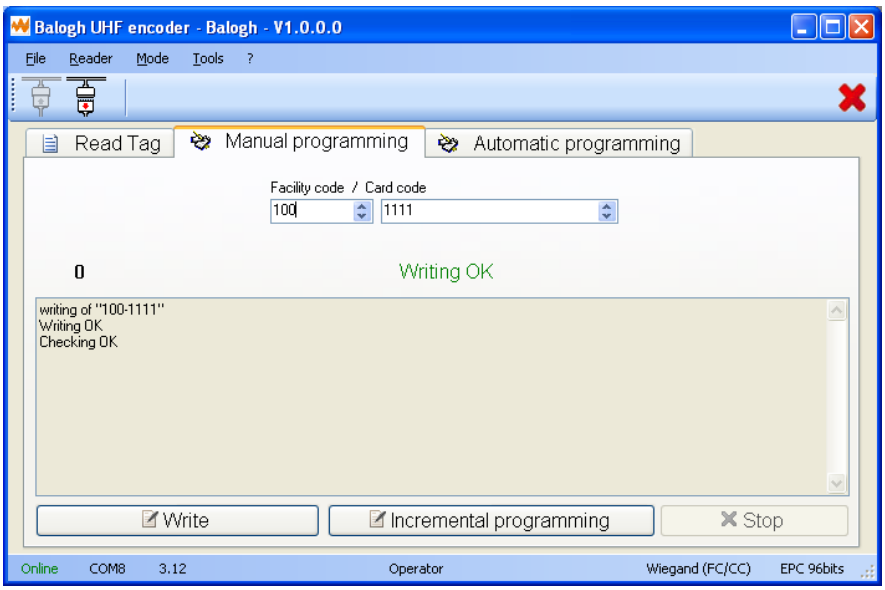
Tag programming can be aborted at any time by clicking on the "**Stop"** button.




*Example given uses a wiegand26bit format composed of FC = 100, CC = 1111*

#### 3.4.2.1 Write a single tag

Click on the "**Write**" button to enable tag programming and present a tag to the SRU6880 USB programmer.

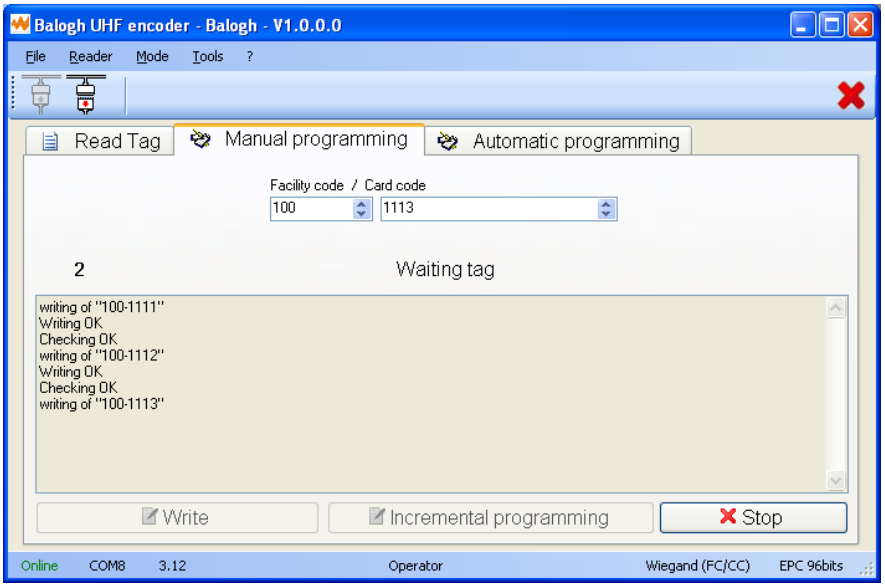



Note: If tag programming fails, click first on the "**Stop"** button before retrying.

#### 3.4.2.2 Write several tags using an automatic incremental process

Automatic incremental process accelerates and increases the reliability (fewer data-entry errors) of the programming of tags belonging to the same batch: same format, same mode, codes which follow on from each other.

Click on the "**Incremental programming**" button to enable tag programming and then present tags one by ones to the SRU6880 USB programmer.




The incrementation takes place only if the reading result is identical to the code input.

If the tag programming fails, click first on the "**Stop"** button before retrying.

Tag programming can be aborted at any time by click on the "**Stop"** button and restarted by clicking on the "**Incremental programming**" button.

### 3.4.3 PROGRAM TAGS FROM A FILE

Balogh UHF encoder software allows programming from a list imported from a text file (.txt) or from a Comma-separated values file (.csv).

The imported file is to be presented as shown

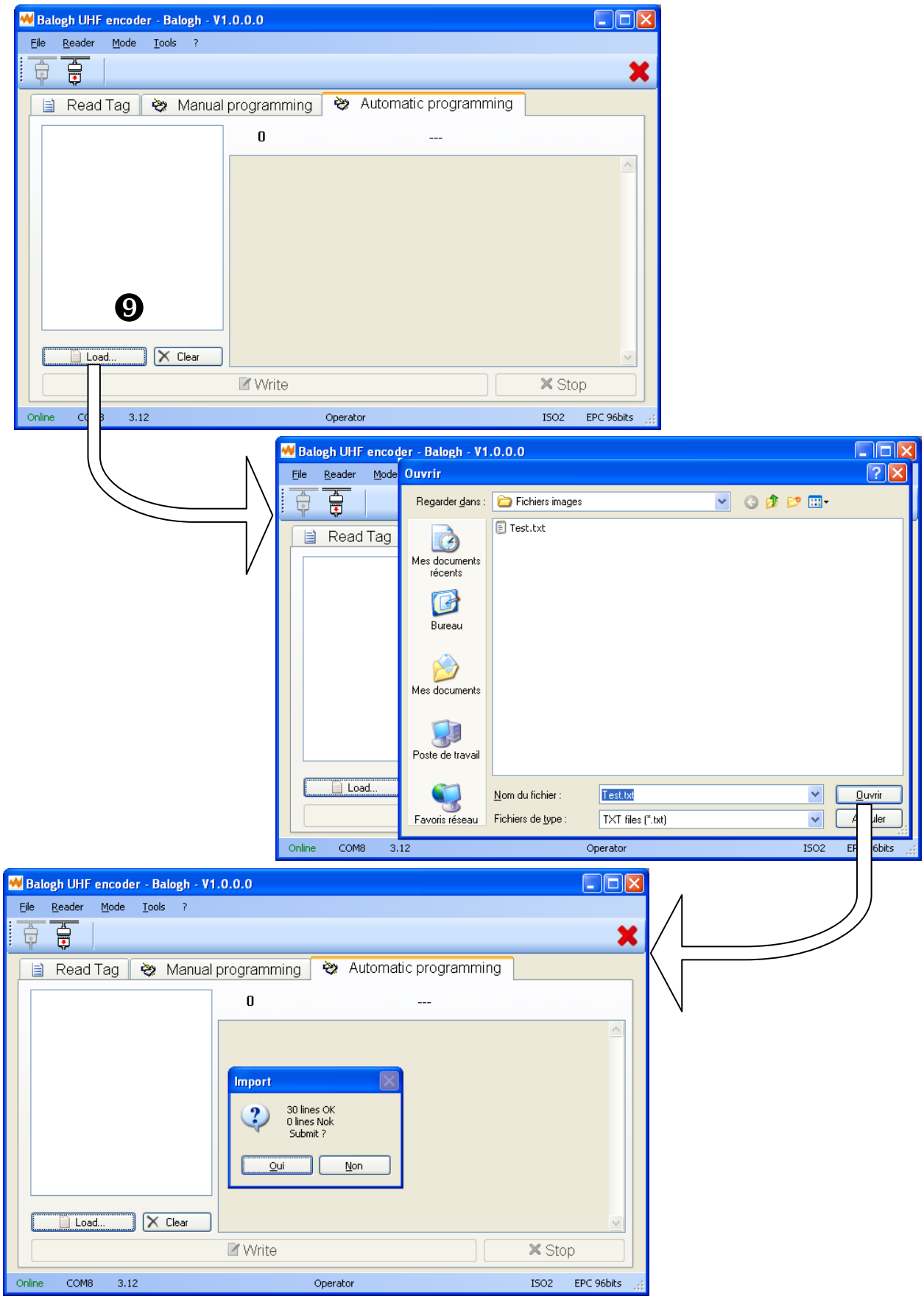
```
512231550
512231551
512231552
512231553
512231554
512231555
512231556
512231557
512231558
512231559
512231560
512231561
512231562
512231563
```

*Example given uses an ISO2 format*

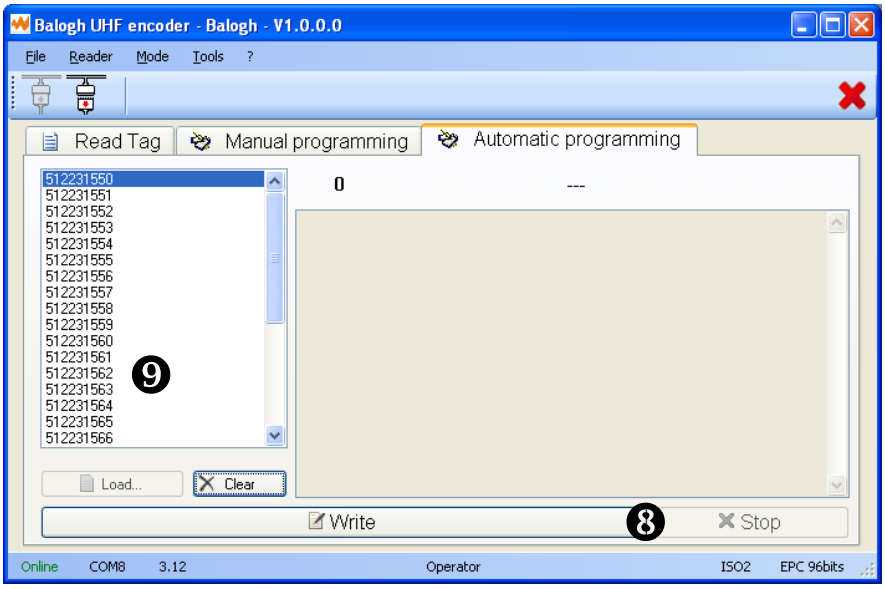
Select the "**Automatic Programming**" folder

Load your file by click on "**Load ...**" button in zone ⑨

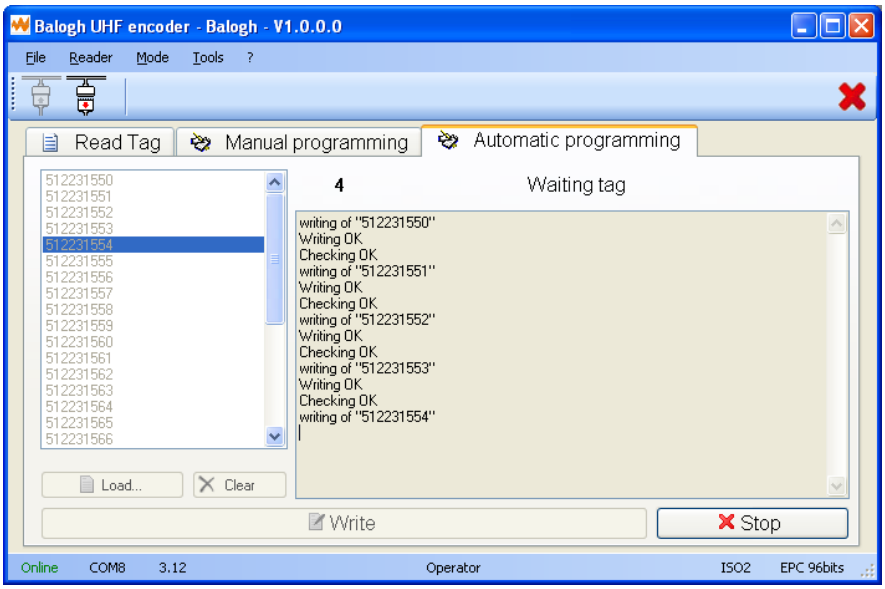
Then open your file.



The complete tag listing will then be displayed in zone ⑨




Click on the "**Write**" button in zone ⑧ to enable tag programming and then present tags one by ones to the SRU6880 USB programmer.



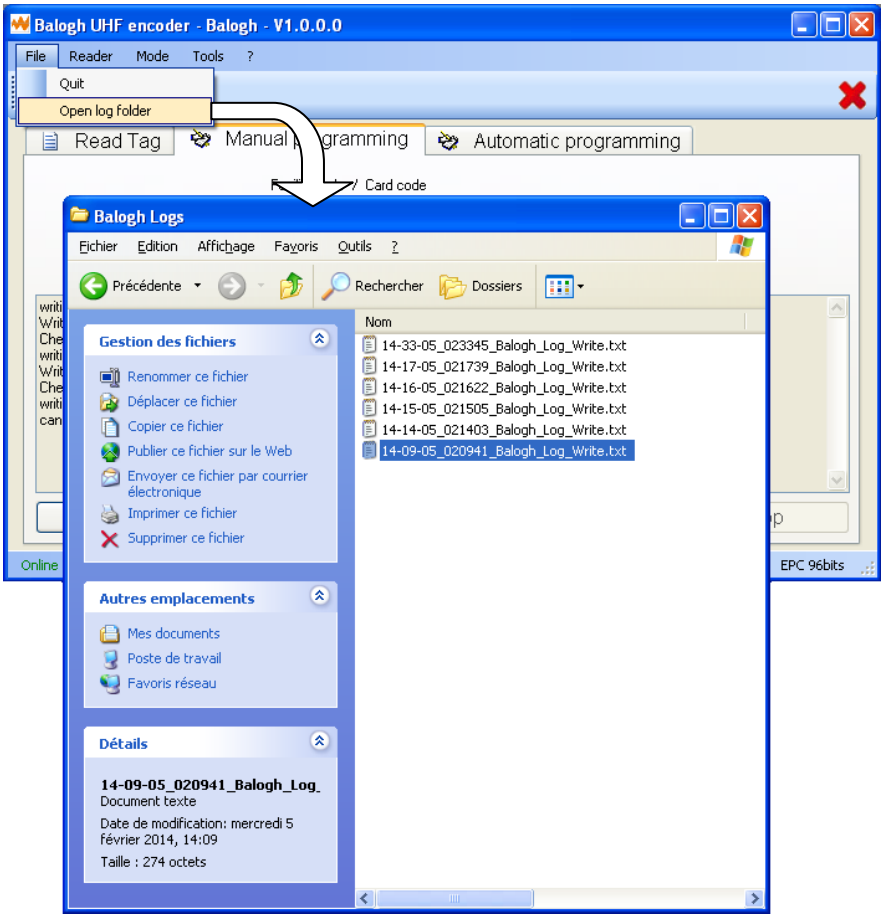

The incrementation takes place only if the reading result is identical to the code input.

Tag programming can be aborted at any time by clicking on the "**Stop"** button and restarted by clicking on the "**Write**" button.

### 3.4.4 REVIEW THE REPORT FILE

Each time an encoding operation is performed, a log file is created.

The file can be review by opening it through the “**File**” menu




The report file is presented as a text file (.txt), which keeps track of the encoding operations performed:

```
Date : 05/févr./2014   02:33:45
-------------------------------------------------
Balogh UHF encoder - Balogh - V1.0.0.0
Format: A = ASCII, W = WIEGAND, I=ISO2, R=RAW
-------------------------------------------------
Format   Bank  Verif       Data
I        1     ok          512231550
I        1     ok          512231551
I        1     ok          512231552
I        1     ok          512231553
```