# GPW100

## Proximity Tag Encoder
## User's Manual

**TM970188**

**October 23, 2013**

# CONTENT

**A. Specifications**

- Frequency : 125 KHz , ASK
- Format : 64 bits, Manchester coding
- Interface : RS-232
- 9600 baud , no parity , 8 data bits , 1 stop bit
- ID number : 10 digits in Hex format
  13 digits in Decimal format
  10 digits in Wiegand format
- Operating temperature : 0 ~ 50 Deg. C
- Storage temperature : - 10 ~ 55 Deg. C
- Humidity : 10 ~ 90 % relative
- Dimensions : W86 x L120 x H80 mm
- Power requirement : DC 9V , 500 mA
- Standard : EM format compatible

**B. Suitable Tag for GPW100 -- GiTAG 1**

**GiTAG 1 is the only suitable tag for GPW100 Proximity Tag Encoder .**

**Tag : GiTAG 1**

- Chip type : GI 8693 Read/Write
- ID code : 10 digits in Hex
- 125 KHz , ASK
- 64 bits , Manchester coding
- Rate timing : MOD 64 ( 64 clocks per bit )
- Compatibility : EM H4002 ( after programmed by GPW100 )
- Coding : user programmable by GPW100
- Passive , no battery required
- Operating temperature : - 45 to 70 Deg. C
- Storage temperature : - 45 to 70 Deg. C
- Available sizes :
  - ISO card : 8.57 x 5.40 x 0.08 cm
  - Badge : 8.57 x 5.40 x 0.19 cm
  - Disc shape tags & Key chain tag also available

## C. Software Installation

1. Put the software disk into the disk drive of your computer .
2. Under Windows 98/2000/XP/Vista/Win7/Win8, run **AutoRun.exe** which is on the disk .
3. Follow the instructions on the screen to install the software till finished .

## D. GPW100 Installation

1. Plug in the RS-232 pin-pin cable to the 9 P D-connector on the unit and the other end to the Serial port of the computer .
2. Plug in the DC regulated power supply or the DC adaptor 9V ( 500mA ) with the DC socket .
3. The **Power** indicator will turn on when power is on .
4. Start **GPW100** software .
5. At **RFID PROGRAMMER** window , select **WIEGAND** and find **COMPORT** and select the correct comport **COM1** or **COM2** on which you connect GPW100 unit with the computer.
6. In order to test the unit to see if the unit gets communication with the computer , put one enclosed GiTAG 1 formatted card on the GPW100 unit and then click **Read** to read the card .
   a. If the unit gets the communication with the computer, the unit will turn on the **Read** indicator momentarily and beep once and the screen will display the card number read from the card when click **Read** on the software window to read a card .
   b. If the unit does not get communication with the computer , it will keep no action and the screen will display **BR** when click **Read** on the software window to read a card . You must check if you did select the correct **COMPORT** or if you did make the correct cable connection and then try again .

## E. Status Indicators

1. **Power** LED will turn on when power is on .
2. **Read** LED will turn on momentarily and beep once when read a card successfully .
3. **Write** LED will turn on momentarily and beep once when write a card successfully .

**F. How to Write A Card**

**First of all , make sure that the GPW100 gets communication with the computer under the GPW100 Software and put the GiTAG 1 formatted card on the GPW100 unit . The computer screen is showing the software "RFID PROGRAMMER" window .**

**1. Write a card with WIEGAND format**

1) Select "WIEGAND" format on the "RFID PROGRAMMER" window .
2) Input "System Code" , 4 digits from 0000 to FFFF in Hex.
3) Input "Site Code" , 2 digits from 00 to FF in Hex. You can also input your site code 3 digits from 000 to 255 in decimal (in the next "DEC" ).
4) Input "User Code" , 4 digits from 0000 to FFFF in Hex. You can also input your User code 5 digits from 00000 to 65535 in decimal (in the next "DEC").
5) Put GiTAG 1 card on the unit .
6) Click "Write" to write the number into the card . The GPW100 will turn on the **Write** LED momentarily and beep once when write a card successfully

**Note : You must input all the "System Code" "Site Code" and "User Code" with the specified digits , otherwise it will be added with zeros automatically .**

**2. Write a card with DECIMAL format**

1) Select "DEC" format on "RFID PROGRAMMER" software window .
2) Input the decimal number you want , 13 digits in decimal numbers from 0000000000000 to 1099511627775 .

**Note : You better input all 13 digits in decimal numbers , otherwise it will be added with zeros automatically . For example , you only input 1234 , it will become 0000000001234 automatically .**

3) Put GiTAG 1 card on GPW100 .
4) Click "Write" to write a card . GPW100 will turn on **Write** LED momentarily and beep once when write a card successfully .

**3. Write a card with HEXADECIMAL format**

1) Select "HEX" format on "RFID PROGRAMMER" software window .
2) Input the Hexadecimal number you want , 10 digits in Hex numbers from 0000000000 to FFFFFFFFFF , and A ~ F must be in capital letters .

**Note : You better input all 10 digits in Hex numbers ,otherwise it will be added with zeros automatically . For example , you only input 1ABC , it will become 0000001ABC automatically .**

3) Put GiTAG 1 card on GPW100 .
4) Click "Write" to write a card . GPW100 will turn on **Write** LED momentarily and beep once when write a card successfully .

**4. How to write many cards with sequential numbers**

1) Just like the above Paragraph 1, 2 and 3 to write a card .
2) Before clicking “Write” to write a card , click “Auto Counter” to activate auto-counter function to add sequential numbers with specified STEP automatically .
3) Move the cursor to the left box at “STEP(DEC)” and input the STEP , from 1 to 9999 in decimal .
4) Move the cursor to the right box at “STEP(DEC)” and clear all the number ( use Back Space ) in this box if any . This right box is an auto-counter to display the total number of the cards which have been encoded when write many cards with sequential numbers .
5) Input the first start number on the center screen box .
6) Put the first card on GPW100 .
7) Click “Write” to write the first number into the first card .
8) The number on the screen center box will be automatically promoted with the preset STEP for the next card to be encoded .
9) Take the first card out of the unit .
10) Put the next card on the unit .
11) Click “Write” to write the second card .
12) Repeat the above Step 9) , 10) and 11) to write many cards with sequential numbers .

**5. How to write many cards with the numbers from a preset file**

1) Also just like the above Paragraph 1 , 2 and 3 to write a card .
2) Make sure what format of the numbers on your preset file , HEX , DEC or WIEGAND , and select the corresponding format .

**Note : Before you can write cards from a file , you must create a file with all the numbers you want and save it under Windows/Notepad with the file name : *.txt ( for example , GPW1.txt ) .**

3) Click “Open file” icon on the most right side of the screen center of the “RFID PROGRAMMER” software window .
4) Select and open the file *.txt ( for example , GPW1.txt ) you saved for this purpose .
5) The center screen box will display the first number from the file you have opened , and “Auto Counter” is activated automatically . Also the file name *.txt ( for example , GPW1.txt ) with the data total number will be shown on the screen , such as the example GPW1.txt 1/10 , where “10” means GPW1.txt file contains total 10 data and “1” means the current number displayed on the center screen box is the first data from the GPW1.txt file .

6) Put the first card on GPW100 .
7) Click “Write” to write the first data from the file into the first card .
8) The number displayed on the center screen box will be automatically promoted to the second data from the preset file *.txt .
9) Take the first card out of the unit .
10) Put the next card on the unit .
11) Click “Write” to write the second card .
12) Repeat the above Step 9) , 10) and 11) to write many cards with the data from the preset file .
13) By the end of data file , the center screen box will display all zeros ( 0000000000 ) and the software deactivates “Auto Counter” and you should stop writing a card .

**6. How to copy a card**

1) Put the existing card which you want to copy , on the GPW100 .
2) Select the format HEX , DEC , or WIEGAND .
3) Click “Read” to read the existing card . GPW100 will turn on the **Read** LED momentarily and beep once when read the card successfully . And the number from the existing card will be displayed on the center screen box .
4) Take the existing card out of the unit .
5) Put one new GiTAG1 card on the unit .
6) Click “Write” to write the new card with the number from the existing card .