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# TWR98/99/100

## *Writer User Manual*

*Rev 3.2*

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## AMENDMENT HISTORY

Version	Date	Description
V2.9	May, 2017	<ol style="list-style-type: none"> <li>1. Add New IC writer function :            TM52 series : TM52F5250, TM52F5264C, TM52F5268C,            TM52F5273B, TM52F5274C, TM52F5276B,            TM52F5278C, TM52F6264, TM52F6268.            TM57series : TM57M5528, TM57M5538, TM57M5541,            TM57M5545, TM57M5551, TM57MA17,            TM57MA18, TM57MA21BZ, TM57MA28.            TM87 series : TM87ML25L, TM87ML25H.</li> <li>2. Add Writer Simple Test/Reset Firmware/Read Hradware ID function.</li> <li>3. Upgrade 51 MCU series IC programming capability/stability/programming speed.</li> <li>4. Add Tx37 series IC license mode function.</li> <li>5. Modify some software/firmware bugs</li> <li>6. Writer user manual update</li> </ol>
V3.0	Jun, 2017	<ol style="list-style-type: none"> <li>1. Writer user manual update</li> </ol>
V3.1	July, 2017	<ol style="list-style-type: none"> <li>1. Add New IC writer function :            TM57 series : TM57ME15, TM57M5526C, TM57M5536C</li> <li>2. Modify some software/firmware bugs</li> <li>3. Writer user manual update</li> </ol>
V3.2	Feb, 2018	<ol style="list-style-type: none"> <li>1. Add New IC writer function :            TM57series : TM57MA45, TM57MA46.</li> <li>2. TWR98 and TWR99 is combined to TWR100.</li> <li>3. Add IC Search function.</li> <li>4. Add the mouse can drag directly Download function.</li> <li>5. Software Help function add (Writer Simple Test/Reset Firmware/Read hradware ID function).</li> <li>6. Add Tx37 series IC Whole chip Erase function.</li> <li>7. Add Tx28 series rolling code function.</li> <li>8. Integration of the IC program information.</li> <li>9. Modify some software/firmware bugs.</li> <li>10. Writer user manual update.</li> </ol>

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## PRODUCT NAME

TWR98/99/100

## TITLE

USB Writer

## FEATURES

1. USB Interface.
2. The device can be attached to a computer and controlled by software for programming or it can also be operated independently as a stand-alone writer.
3. Both software and firmware can be updated.

### 1. Supported IC Series

#### 1.1 Supported IC Type

1. 4-bit TM87 series: TM8793, TM8795, TM87P04, TM87P08, TM87P18M, TM87ML25L([Note1](#)), TM87ML25H([Note1](#))
2. 4-bit TM89 series: TM89P51M, TM89P52M, TM89P55M, TM89P57M, TM89P59M
3. 8-bit TM56 series: TM56MH40
1. 8-bit TM57 series: TM57FA40, TM57FA40A, TM57FLA80, TM57FLA80A, TM57MA16, TM57MA1660, TM57MA1668, TM57MA1672, TM57MA20, TM57MA51A, TM57MA21B, TM57MA25, TM57ME20, TM57ME16, TM57ME16AS, TM57ML40, TM57MR10, TM57MR20, TM57PA10, TM57PA10A, TM57PA11, TM57PA11B, TM57PA15, TM57PA16, TM57PA16AS, TM57PA16B, TM57PA20, TM57PA20A, TM57PA20AS, TM57PA20B, TM57PA20E, TM57PA21, TM57PA21B, TM57PA25, TM57PA25B, TM57PA28, TM57PA40, TM57PA40E, TM57PA45, TM57PA45C, TM57PE10, TM57PE11, TM57PE11A, TM57PE11BS, TM57PE11C, TM57PE11CS, TM57PE12, TM57PE12D, TM57PE12AS, TM57PE15AS, TM57PE15A, TM57PE15C, TM57PE15CS, M57PE20A, TM57PE20B, TM57PE40, TM57PT16, TM57PT16AS, TM57PT16B, TM57PT20A, TM57PT20B, TM57PT45, TM57PT45C, TM57M5528, TM57M5538, TM57M5541, TM57M5545, TM57M5551, TM57MA17, TM57MA18, TM57MA21BZ, TM57MA28, TM57ME15, TM57M5526C, TM57M5536C, TM57MA45, TM57MA46

4. 51 MCU series: TM52F2230, TM52F2234, TM52F2260, TM52F2261, TM52F2264, TM52F2280, TM52F2280B, TM52F2284, TM52F2284B, TM52M5254, TM52M5258, TM52F5264B, TM52F5268B, TM52F5274B, TM52F5278B, TM52F5284, TM52F5284C, TM52F5288, TM52F5288C, TM52F5250, TM52F5264C, TM52F5268C, TM52F5273B, TM52F5274C, TM52F5276B, TM52F5278C, TM52F5276, TM52F5273, TM52F2230B, TM52F2234B, TM52F2268
5. USB series: TMU3130, TMU3131, TMU3132, TMU3132LV, TMU32FA80

Note1 : Only TWR100 hardware support

### **1.2 Program Filename Extension:**

1. .epm file: TM87, TM89 series program filename
2. .tenx file: 51 MCU series program filename
3. .hex file: TM56, TM57 series program filename

## 2. Hardware and PC Setup

### 2.1 System Requirements:

- a. Applicable in Windows 98/ME/2000/XP, Windows 7, Windows 8, Windows 8.1 system.
- b. Need more than 100MB of hard disk space.

### 2.2 PC Setup:

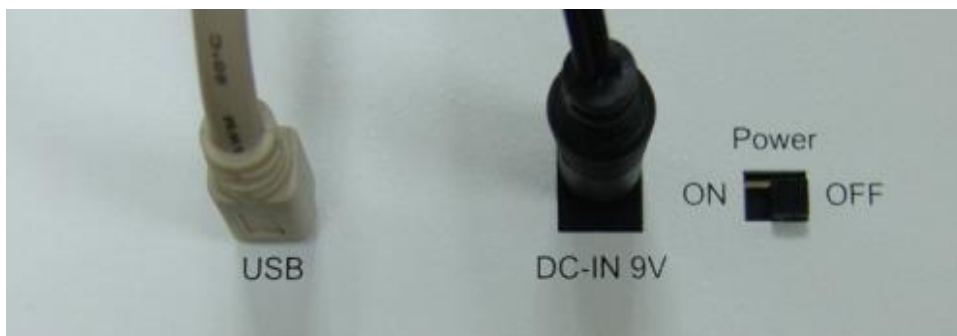
- a. The user to enter tenx company website <http://www.tenx.com.tw>.
- b. Installation Setup\_Writer\_Version200\_Build 001.exe

### 2.3 Hardware connection:

Step 1. Connect the DC 9V Adapter and USB Cable (mini B Type).



Step 2. Turn the Power on.



### 3. Hardware Function Illustration

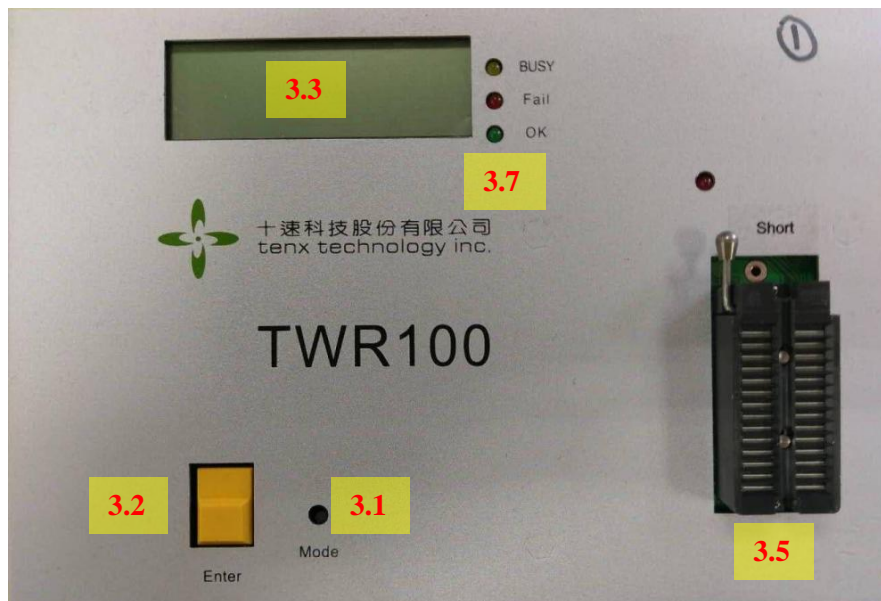
a. TWR98 hardware (The following is a functional description)



b. TWR99 hardware (The following is a functional description)



- c. TWR100 hardware (The following is a functional description)





### 3.1 Mode function Key: Select the program mode function:

a. Mode1: CHIP NAME



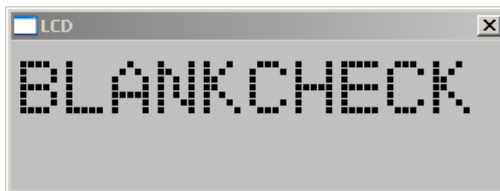
b. Mode2: AUTO (Blank check + Program+Verify) function



c. Mode3: BLANKCHECK function

(OTP series IC: Blankcheck)

(FLASH/MTP series IC: Erase+Blank check)



d. Mode4: PROGRAM (Program+Verify) function



e. Mode5: VERIFY function



f. Mode6: CHECKSUM\_E =>Display the EEPROM buffer Checksum

This function is used to check the correctness of the PC download data, which is to be programmed to the EEPROM.

It is deemed correct if the Checksum value from EEPROM equals to the Checksum value from software.



g. Mode7: CHECKSUM\_O =>Display the OTP Chip Checksum

This function is used to read back the data from the OTP Chip to do the Checksum calculation.

It will be deemed correct only if the Checksum value from OTP chip equals to the Checksum value from EEPROM.



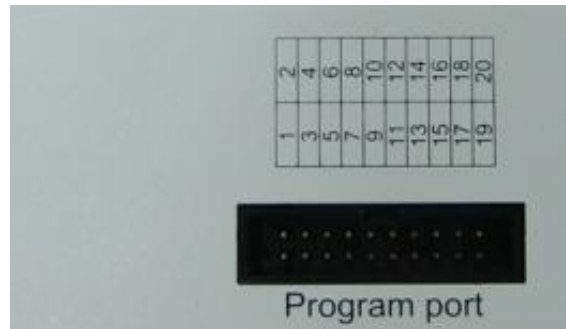
h. Mode8: SW : =>Display Software version / FW : =>Display Firmware version



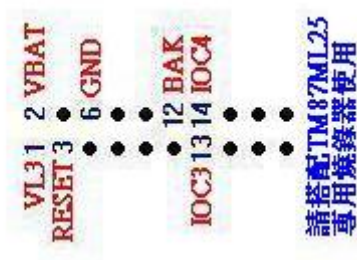
**3.2 Enter function key: Execute the mode function**

**3.3 LCD: Display the Mode function and programming result**

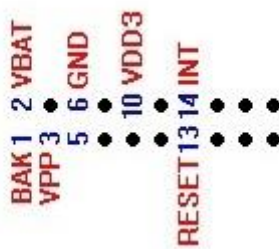
**3.4 TWR98 Writer IC programming-pins**



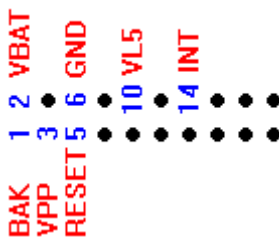
**3.4.1: TM87ML25L, TM87ML25H**



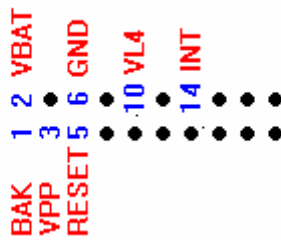
**3.4.2: TM87P18M**



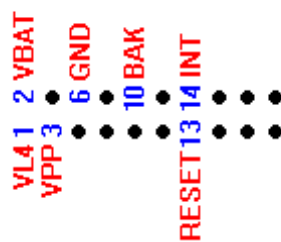
**3.4.3: TM89P59, TM89P59M, TM89P55M, TM89P52M, TM89P57M**



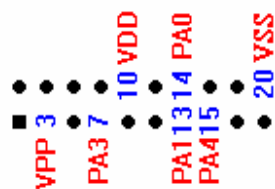
3.4.4: TM89P51M



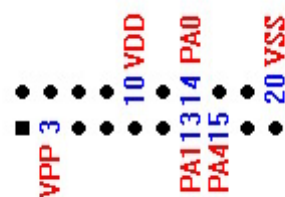
3.4.5: TM8793



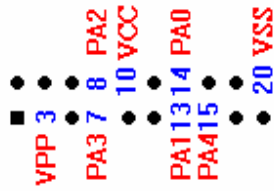
3.4.6: TM57PA10, TM57PA40, TM57PE11, TM57PA20, TM57PA21, TM57PE10, TM57PE11A, TM57PA10A, TM57PE12, TM57PE11B, TM57PE15A, TM57PE40, TM57PA21, TM57PA25, TM57PA20A, TM57P11, TM57P11B, TM57P11C, TM57PE11C, TM57PE15C, TM57P11CU, TM57PE12D, TM57PA11, TM57PE20A, TM57PT20A, TM57PA45, TM57PA15, TM57PA21B, TM57PA25B, TM57PA16, TM57PT16, TM57PT45, TM57MA25, TM57PA20B, TM57PA28, TM57PE20B, TM57PT20B, TM57PA16B, TM57PT16B, TM57PA45C, TM57PT45C



3.4.7: TM57PE11B, TM57PE11C, TM57PE15AS, TM57PE15CS, TM57PE15AS, TM57PE12AS, TM57PA20AS

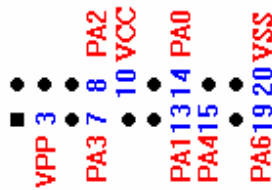


3.4.8: TM57FA40, TM57FA40A

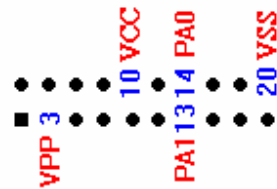


3.4.9: : TM57FLA80, TM57ME20, TM57MR10, TM57MR20, TM57MR10, TM57MA20, TM57MA21B, TM57MA16, TM57MA1660, TM57MA1668, TM57MA1672, TM57M5528, TM57M5538, TM57M5541, TM57M5545, TM57M5551, TM57MA17, TM57MA18, TM57MA21BZ, TM57MA28, TM57M5526C, TM57M5536C, TM57ME15, TM57ML40, TM57MA45, TM57MA46

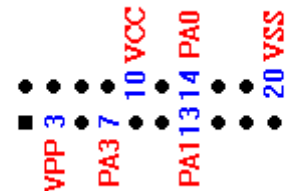
(1) non ISP mode



(2) EXHV ISP mode

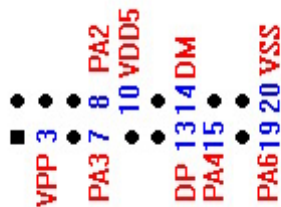


3.4.10: TM57ME16, TM57ME16AS

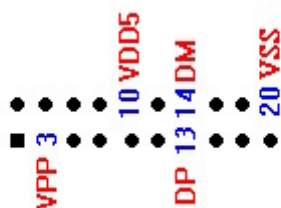


3.4.11: TMU3130, TMU3132, TMU3132LV, TMU3115, TMU32FA80

(1) non ISP mode



(2) EXHV ISP mode

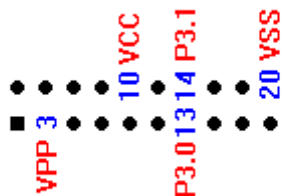


3.4.12: TM52M5254, TM52M5258, TM52F5274B, TM52F5278B, TM52F5264B, TM52F5268B, TM52F5250, TM52F5264C, TM52F5268C, TM52F5273B, TM52F5274C, TM52F5276B, TM52F5278C, TM52F5276, TM52F5273

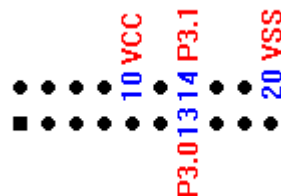
(1) non ISP mode



(2) EXHV ISP mode



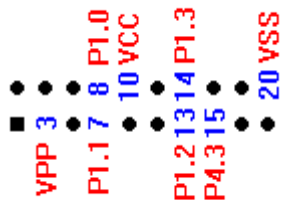
(3) ISP mode



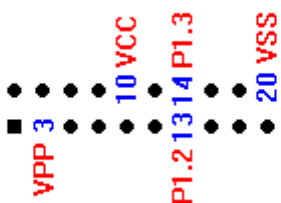
Note : TM52M5254, TM52M5258 no support ISP mode

3.4.13: TM52F5284, TM52F5288, TM52F5284C, TM52F5288C

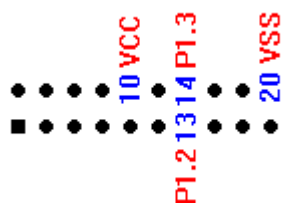
(1) non ISP mode



(2) EXHV ISP mode

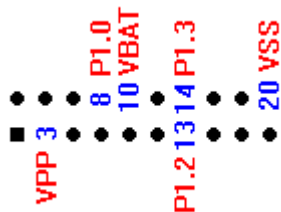


(3) ISP mode



3.4.14: TM52F2260, TM52F2261, TM52F2264

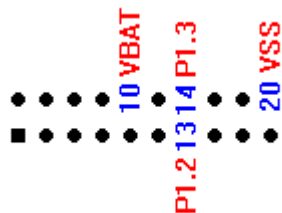
(1) non ISP mode



(2) EXHV ISP mode

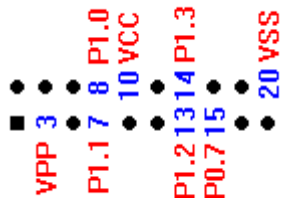


(3) ISP mode

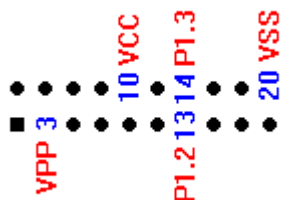


3.4.15: TM52F2280, TM52F2284, TM52F2230, TM52F2234, TM52F2230B, TM52F2234B, TM52F2280B, TM52F2284B, TM52F2268

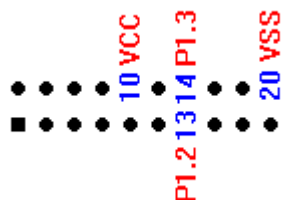
(1) non ISP mode



(2) EXHV ISP mode



(3) ISP mode





### 3.5 Writer Socket

### 3.6 EX\_Control: External Control Signal



#### 3.5.1: Signal Name and location

9: N.C.	7: Result2	5: GND	3: Result0	1: VDD
10: N.C.	8: N.C.	6: GND	4: Result1	2: Start

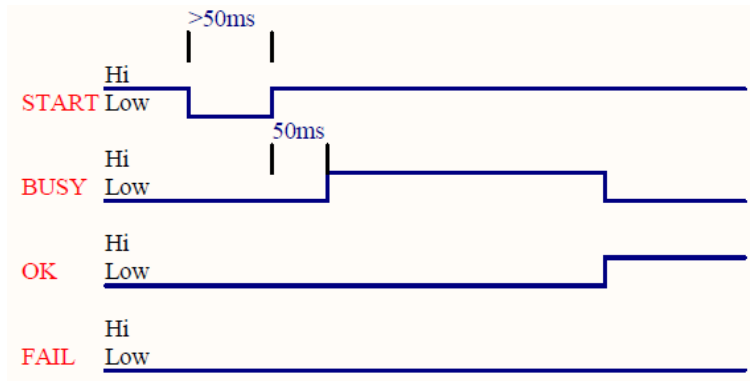
#### 3.5.2: Signal Function

1. VDD =>Output Power, +3V
2. Start signal =>Input Start signal, Low Pulse valid (start signal valid wide>50 ms)
3. Result0, Result1 and Result2 pins =>Output Programming result, the status is as below:

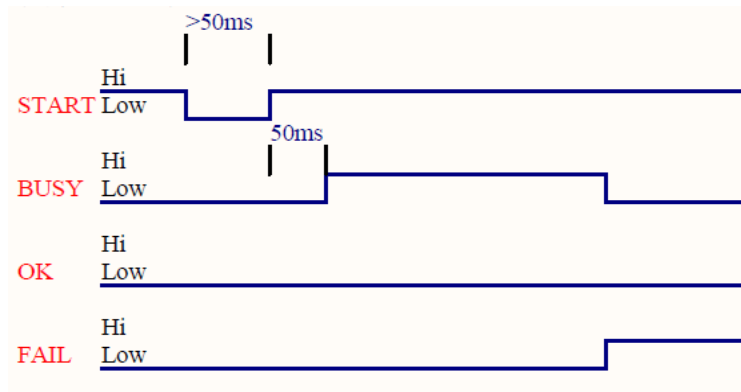
Result2	Result1	Result0	Status
1	0	0	BUSY
0	1	0	FAIL
0	0	1	OK

### 3.7 Semi-automatic Machine Control Signals

#### 3.7.1: Program ok signal



#### 3.7.2: Program Fail signal



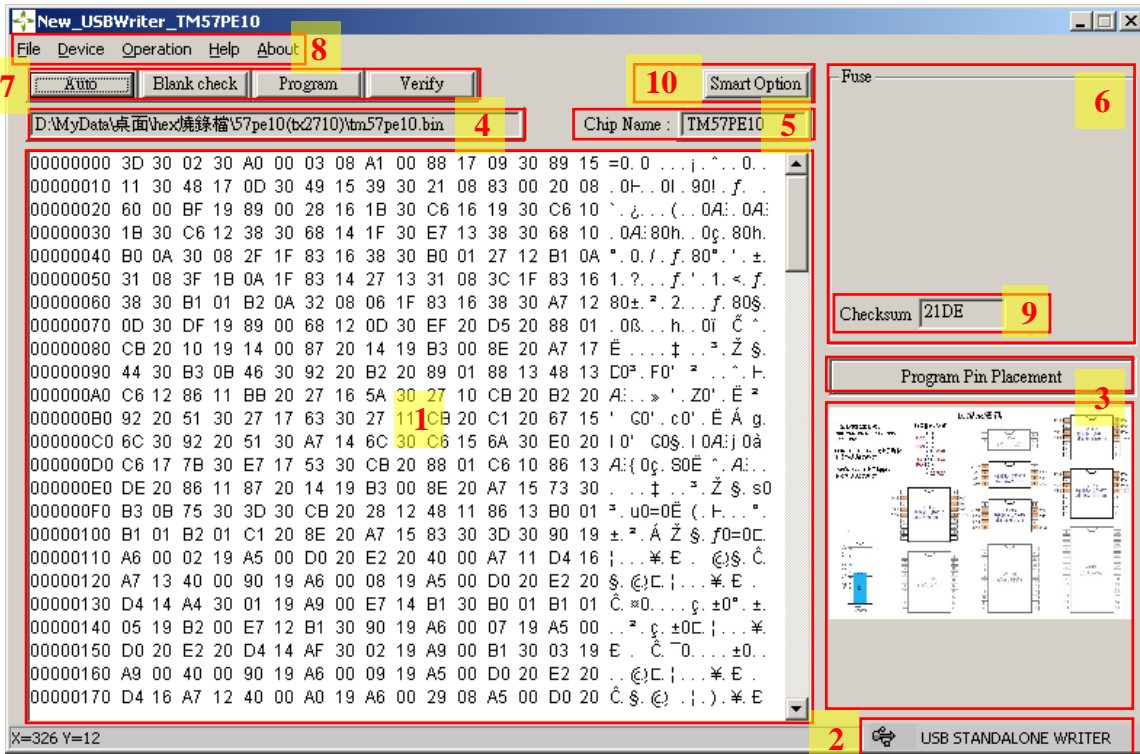
### 3.8 LED Description:

3.8.1: Yellow LED: the LED blinks when downloading writer file data or during writing process, means it is in busy state.

3.8.2: Red LED: red light ON means writing process fails. When IC is taken away or writing mode is switched to another mode, LED will be switched off.

3.8.3: Green LED: green light ON means the writing process succeeded. When IC is taken away or writing mode is switched to another mode, LED will be switched off.

### 4. Software Function Guide

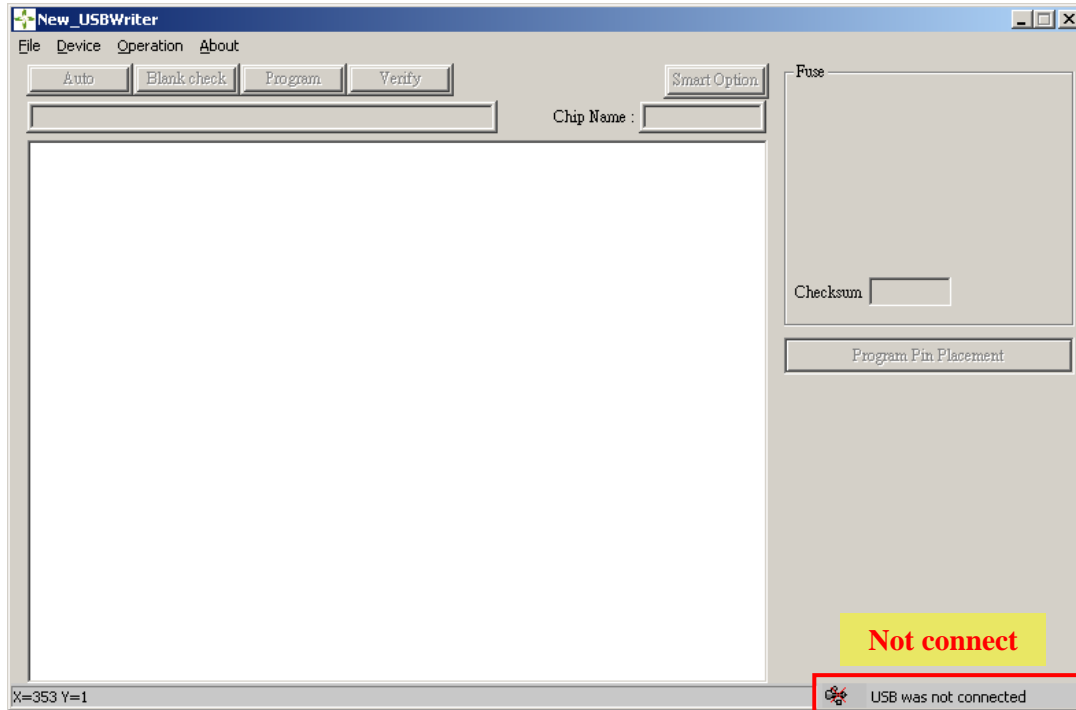


1. Display the programming data
2. Display whether the Writer Device is connected to PC or not
3. Display OTP IC programming-pins placement (Corresponding to the Hardware programming port)
4. Display the file path of program
5. Display the name of the programming CHIP
6. Display IC program mode
7. Program Toolbar:
  - 7.1 Execute programming instruction (Auto, Blank, Check, Program, Verify etc... functions, which, just like using the hardware, can be executed directly from the software when the USB Writer Device is connected to the PC)
  - 7.2 Blank check function
  - 7.3 Program function (program+verify)
  - 7.4 Verify function
8. Menu bar:
  - 8.1 File =>Load the programming file
  - 8.2 Device =>Select programming CHIP
  - 8.3 Operation =>Update firmware, Writer option set, Read IC information
  - 8.4 Help =>Writer Firmware Reset, Hareware Simple Test, Read Hardware ID
  - 8.5 About =>Display software version

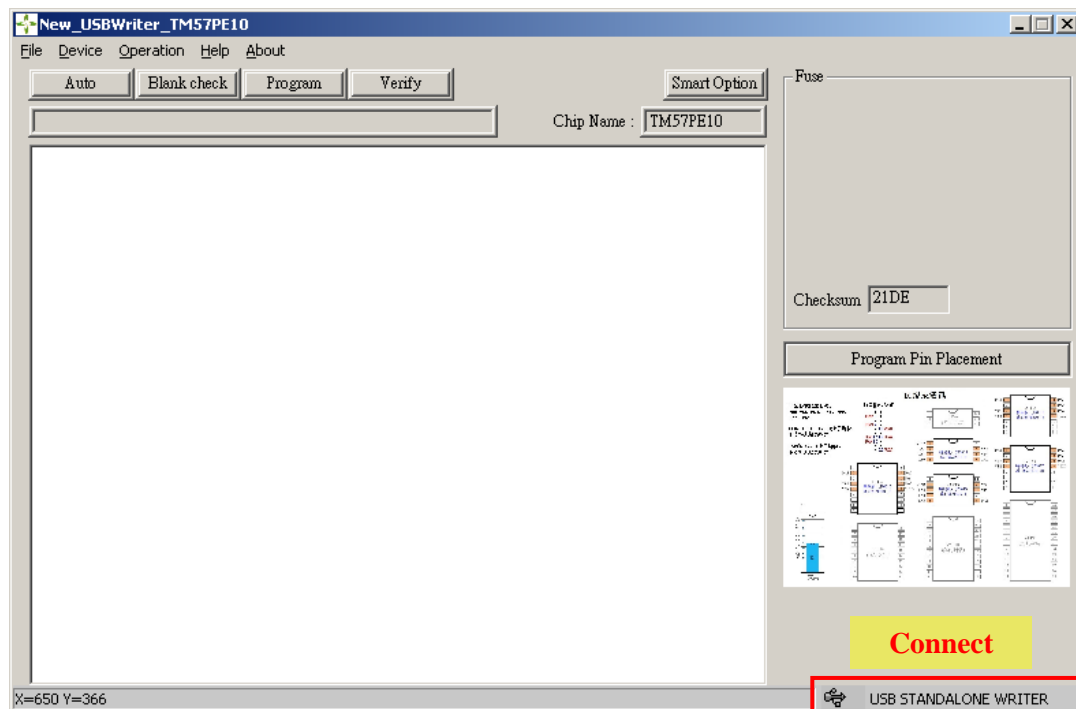
- 9. Checksum: Display the Checksum value of the programming file
- 10. Smart Option: Display System Configuration definition

## 5. Programming Software Operation

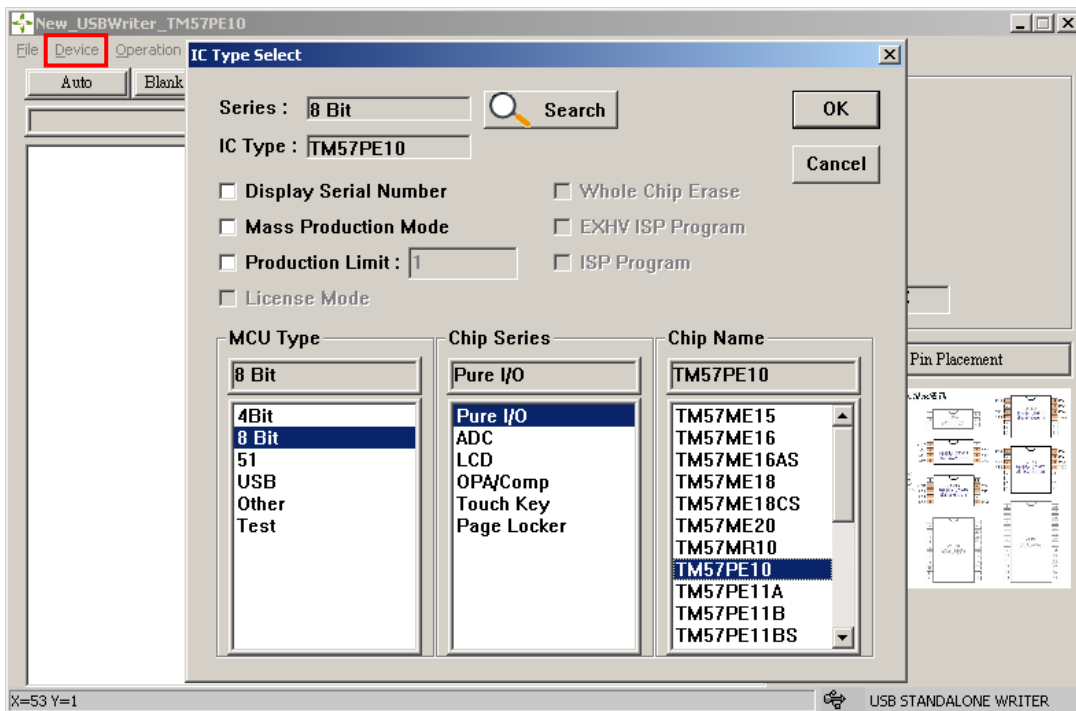
Step 1: Start the writer software tool.



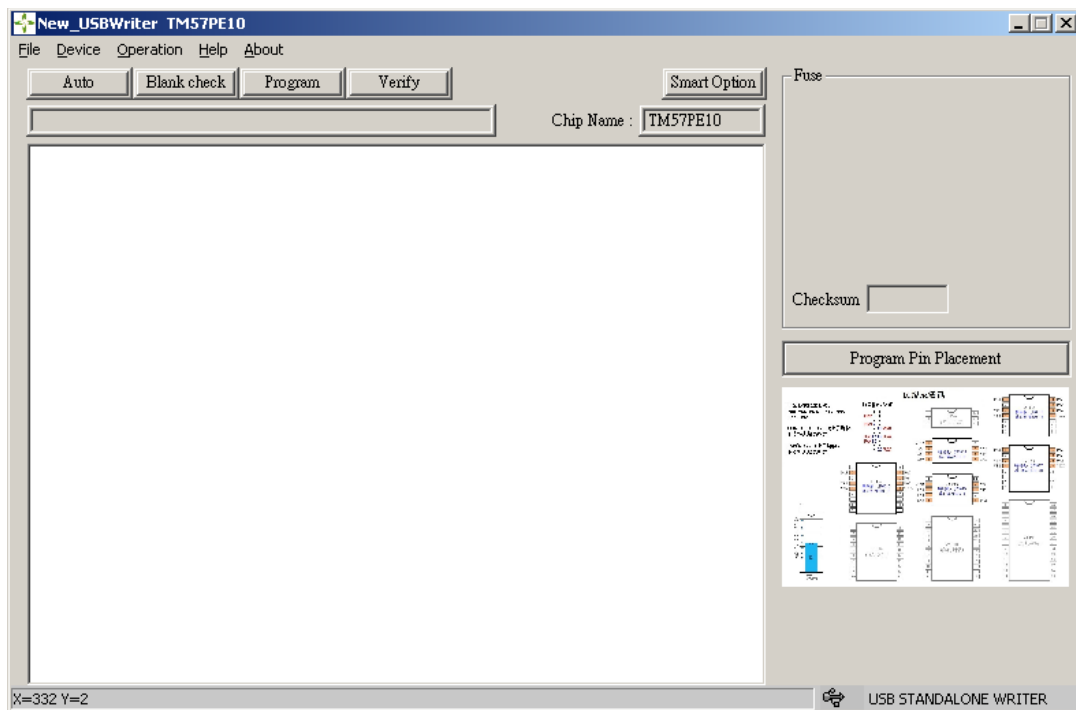
Step 2: The writer is open; confirm that the writer Device is connected to PC



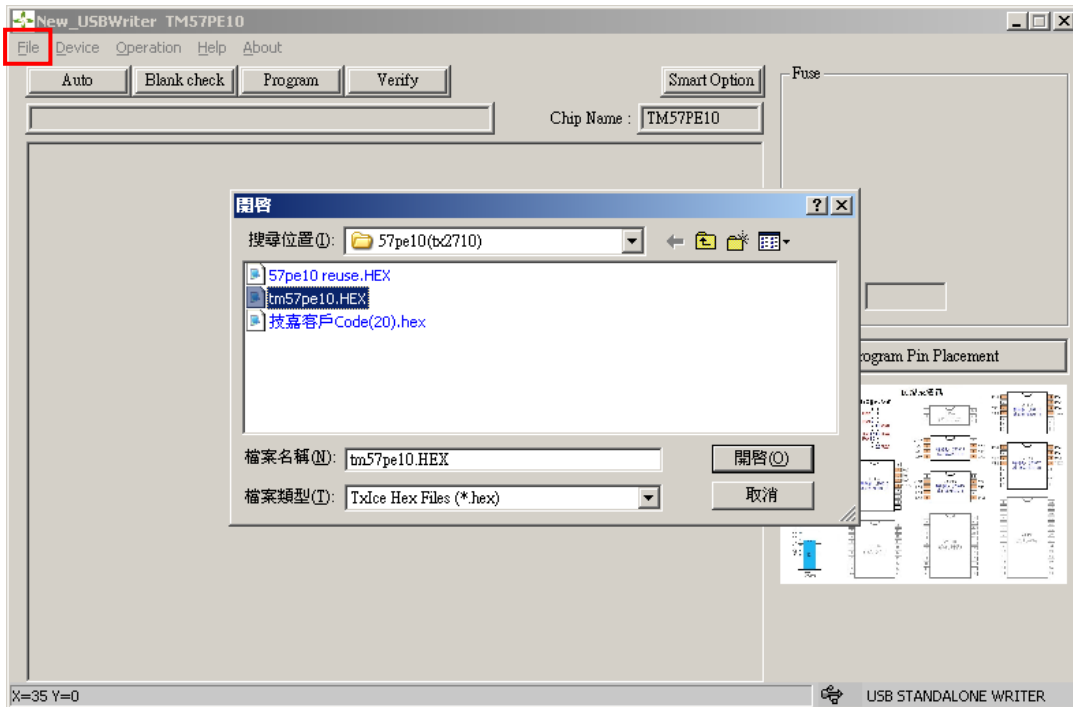
Step 3: Execute Device (Select CHIP) *Note: search function can be used to search*



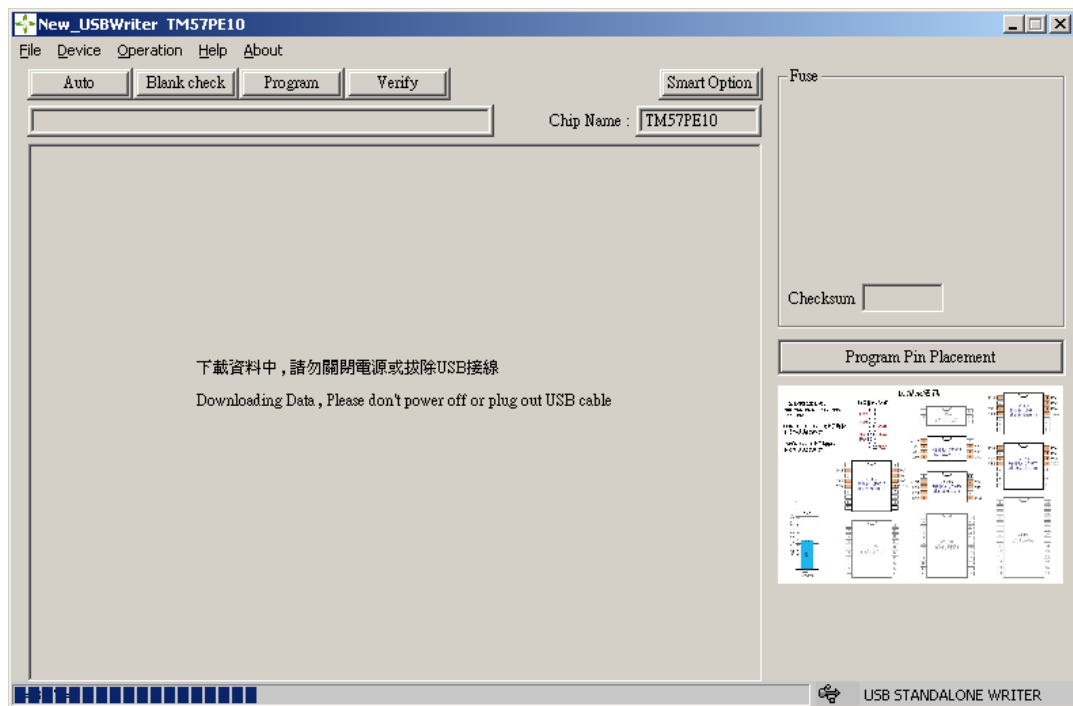
Step 4: Select CHIP ok.



Step 5: Execute File =>Load File.



Step 6: Load the file



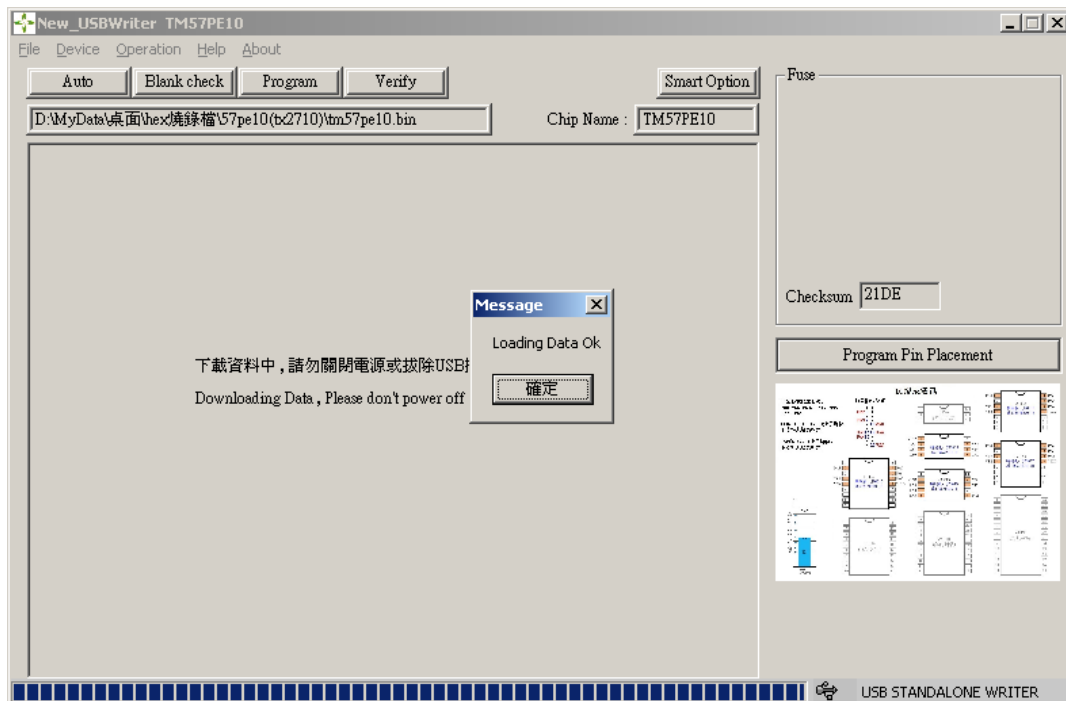
Step 7: When loading the file, the hardware of the LCD will display as follows

**(Please don't power off or plug out USB cable)**



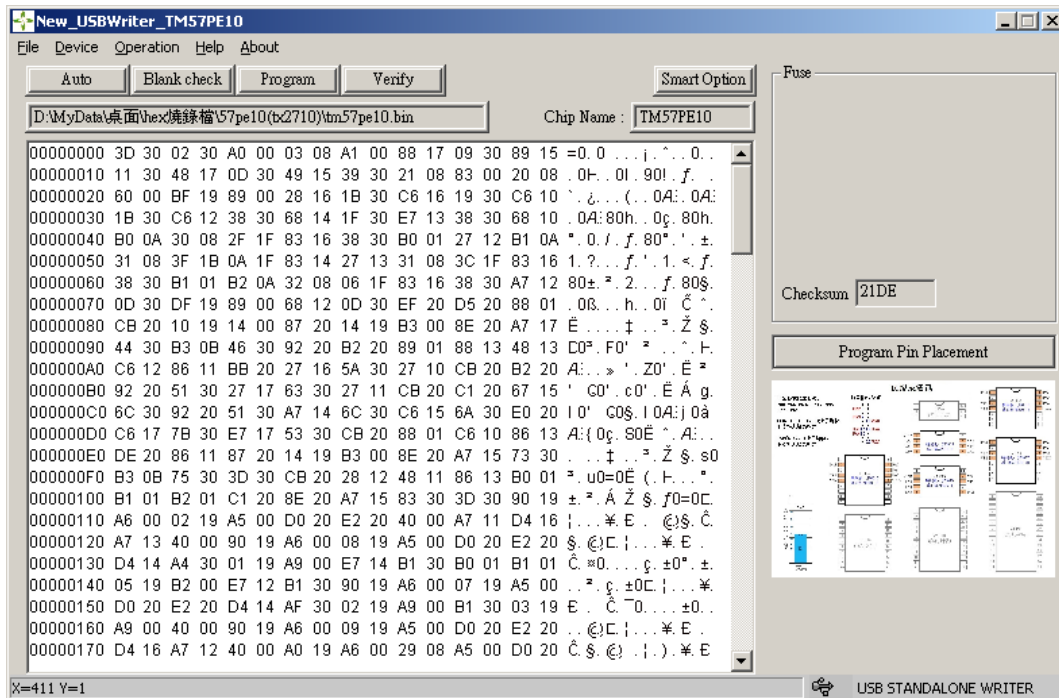
Step 8: Click on OK, download is completed

**(If you don't click the "OK" button, plug out USB cable will occur Writer stand lone operation error, please re-power the Writer can be restored to normal)**





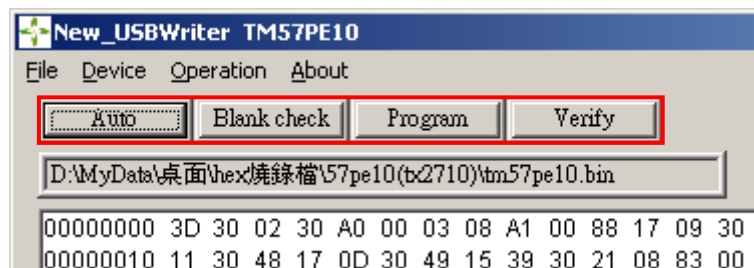
Step 9: Start execution (already loading into hardware)



Step 10: After successfully loading the file, the LCD panel on the hardware will display the CHIP NAME.



Step 11: Select the function on the toolbar (Auto, Blank, Check, Program, Verify).

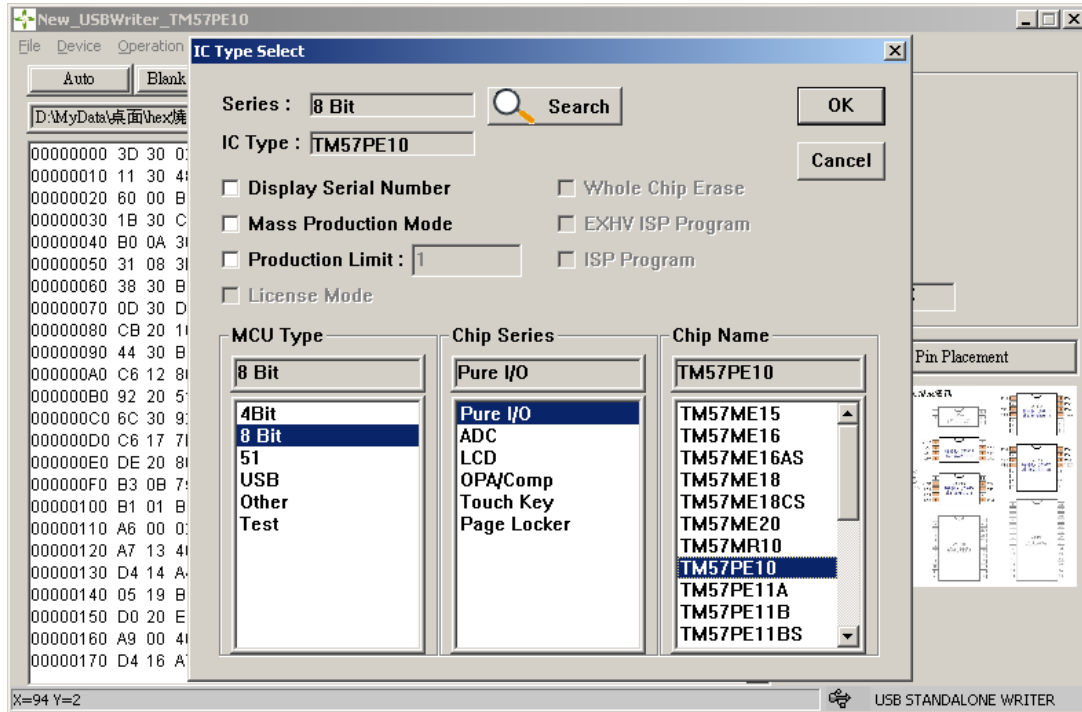


## 6. LCD Error Messages

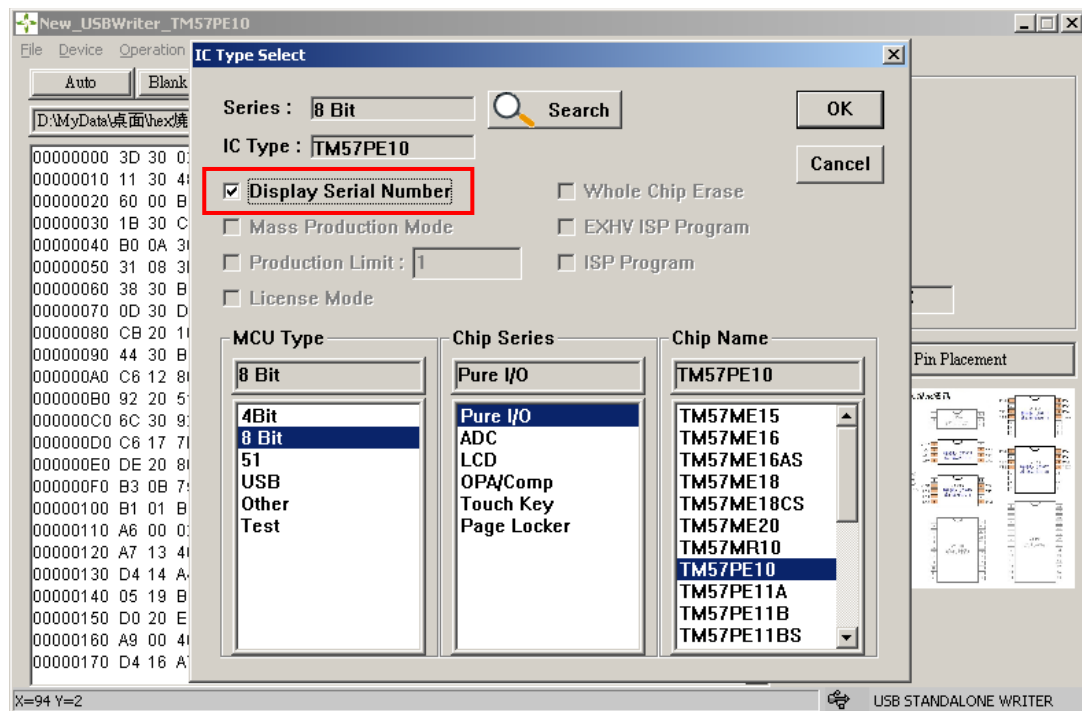
- 6.1: PROTECT =>IC data are protected and cannot be read.
- 6.2: BUSY FAIL =>Check if the IC Programming signals are connected to Writer.
- 6.3: B FAIL =>Blank Test fails
- 6.4: P FAIL =>Programming data fails
- 6.5: V FAIL =>Comparing data fails
- 6.6: I FAIL =>4-bit series Enter Programming Mode fails, or 8-bit series ID Programming fails
- 6.7: D FAIL =>Check ID fail
- 6.8: F FAIL =>Programming FUSE or SYSTEM CONFIG fails
- 6.9: NO CHIP =>IC or connection is not connected properly. Please confirm whether IC is put properly or the line is connected perfectly.
- 6.10: C/E FAIL =>Writer Checksum data comparing error
- 6.11: ENTRANCEF =>Check IC entering write mode fail
- 6.12: Busy Fail => Busy Fail => Writer wait IC busy time out
- 6.13: C Fail => Checksum Data verify fail

## 7. Set-up and Operations for Programming Serial Number

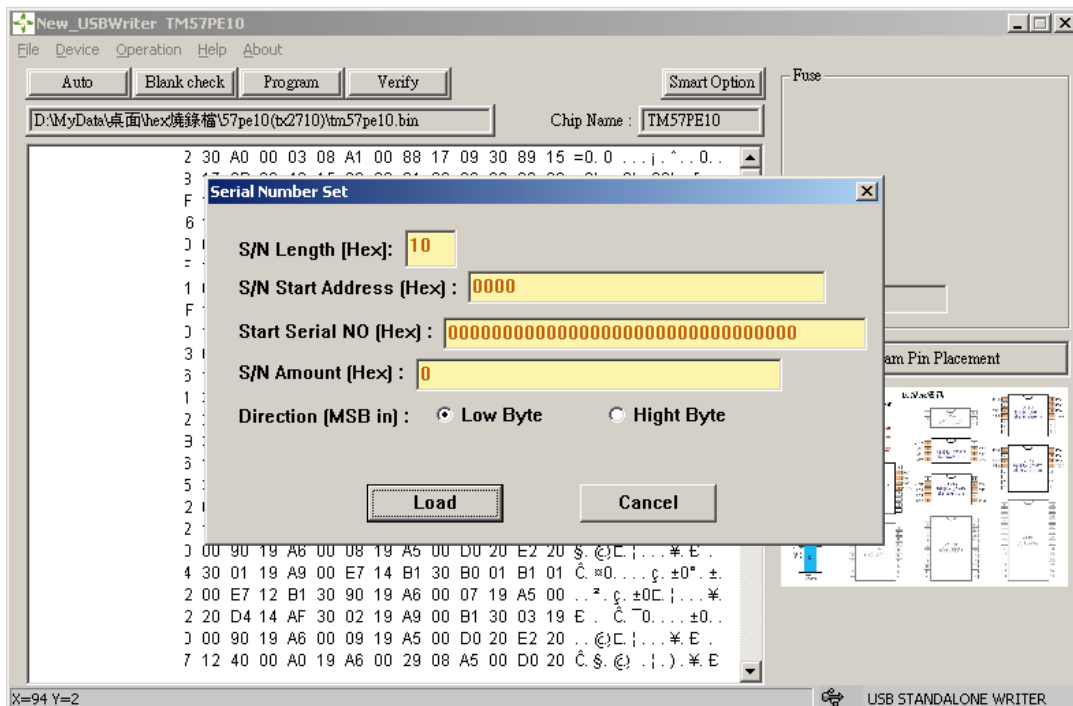
Step 1: Select “Device” :



Step 2: After selecting IC, please enable the “Display Serial Number”, and then click on “OK”.



Step 3: Enter “Serial Number Set” =>Set up the Serial Number parameters.



Step 4: Set up the S/N Length [Hex] (range: 0x01~0x10)

Step 5: Set up the S/N Start Address [Hex].

Step 6: Set up the Start Serial NO [Hex].

Step 7: Set up the S/N Amount [Hex] (the amount of OTP IC programming).

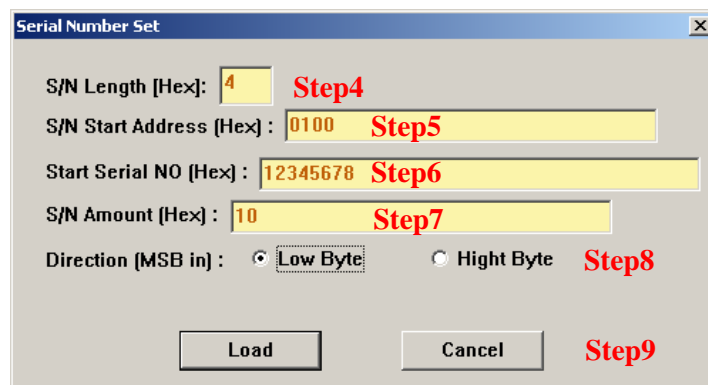
Step 8: Set up the S/N Direction [MSB In]

For Example: Serial Number value=12345678

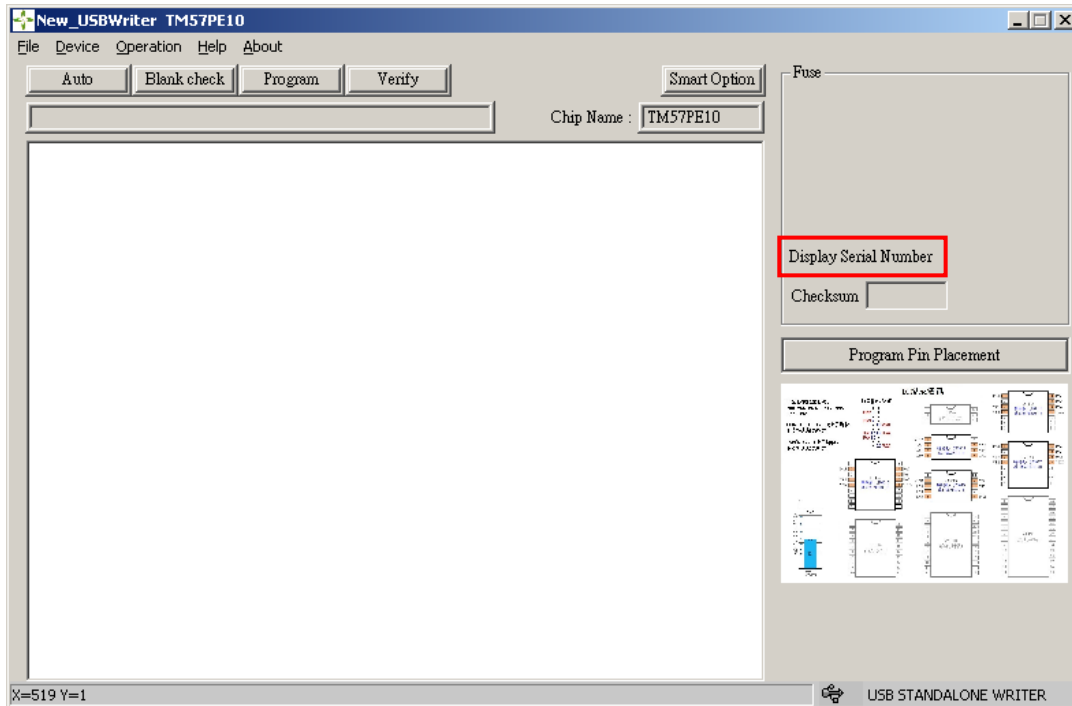
Select “Low Byte” to program the IC location: 12 34 56 78

Select “High Byte” to program the IC location: 78 56 34 12

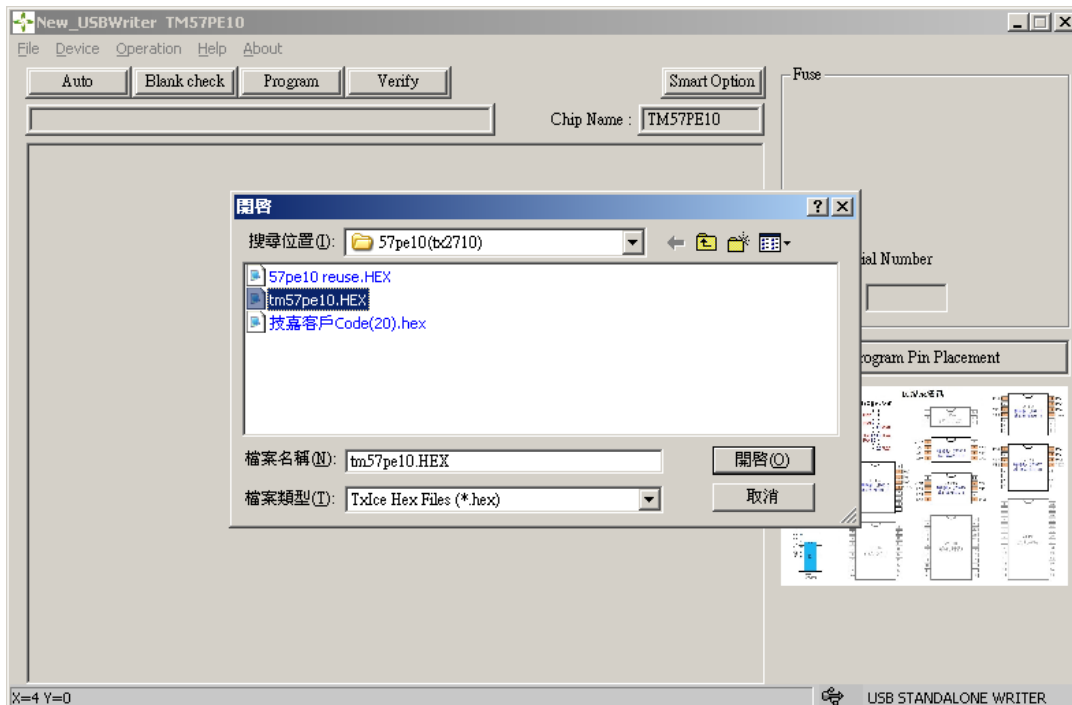
Step 9: After finishing set up, click the Load button (load the serial configuration data into Writer, please wait for it to complete)



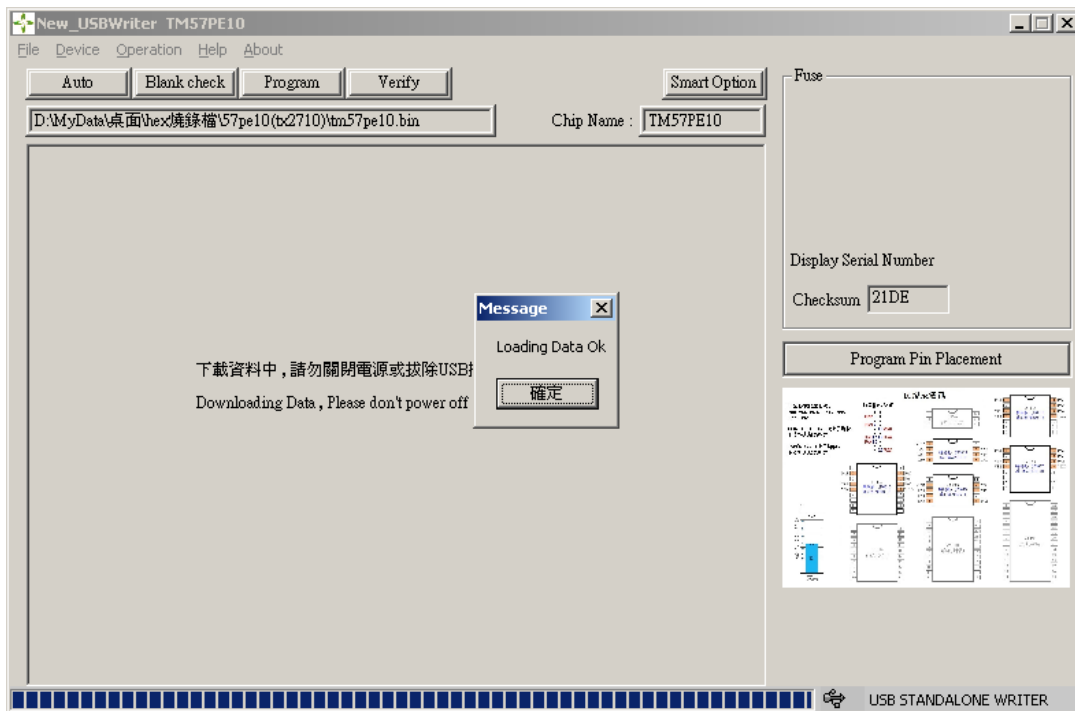
Step 10: After setting the “Serial Number Set” setup, click on the “Load” button.



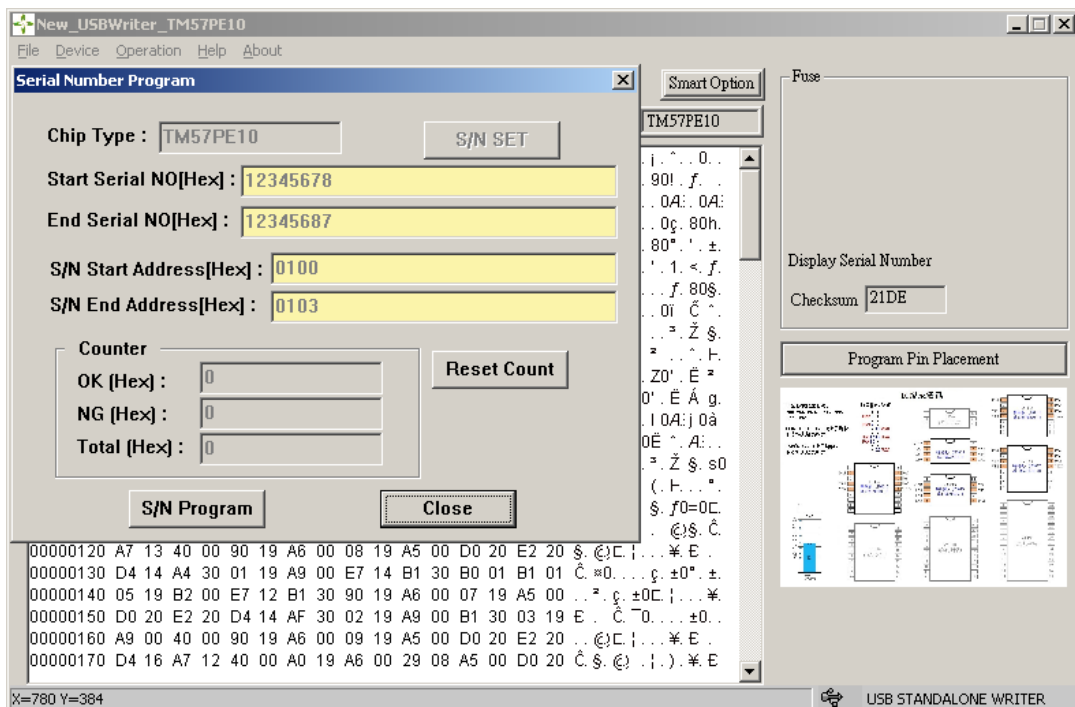
Step 11: Execute File ->Load File



Step 12: Wait until the files are downloaded OK, click on “ confirm ” button to enter the Serial Number Program mode



Step 13: Click on “ S/N Program ” button to start programming



**Note:** After the completion of programming, if programming code + serial number is desired, go back to Step 1 and start all over.

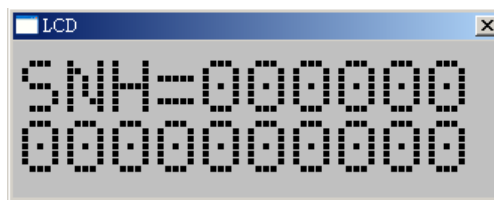
After the above steps are completed, the user can choose two modes of operation: to connect to PC and let PC control the programming process or go offline and programmed by using writer independently.

1. Operating instruction in using PC to control the programming process:

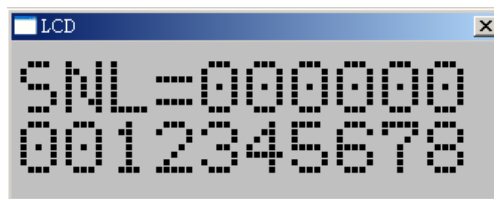
- a. Click on S/N Program button to start the programming process.
- b. If programming is successful, the count number for “ Start Serial NO, OK, Total ” will be incremented by 1 automatically.
- c. If programming is fail, the count number for “ NG, Total ” will be incremented by 1 automatically.
- d. When the S/N Program button is disabled, it means that the programming process for the serial number is completed. Reset and reload by entering the “ S/N SET ” window is required.
- e. “ Reset Count ” button will reset the “ OK, NG, Total ” column value to zero.
- f. **Attention:** Do not press the “ Enter ” key on the writer hardware during programming if PC control mode is used.

2. Operating instruction in using writer for programming independently:

- a. The function for the Mode button is to choose whether to display the value for “ Serial Number, OK, NG, TOTAL ”.
  - a-1: SNH =>Display Serial Number (9~16 bytes) , but when S/N Length is less than 9, this mode will not display the number.



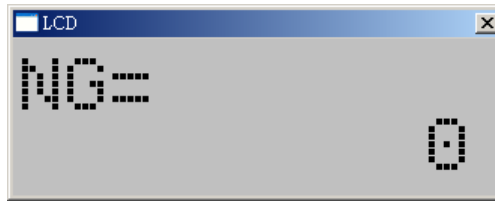
- a-2: SNL =>Display Serial Number (1~8 bytes).



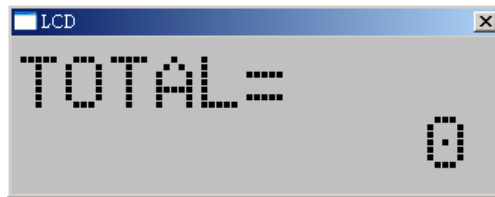
- a-3: OK =>Display the number of successful programming.



a-4: NG =>Display the number of fail programming.



a-5: TOTAL =>Display the total number of programming.

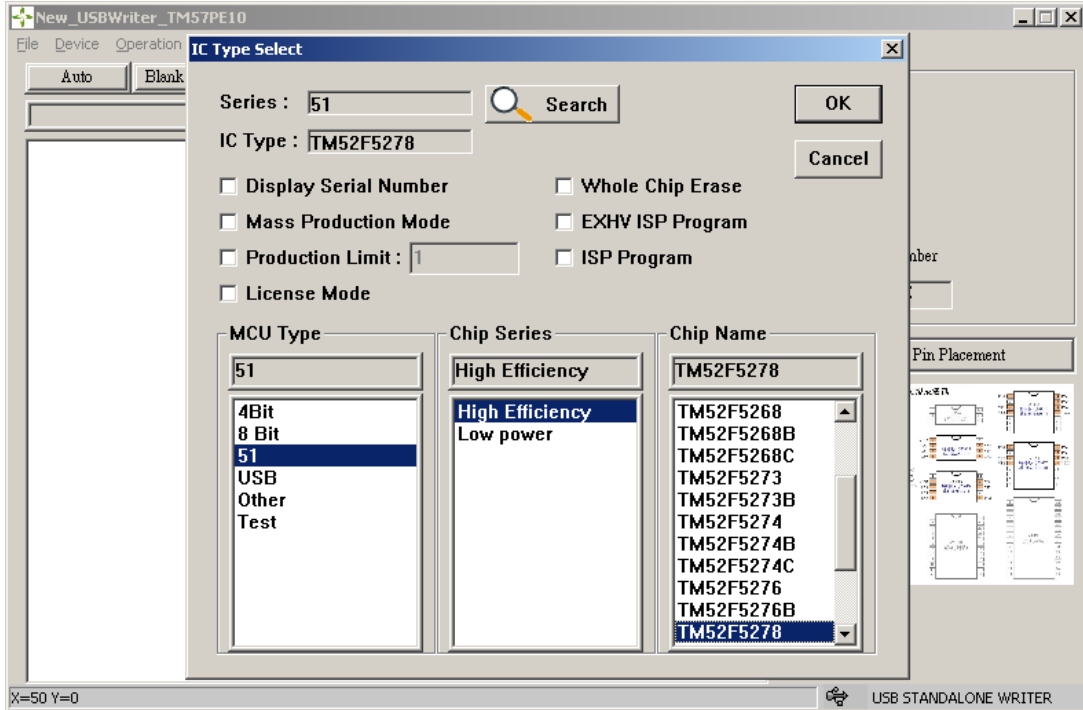


- b. The function for the “ Enter ” key is to execute programming.
- c. If programming is successful, the value of “ Serial Number, OK, TOTAL ” will be incremented by 1 automatically.
- d. If programming is fail, the value of “ NG, TOTA L” will be incremented by 1 automatically.
- e. When the “ Enter ” key is disabled, it means that the programming for the serial number is completed and the must be reloaded.
- f. **Attention:** if the power of writer is turned off and on again, the serial number will be reset to the initial value.

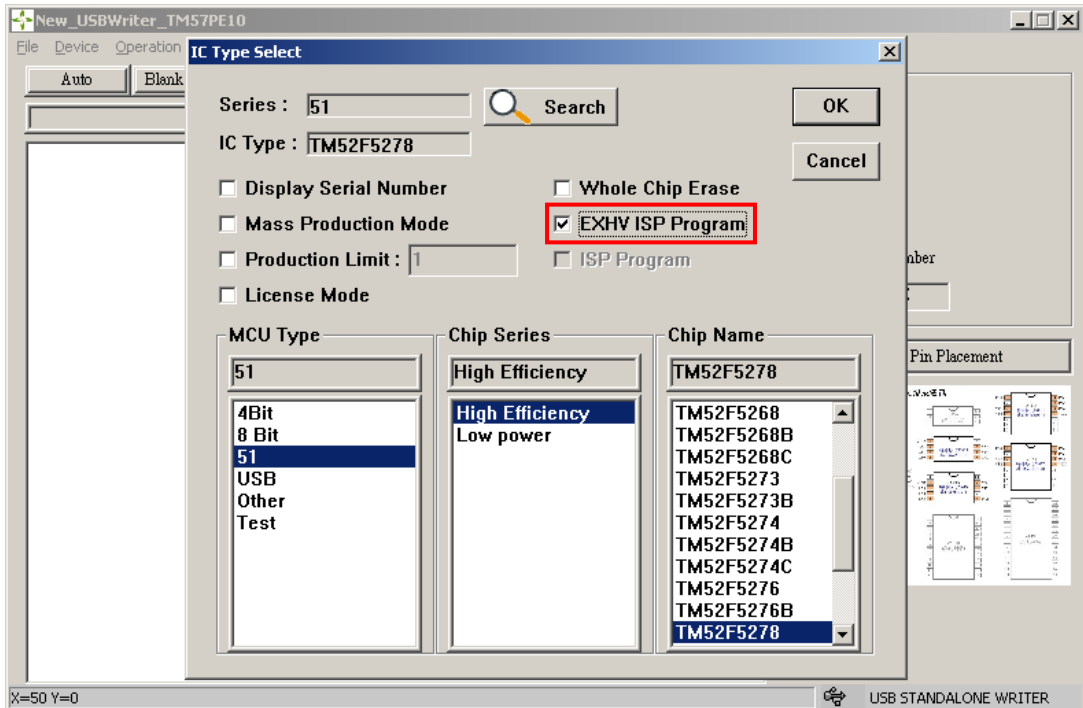


## 8. Programming Operation in EXHV ISP Mode

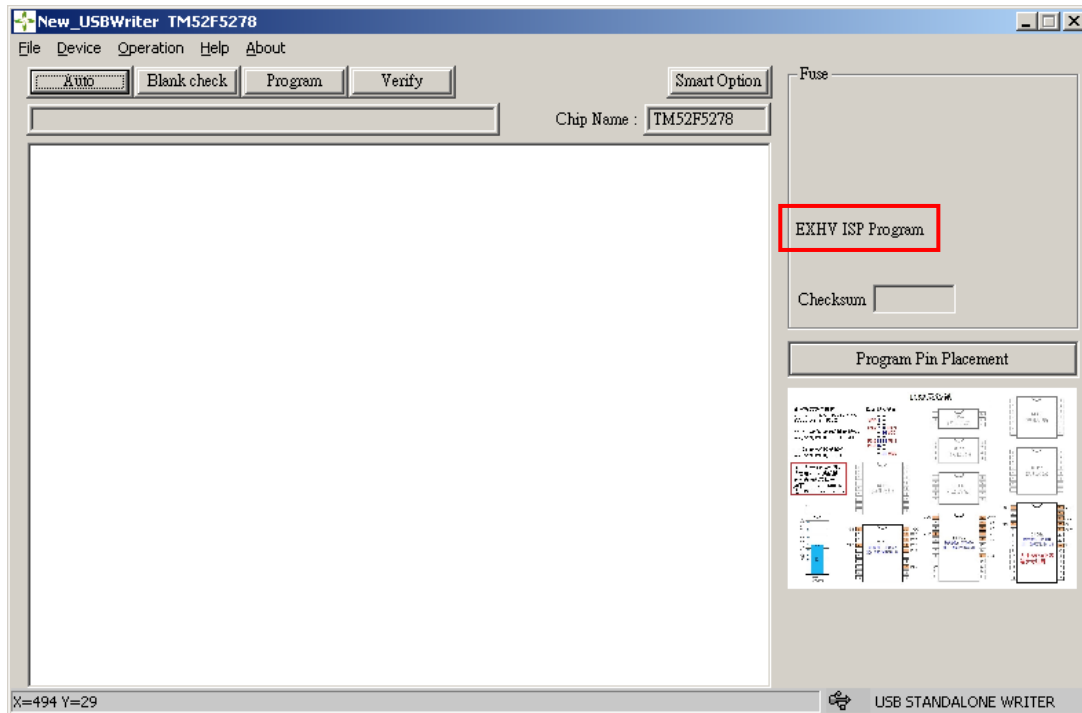
Step 1: Select Device



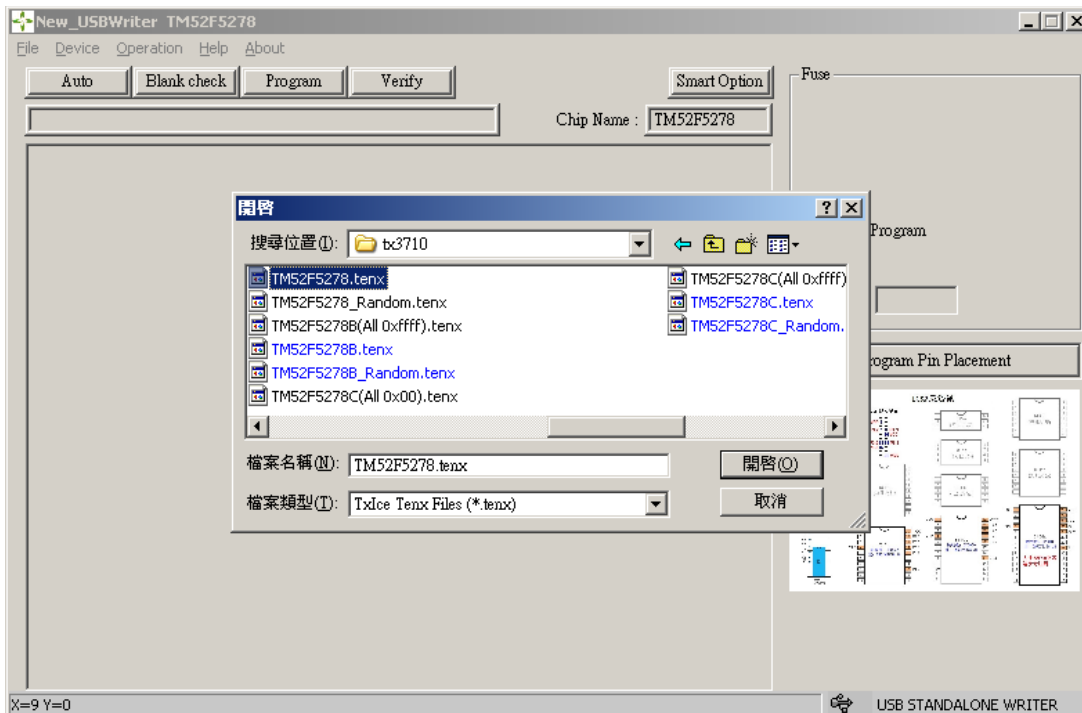
Step 2: Select IC and enable “ EXHV ISP Program ”, and then click on “ OK ”



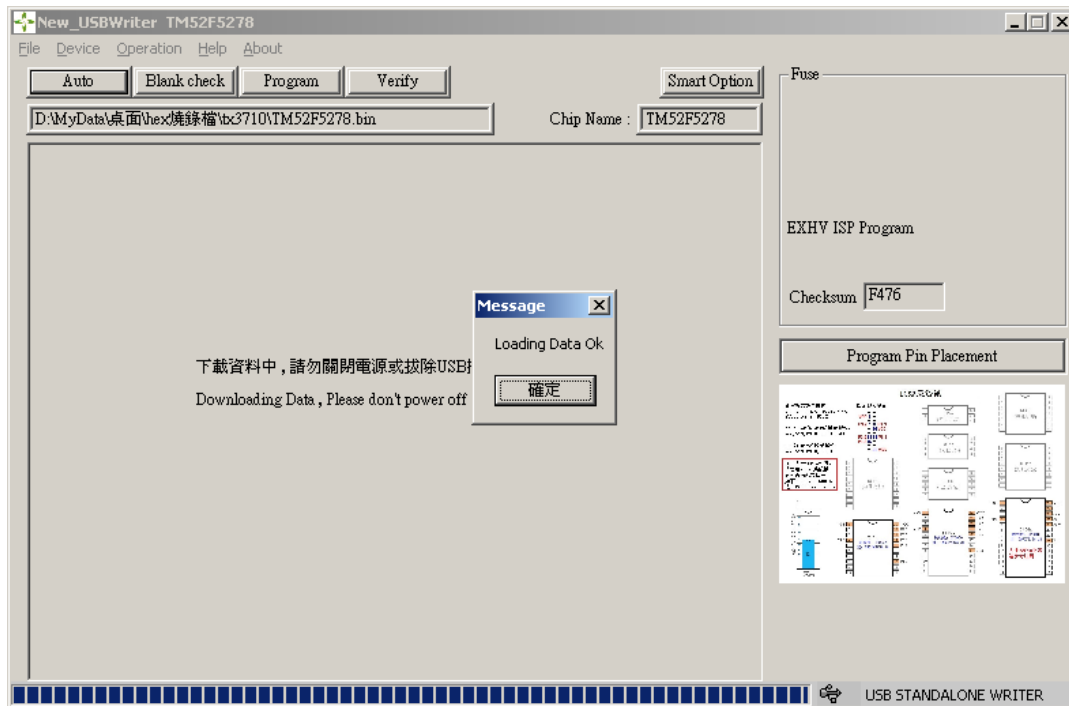
Step 3: The main screen will exhibit “ EXHV ISP Program ”



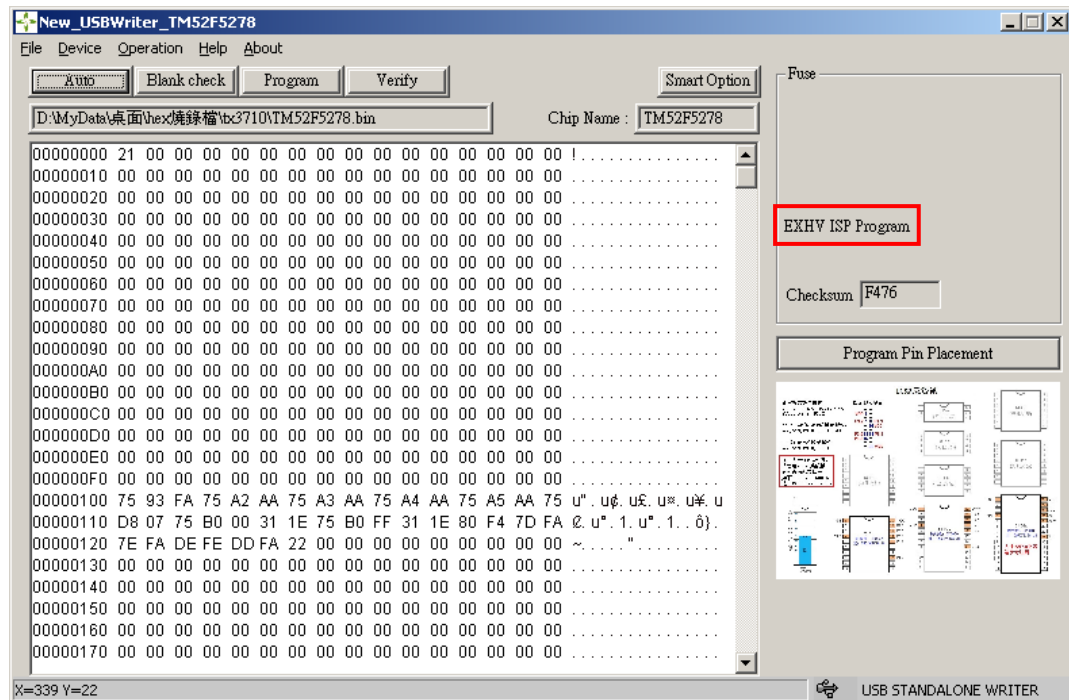
Step 4: Select File ->Load File



Step 5 : Wait until files are downloaded, click on OK to complete the download

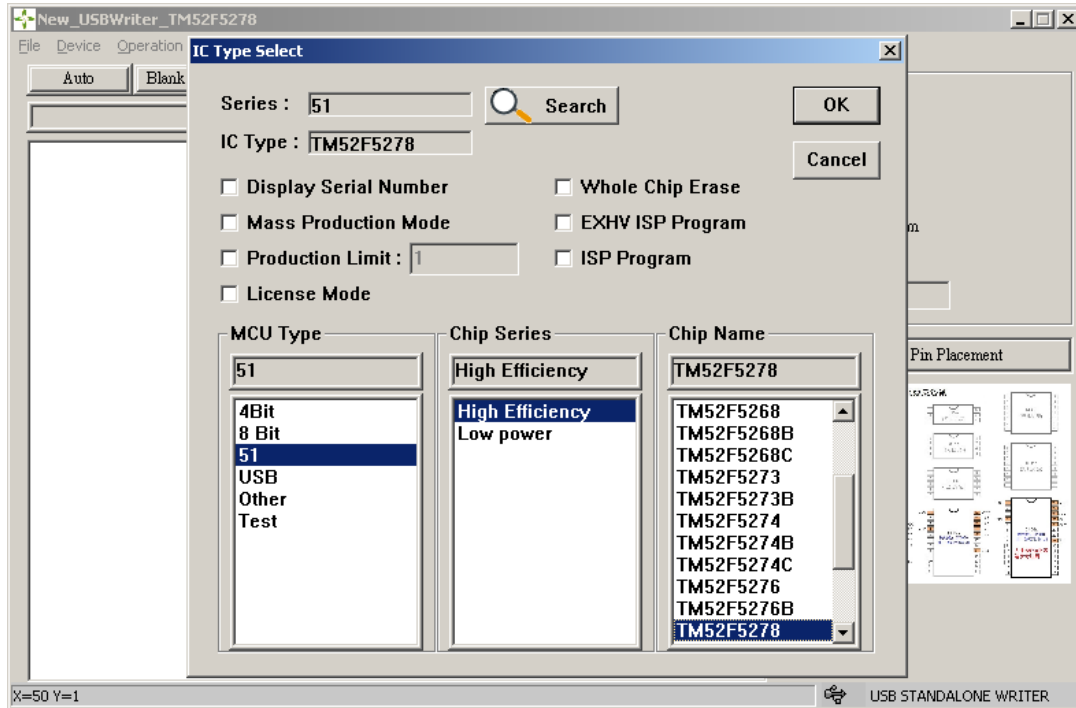


Step 6: Downloaded OK

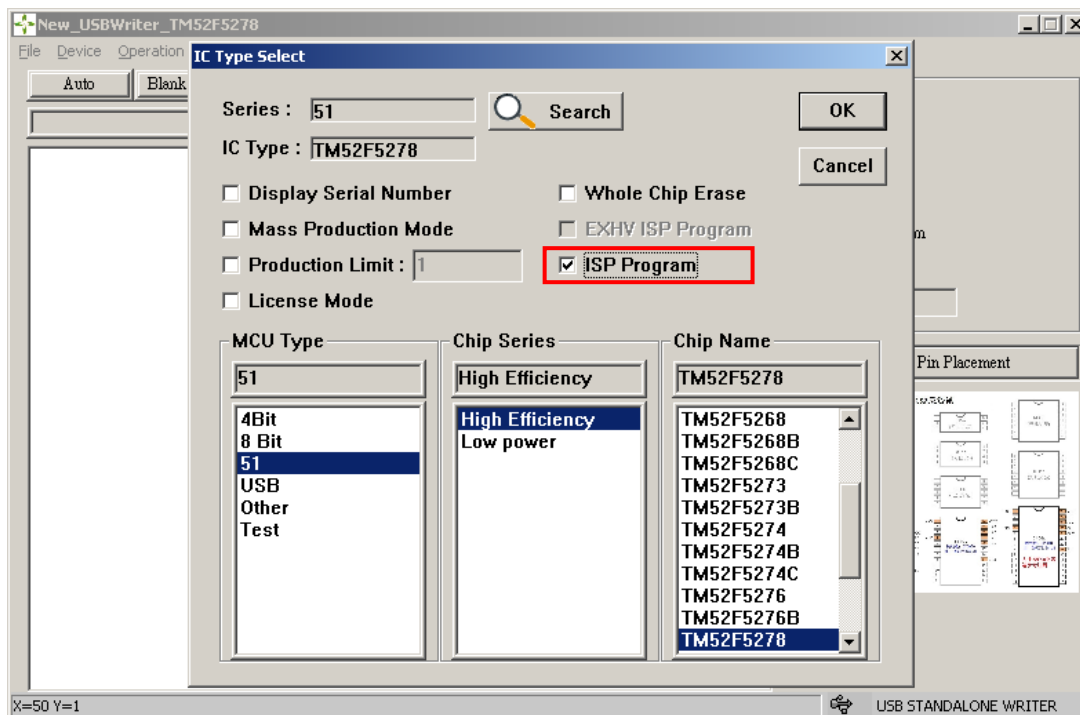


## 9. Programming Operation in ISP Mode

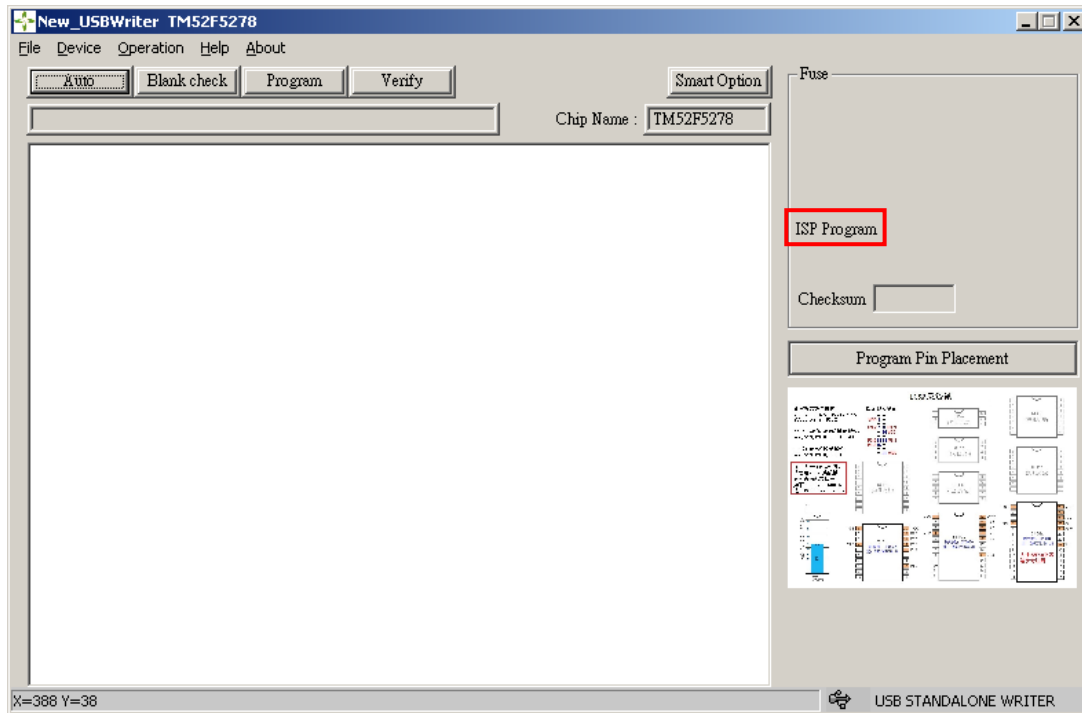
Step 1: Select Device



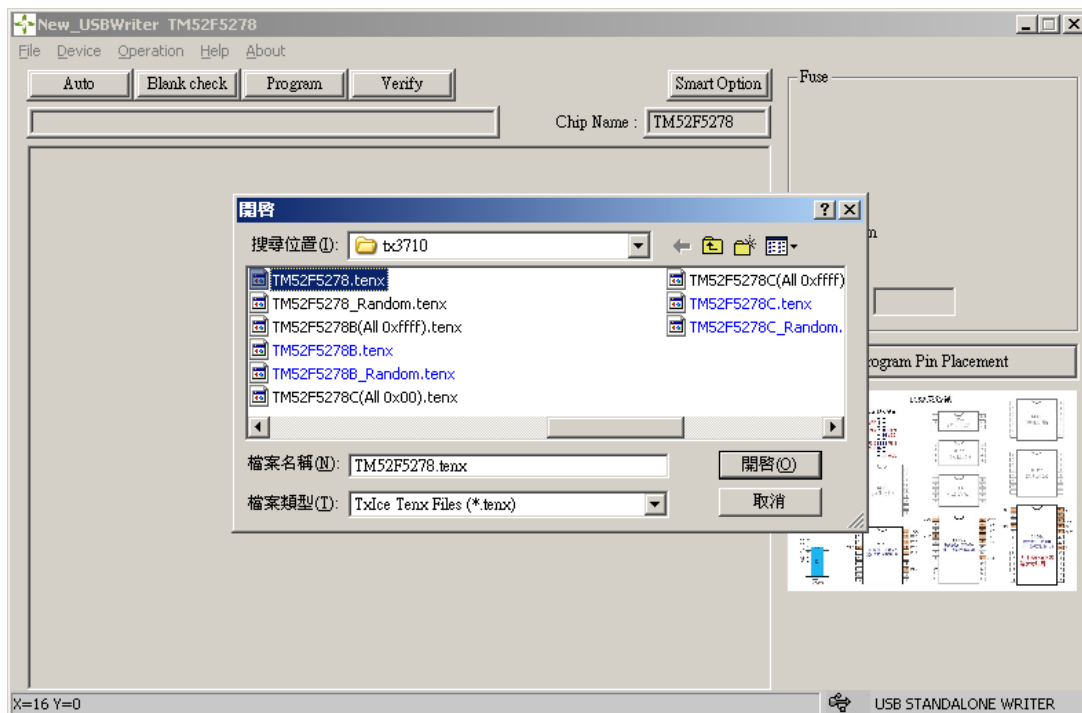
Step 2: Select IC and enable “ISP Program”, and then click on “OK ”



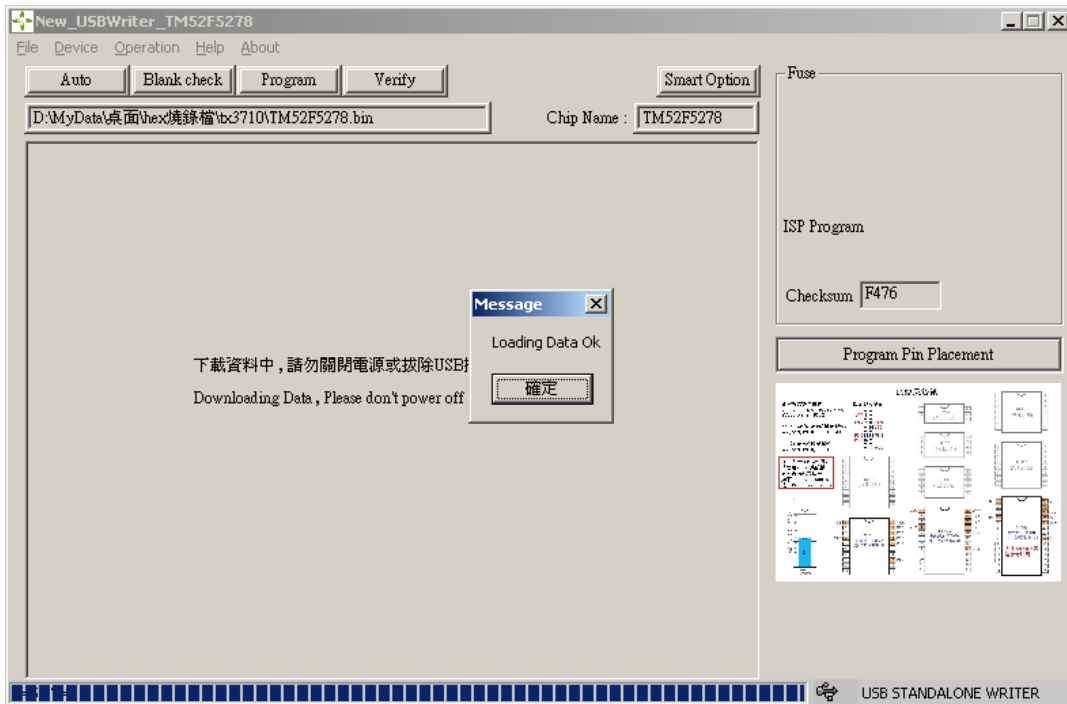
Step 3: The main screen will exhibit “ ISP Program ”



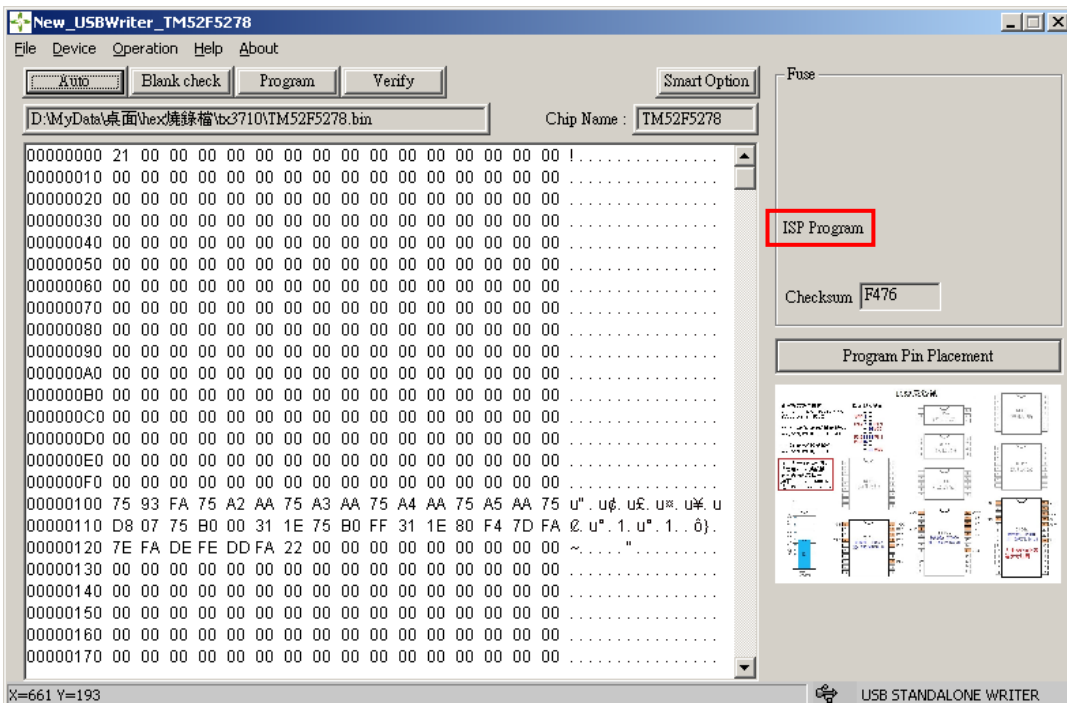
Step 4: Select File ->Load File



Step 5: Wait until files are downloaded, click on OK to complete the download

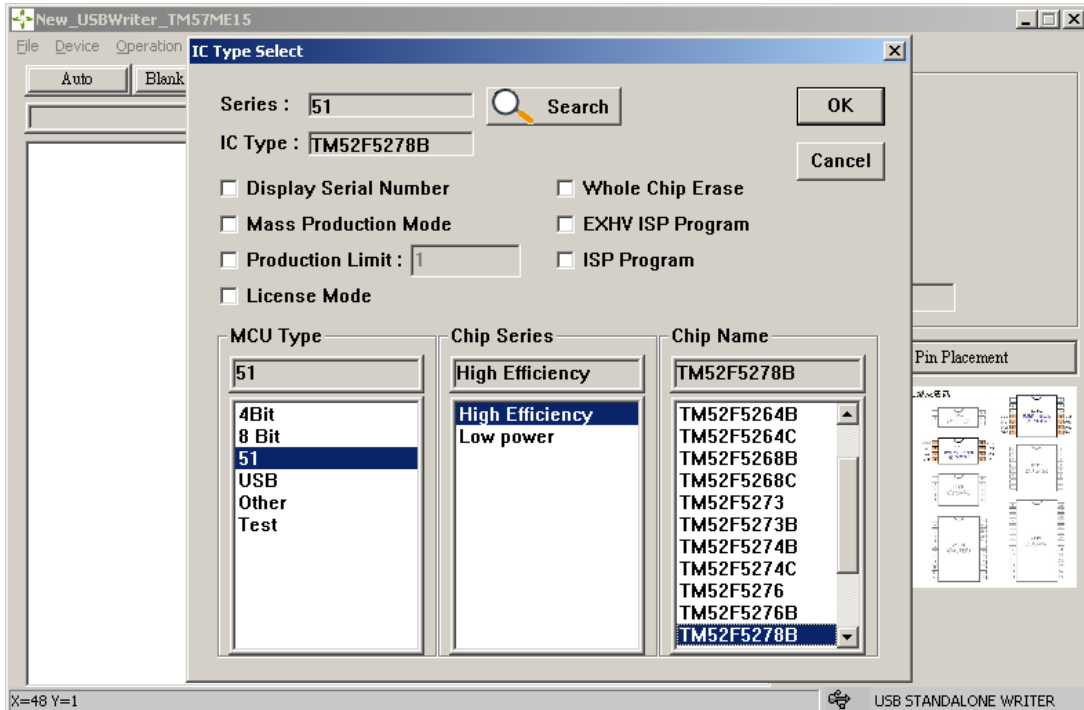


Step 6: Downloaded OK

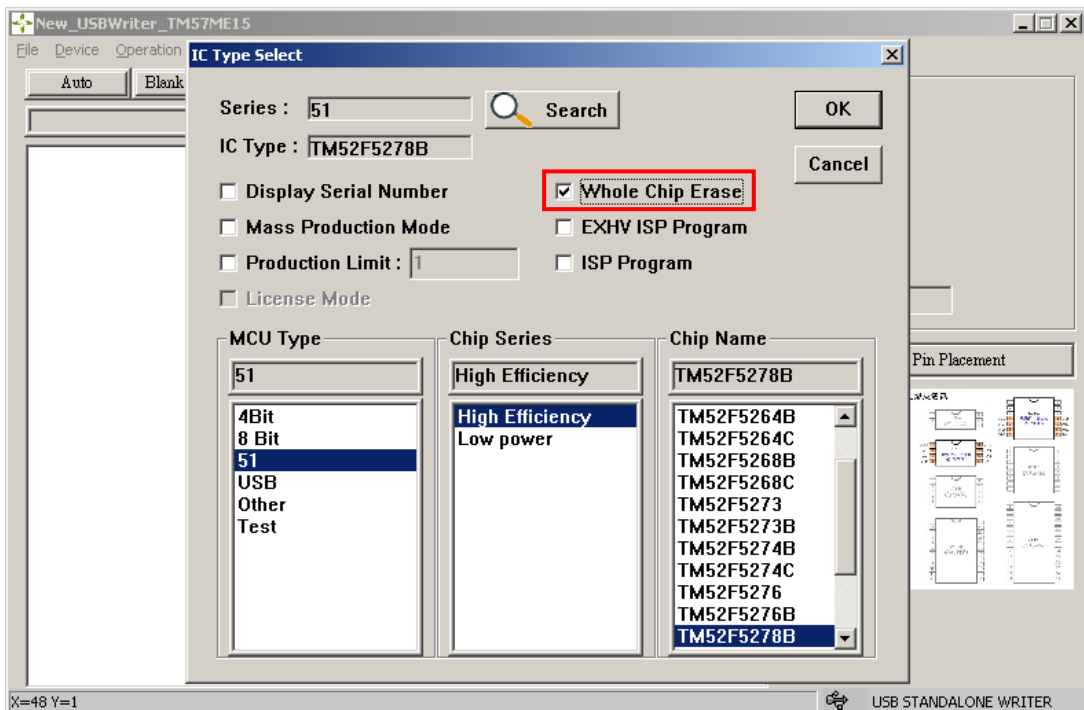


## 10. Programming Operation in Whole Chip Erase Mode

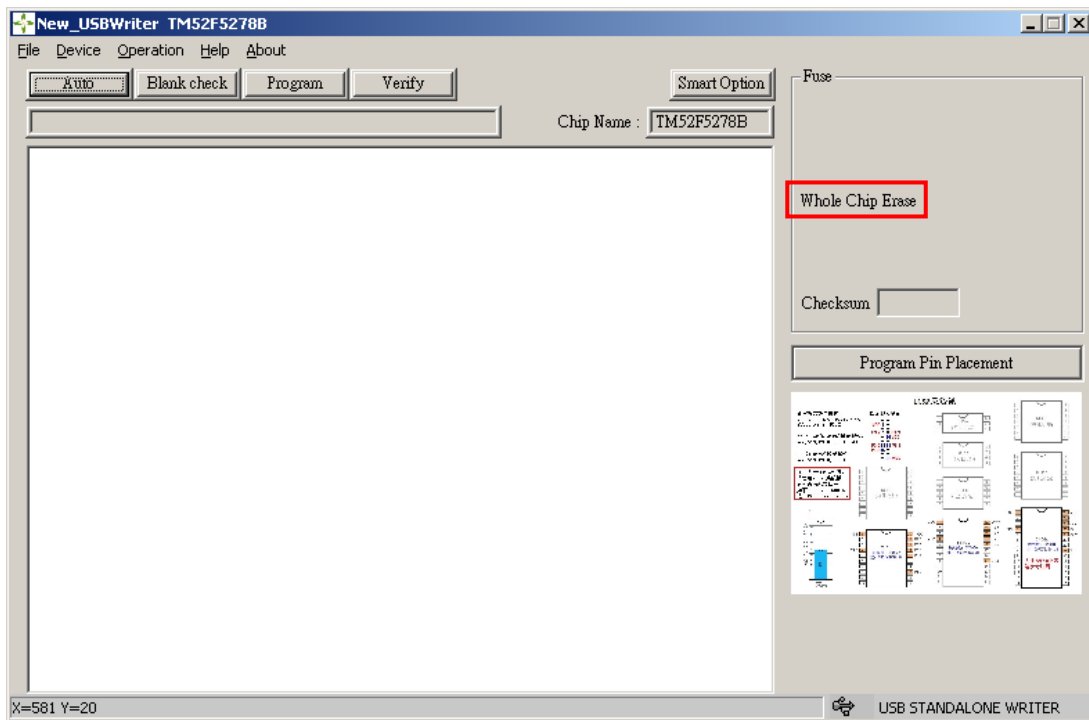
Step 1: Select Device



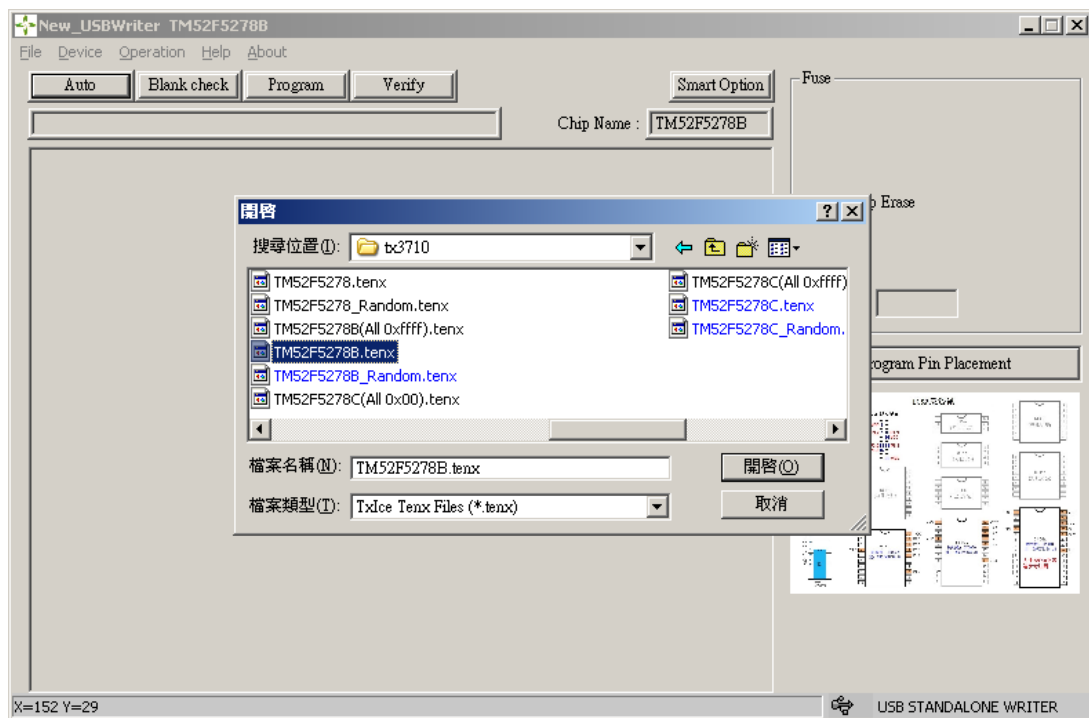
Step 2: Select IC and enable “ Whole Chip Erase ”, and then click on “ OK ”



Step 3: The main screen will exhibit “Whole Chip Erase”

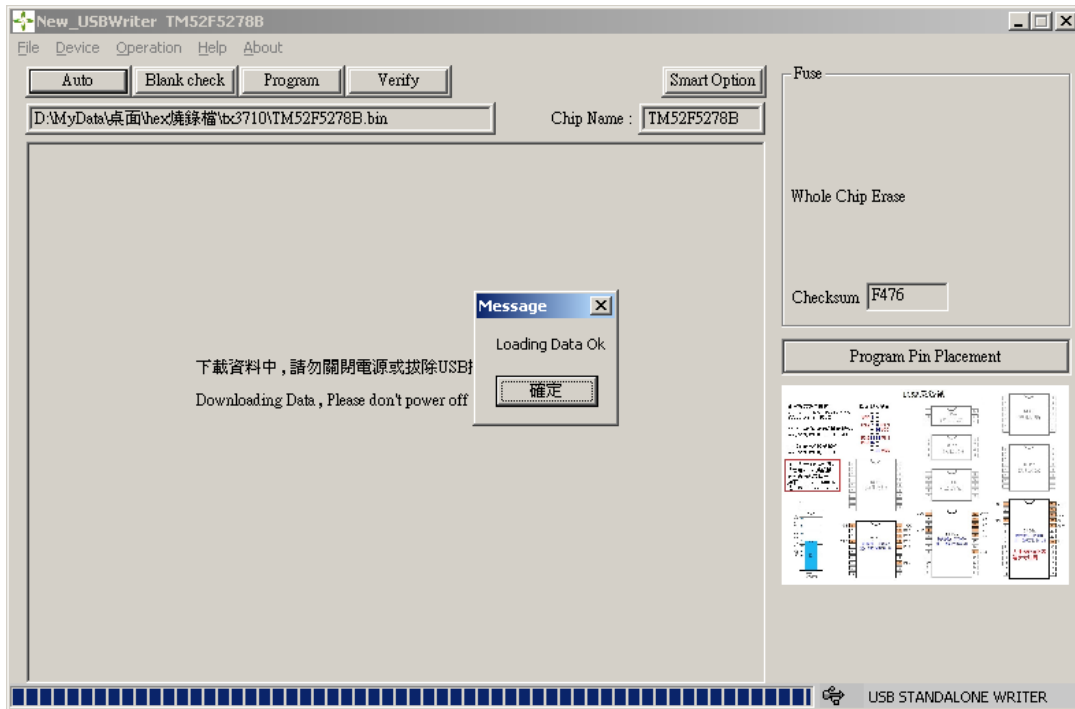


Step 4: Select File ->Load File

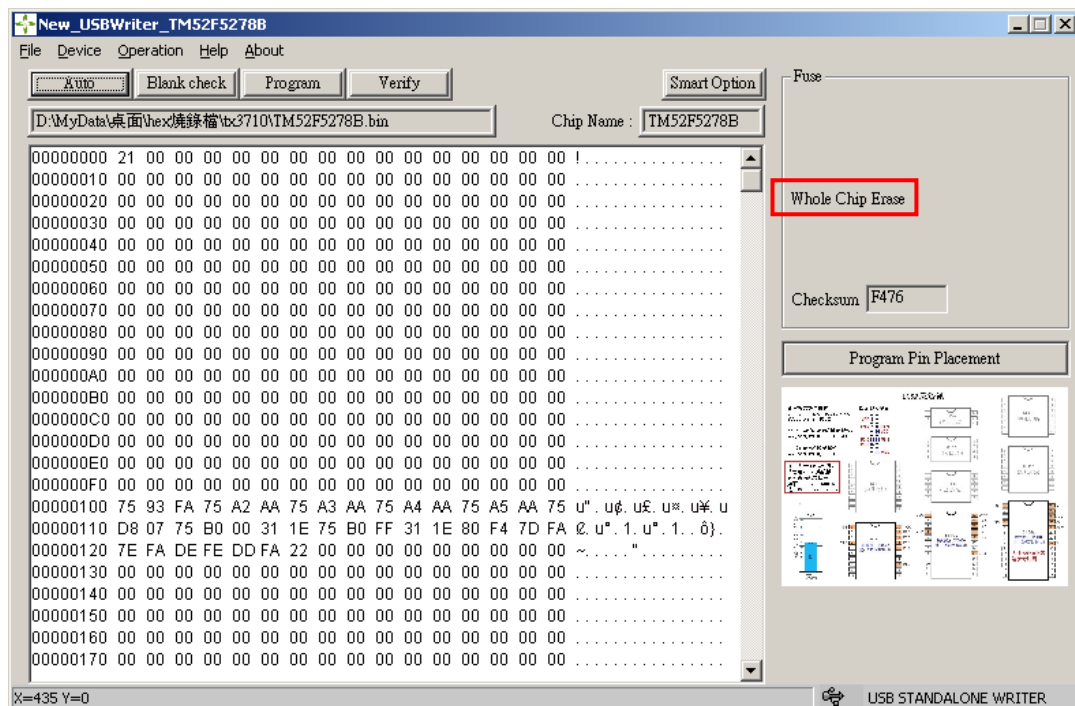




Step 5: Wait until files are downloaded, click on OK to complete the download



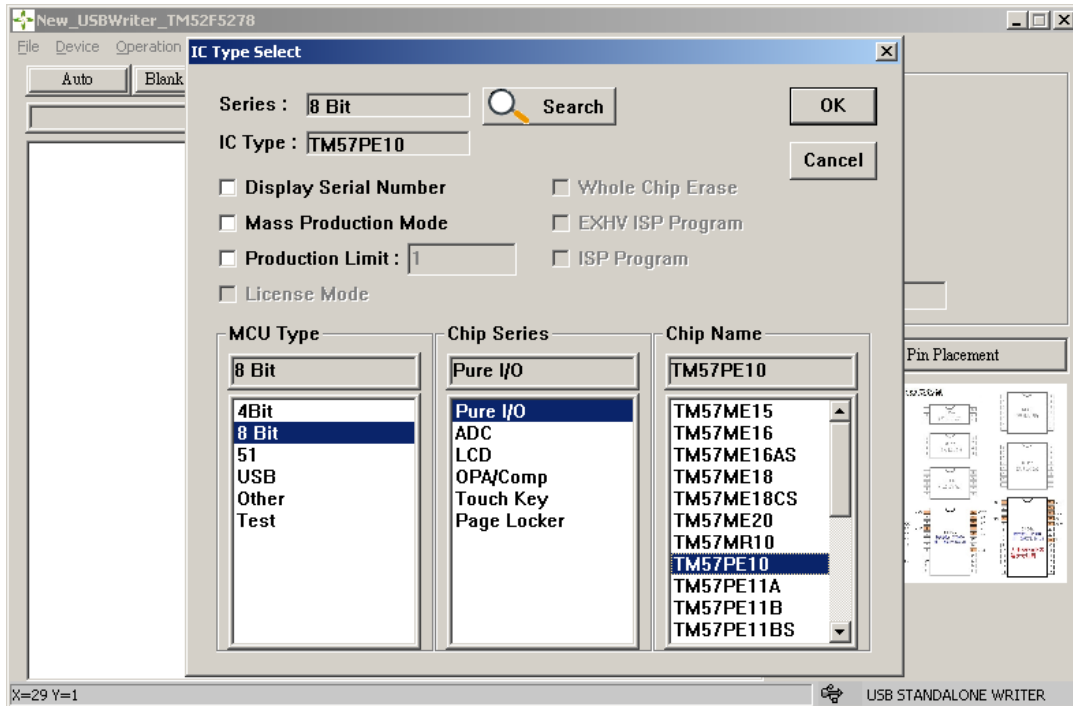
Step 6: Downloaded OK



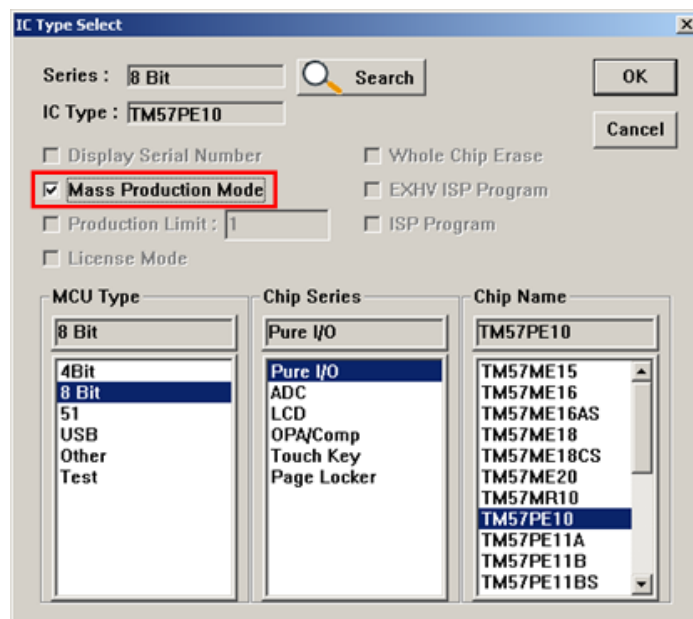
### 11. Programming Guide for Mass Production Mode

This function contains only Auto mode, which records OK and NG counts, and checksum display, there are no other functions, so it is recommended to be used in mass production.

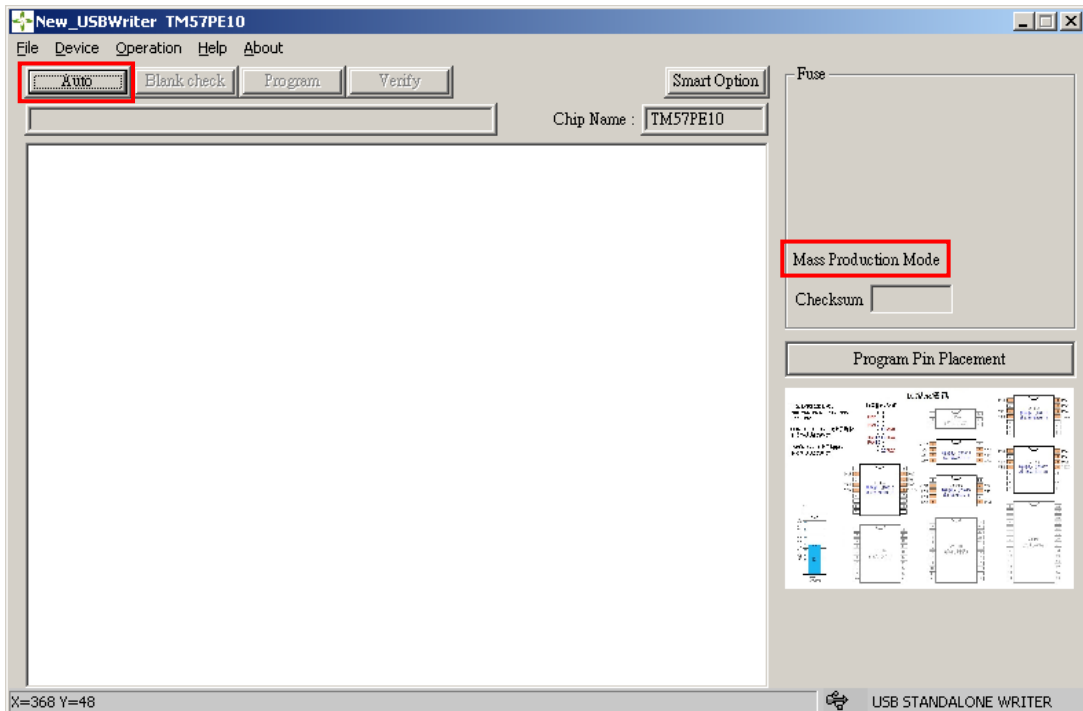
Step 1: Select Device



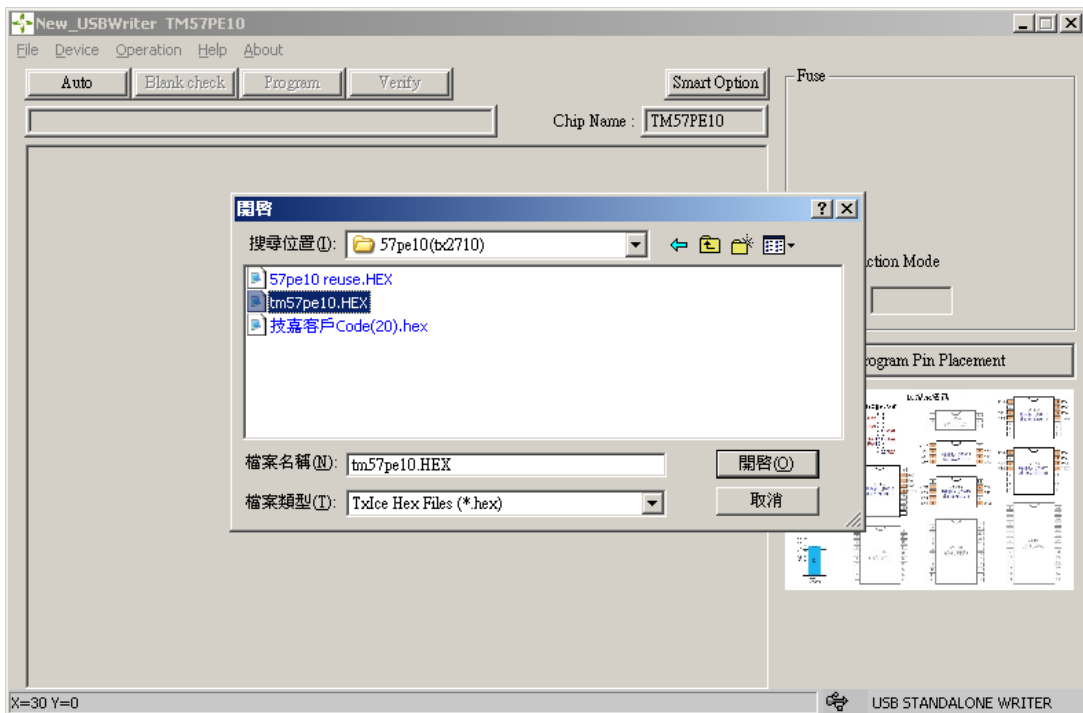
Step 2: Select IC type and enable the “ Mass Production Mode ”, and then click on “ OK ”



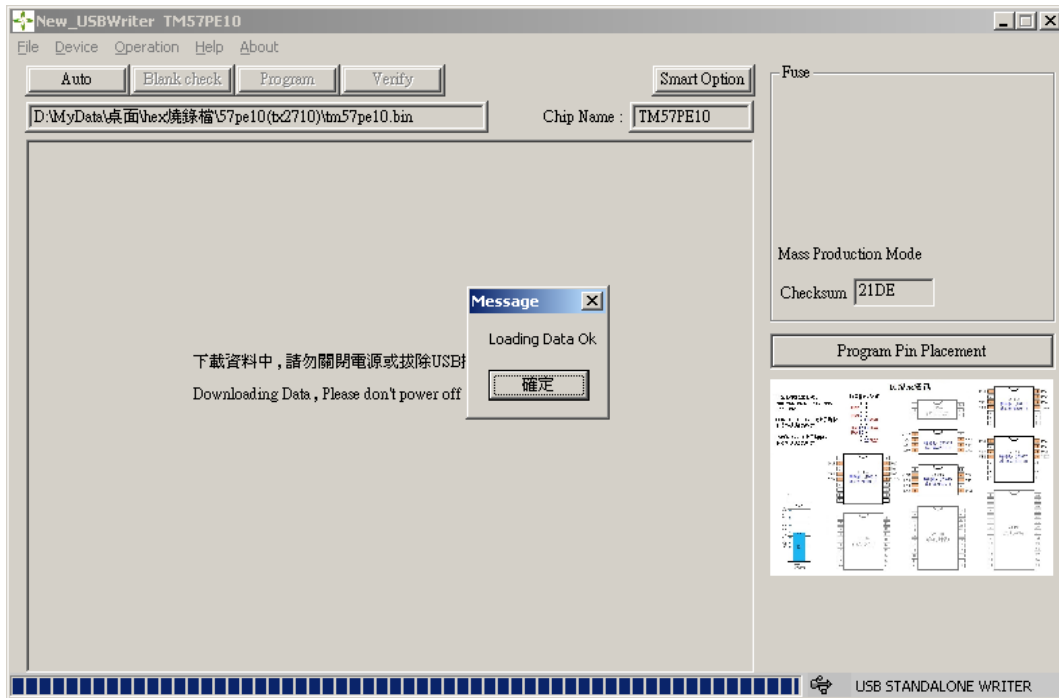
Step 3: The main screen will show “ Mass Production Mode ” and Enable Auto function



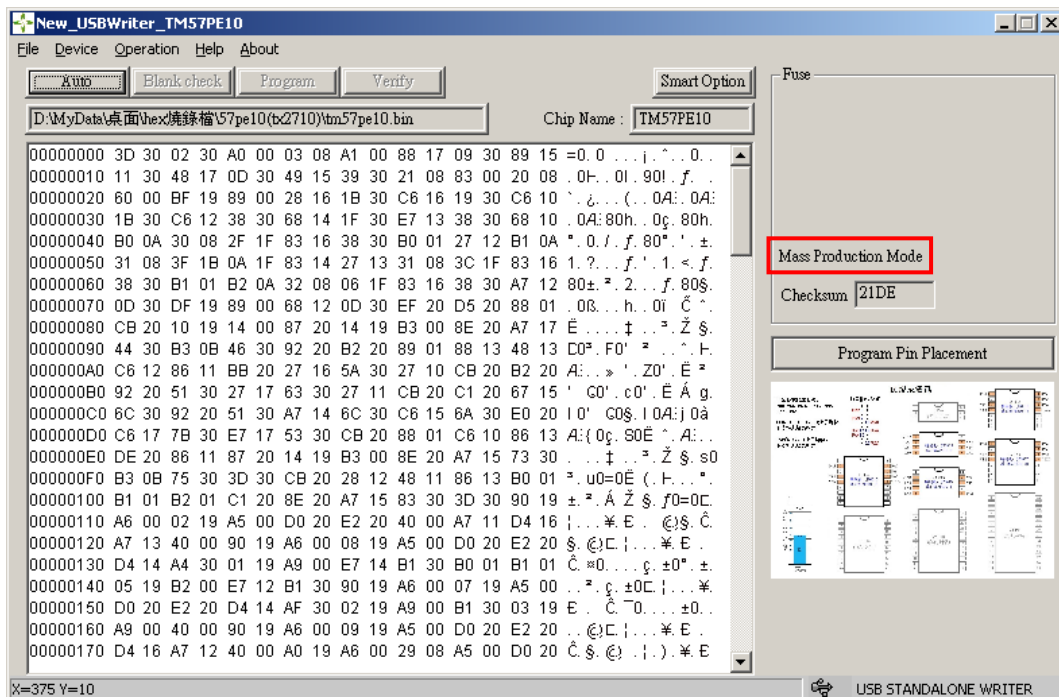
Step 4: Execute File ->Load File



Step 5: Wait until files are downloaded, click on OK to complete the download



Step 6: Downloaded OK



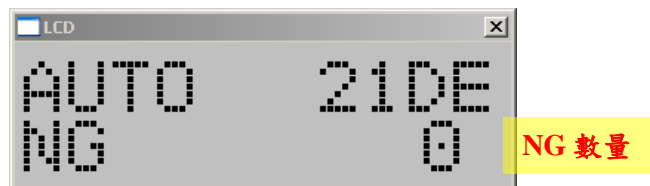
Step 7: Hardware Display and Operate:

- a. Display CHIP NAME (Hold 2 sec Display)



- b. Display Auto Mode: (Mode button: click once will change OK and NG Display)

1. Display Checksum
2. Display the counting number that the programming procedure is successful
3. Display the counting number that the programming procedure is not successful



- c. Display Software version and Firmware version (Press the Mode button more than 3 seconds continuously to get the information)

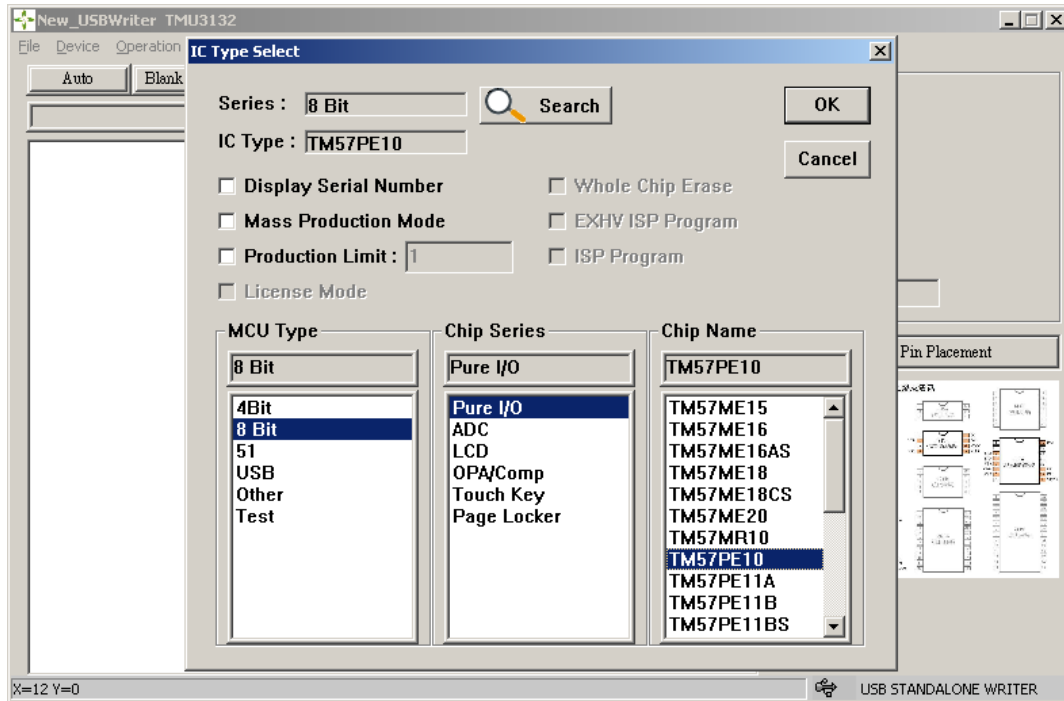


- d. Enter button: press enter to execute

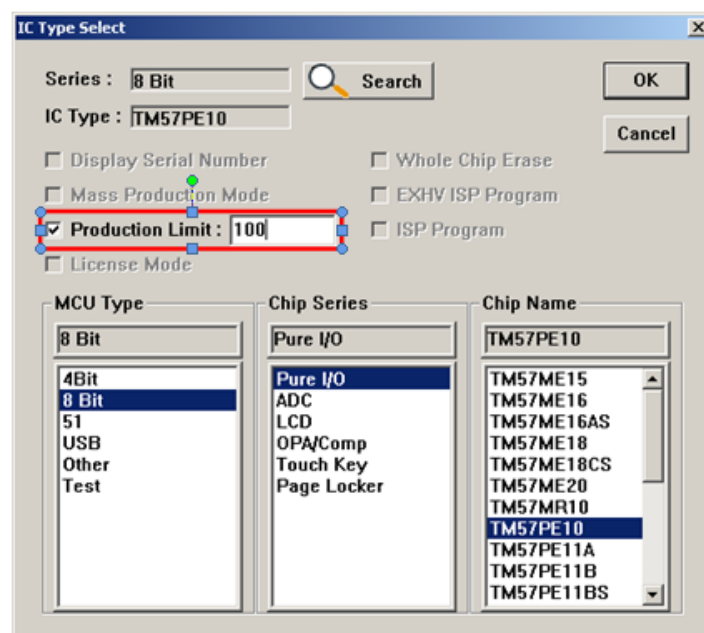
## 12. Production Limit Mode Writer Operation

This function contains only Auto mode, which records OK and NG counts, and checksum display, there are no other functions, so it is recommended to be used in mass production.

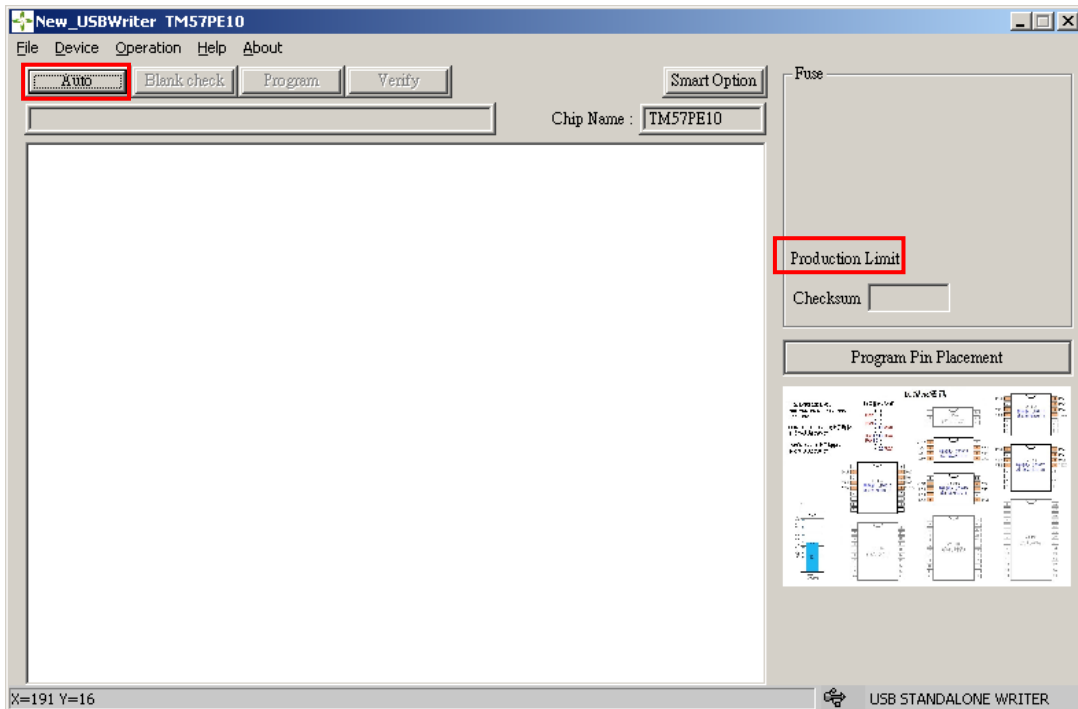
Step 1: Select Device



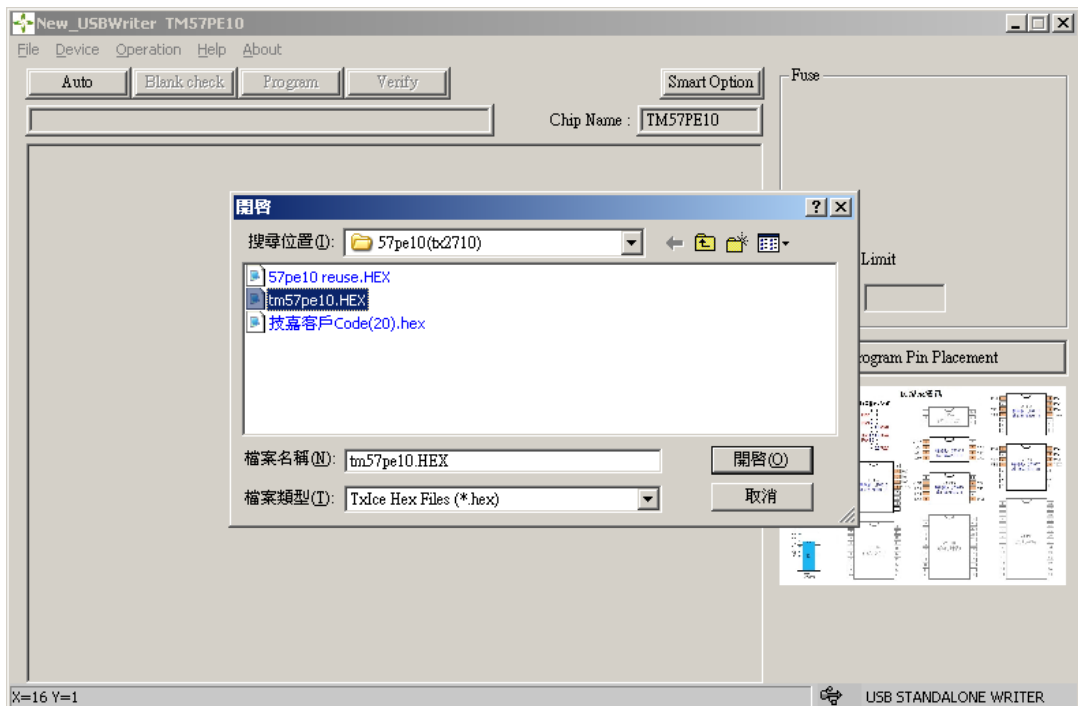
Step 2: Select IC and enable the Production Limit Mode to set the writer counts (1~99999999) , then press OK.



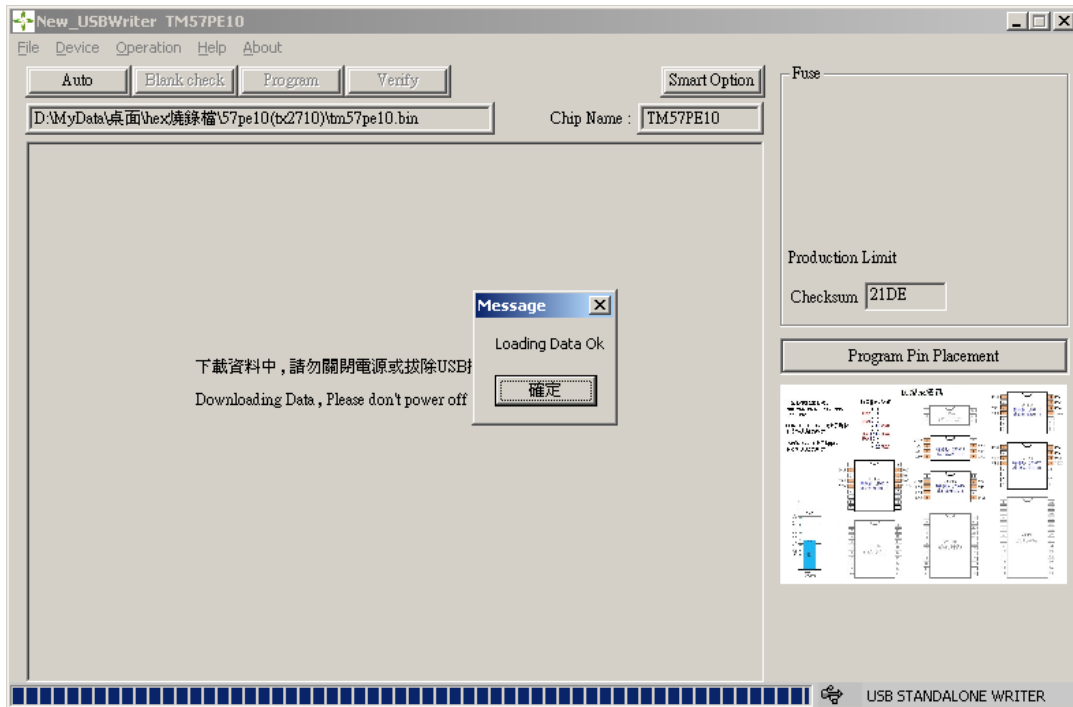
Step 3: Main window will show “ Production Limit Mode ” and enable “ Auto ” function



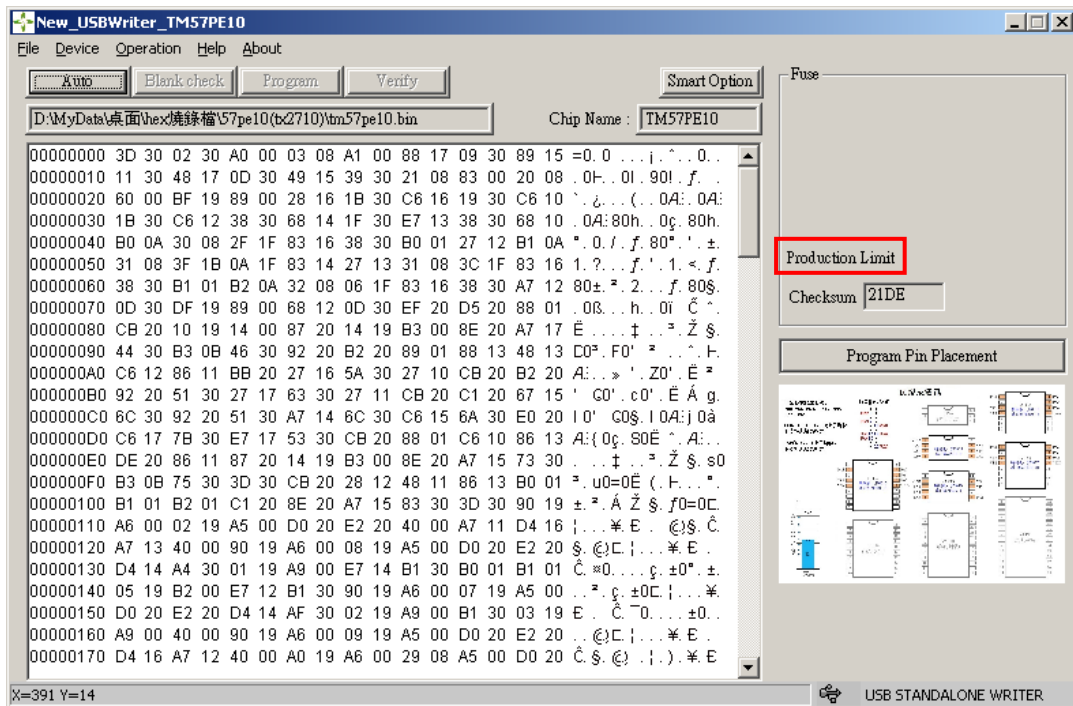
Step 4: Select File ->Load File



Step 5: Wait until files are downloaded, click on OK to complete the download



Step 6: Download OK



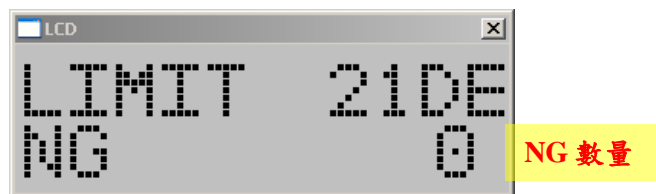


Step 7: Hardware display and operation:

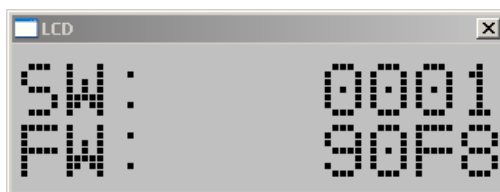
- a. Display CHIP NAME (holds for 2 secs display)



- b. Display Limit mode: (hardware mode button can only switch to OK and NG display)
  - 1. Checksum
  - 2. Write OK count
  - 3. Write NG count



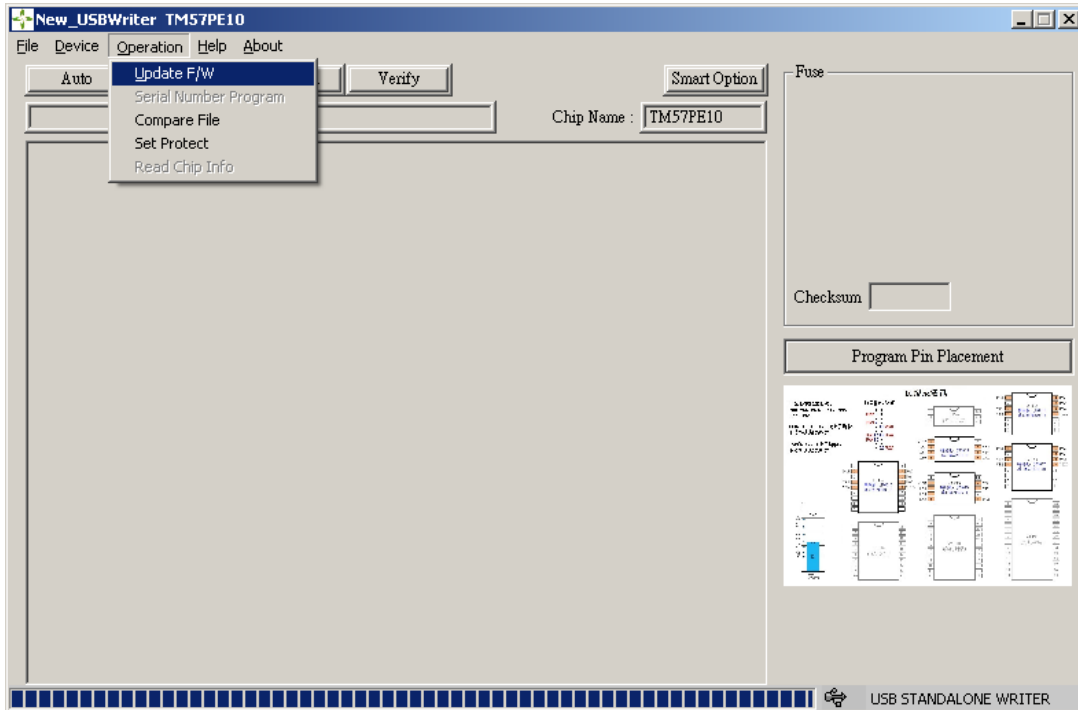
- c. Display Software version and Firmware version (Press the Mode button more than 3 seconds continuously to operate this function)



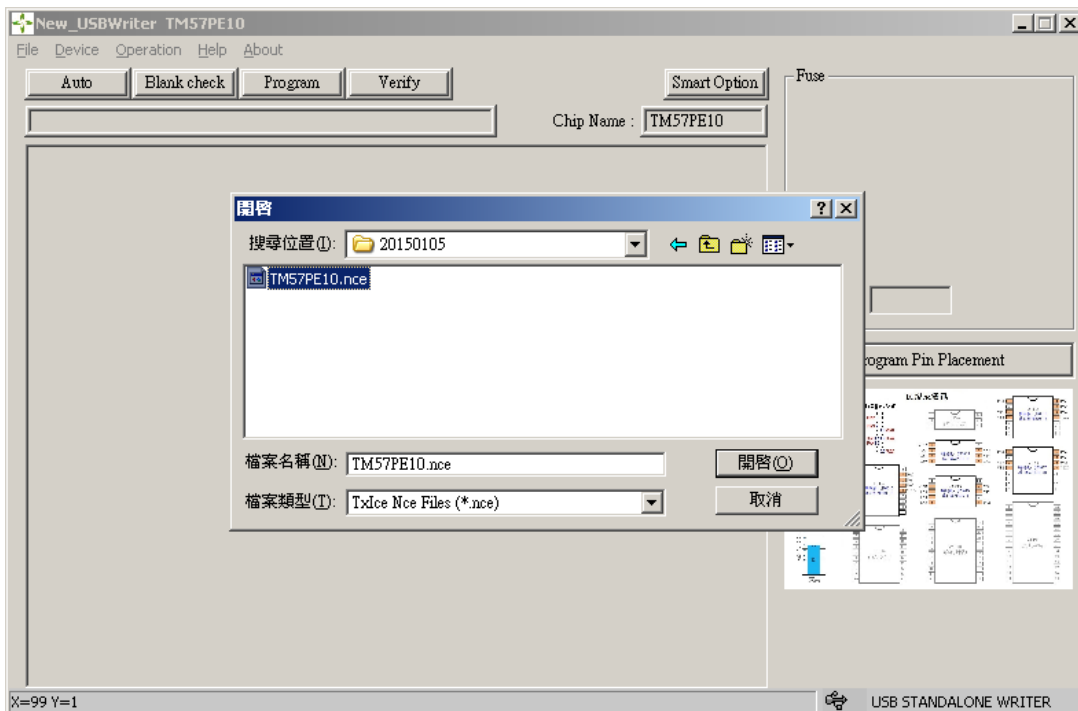
- d. Enter button: press enter to execute
- e. When OK count reaches the writing limit setting, writer will not continue to execute

### 13. Manually Update Firmware Function Guide

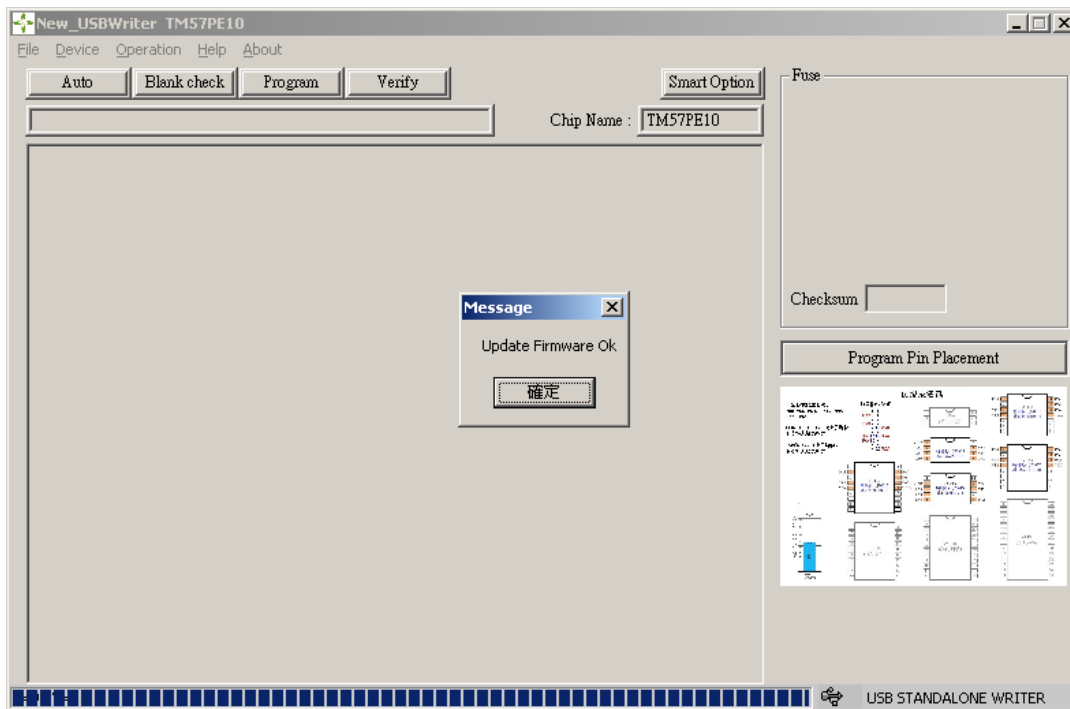
Step 1: Execute Operation =>Update F/W



Step 2: Select the file to Update.



Step 3: Start execution (start loading into hardware), click on OK to complete the set



Step 4: During the Updating Firmware period, the LCD will display UPDATE\_FW WAIT.



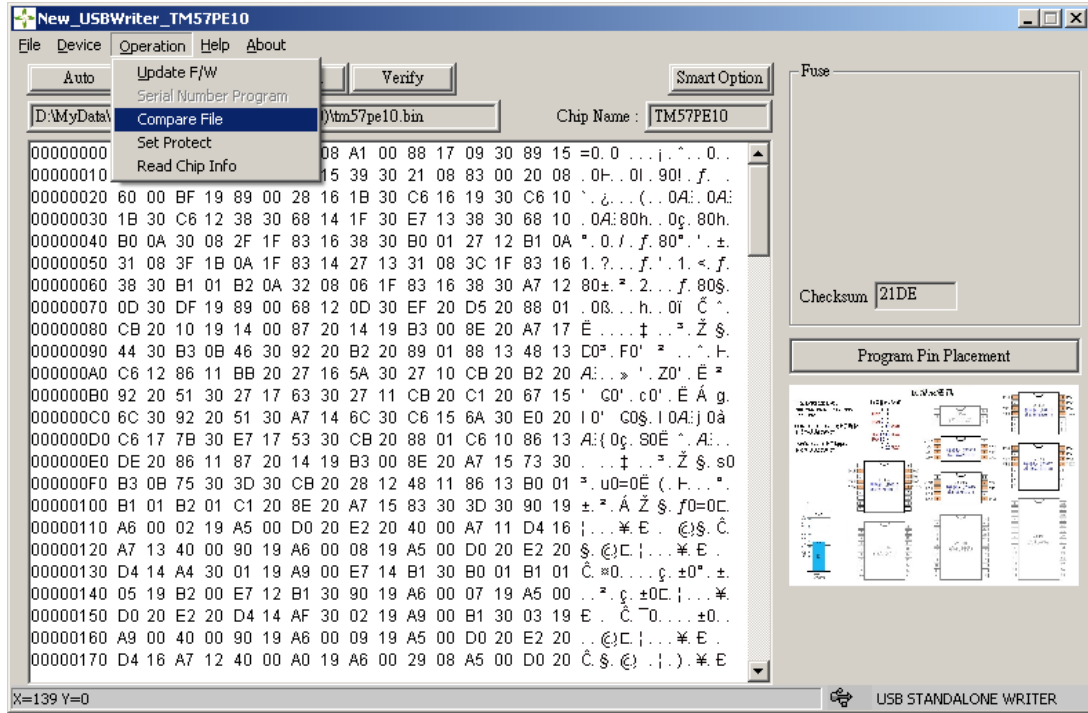
Step 5: After successfully updating Firmware, the LCD will display the CHIP NAME.



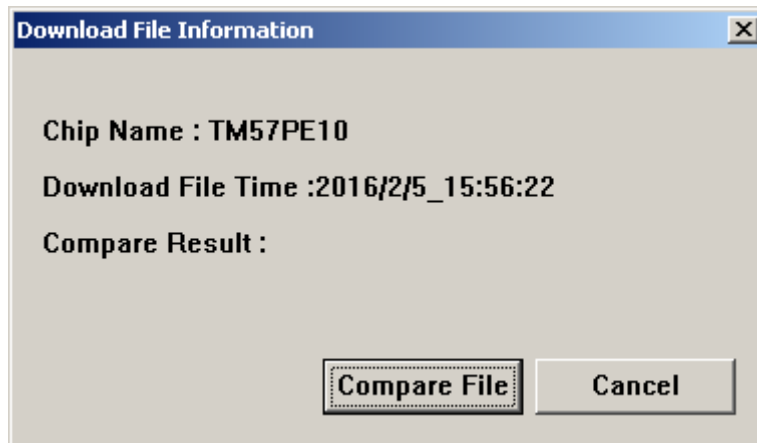
### 14. Compare File Function Operation

Display writer register data, “ IC Name ”, “ Download File Time ”, and “ Compare File Result ”.

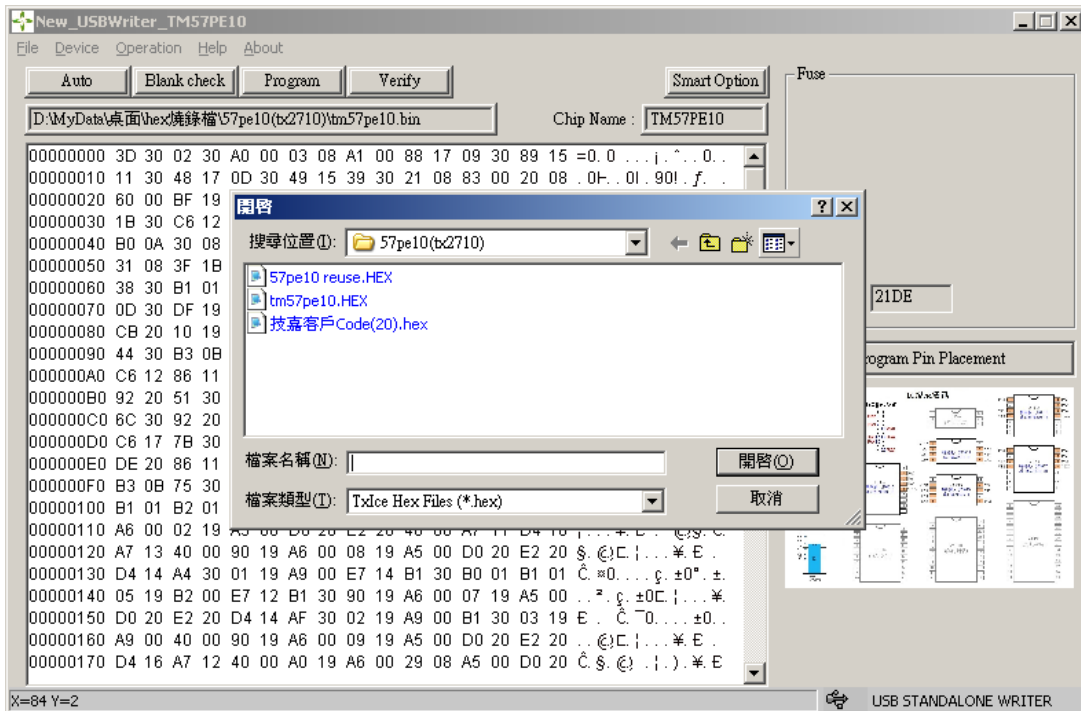
Step 1: Select Operation ->Compare File



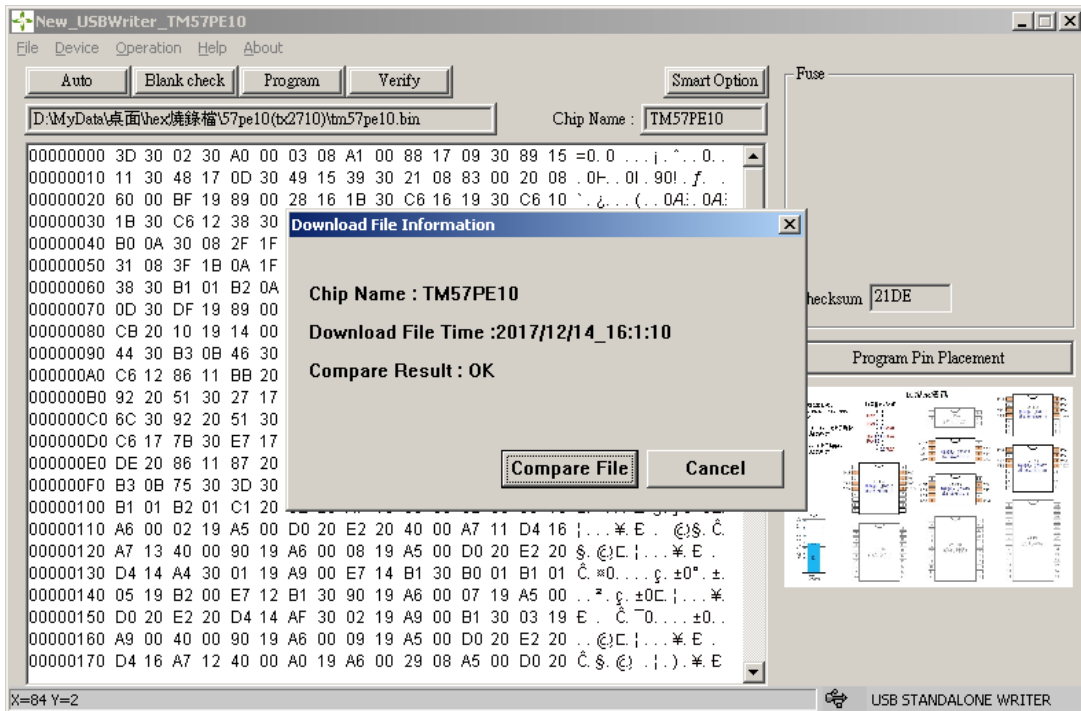
Step 2: Download File information window shows up



Step 3: Press “ Compare File ” button, select the file to be compared, then press “ Open ” button.

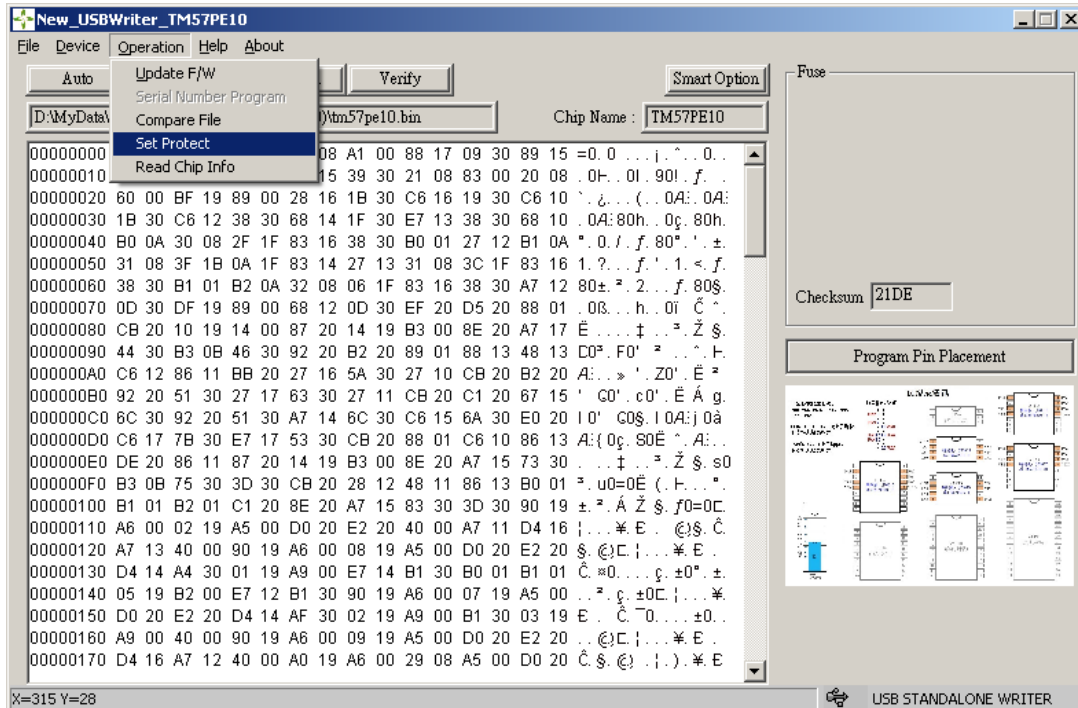


Step 4: Wait for compare result, OK/Fail

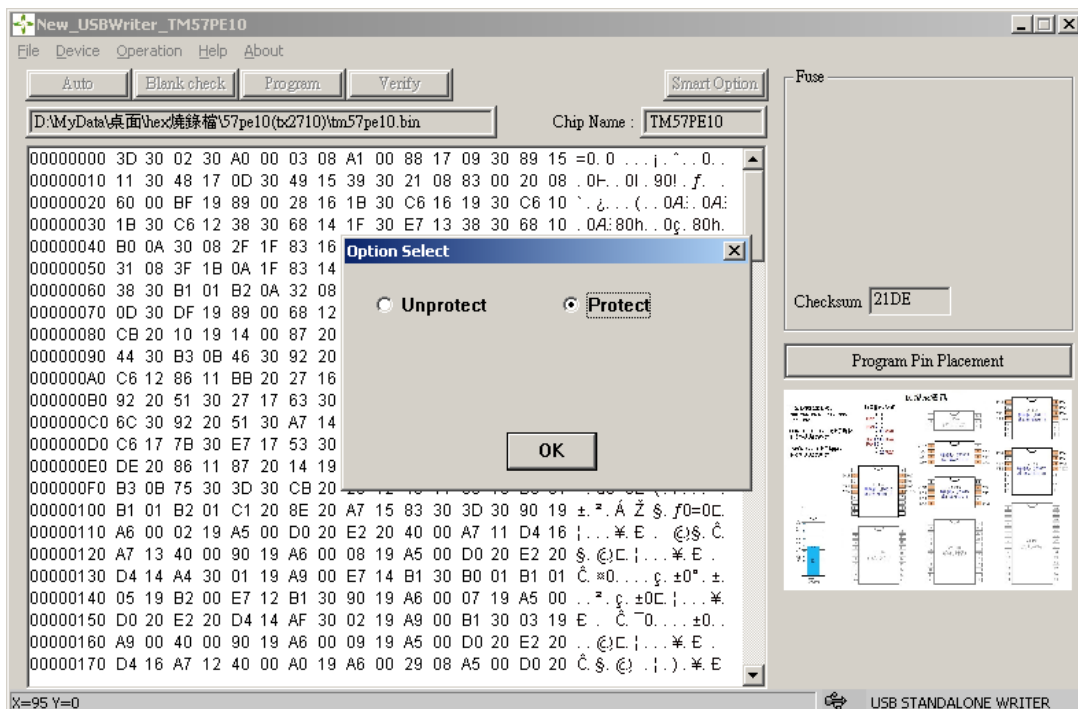


### 15. Set Protect Function Operation

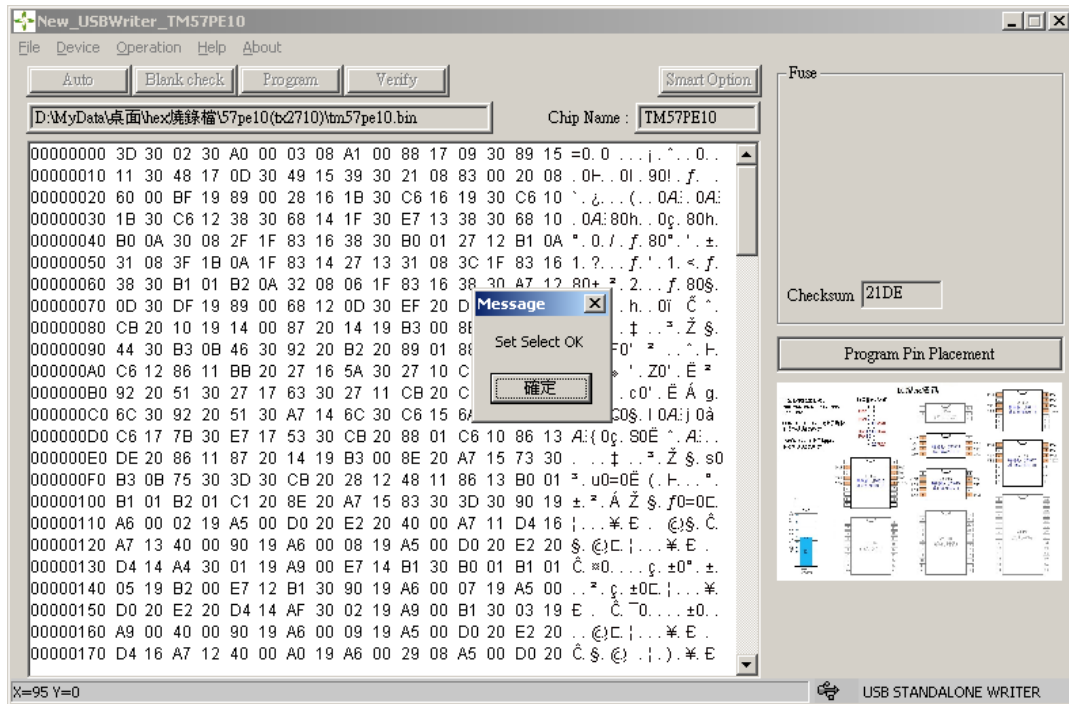
Step 1: Select Operation ->Set Protect



Step 2: Option Select 1 window shows up



Step 3: Select Unprotect or Protect, then press “ OK ” button, wait for the setting completes

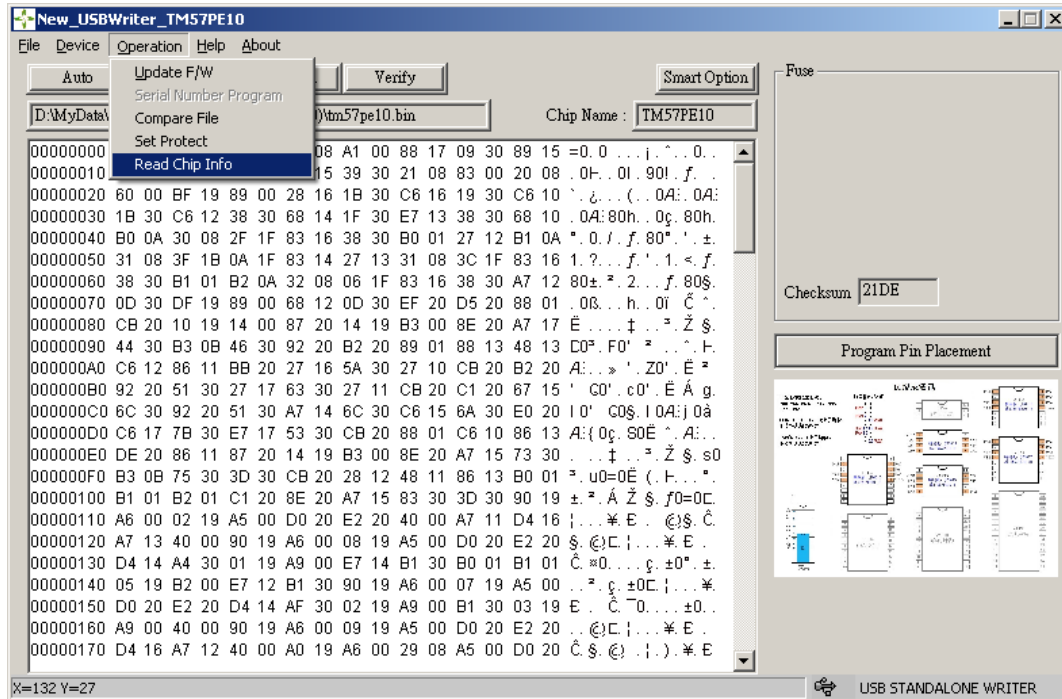


## 16. Read Chip Info Function Operation

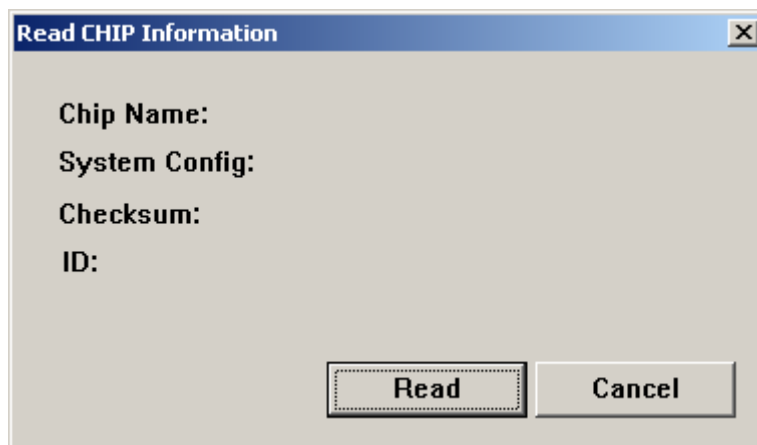
Note: It does not support Mass Production and Production Limit mode.

Read Target IC info, “ system config ”, “ checksum ”, “ ID ”.

Step 1: Select Operation ->Read Chip Info

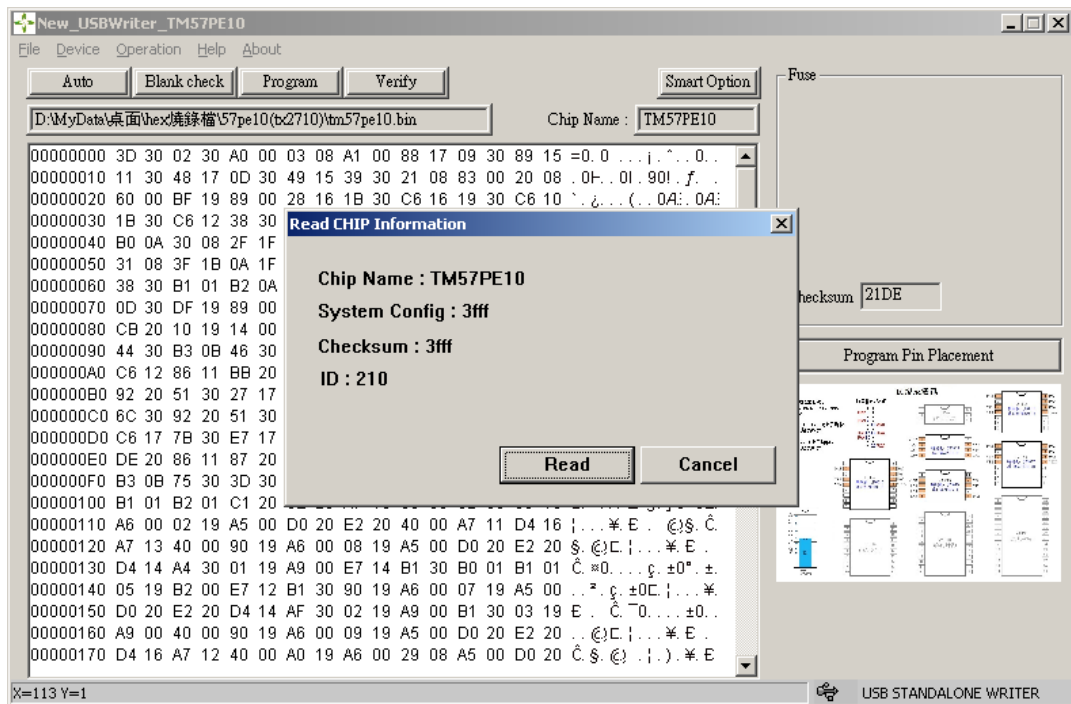


Step 2: Read chip information window shows up



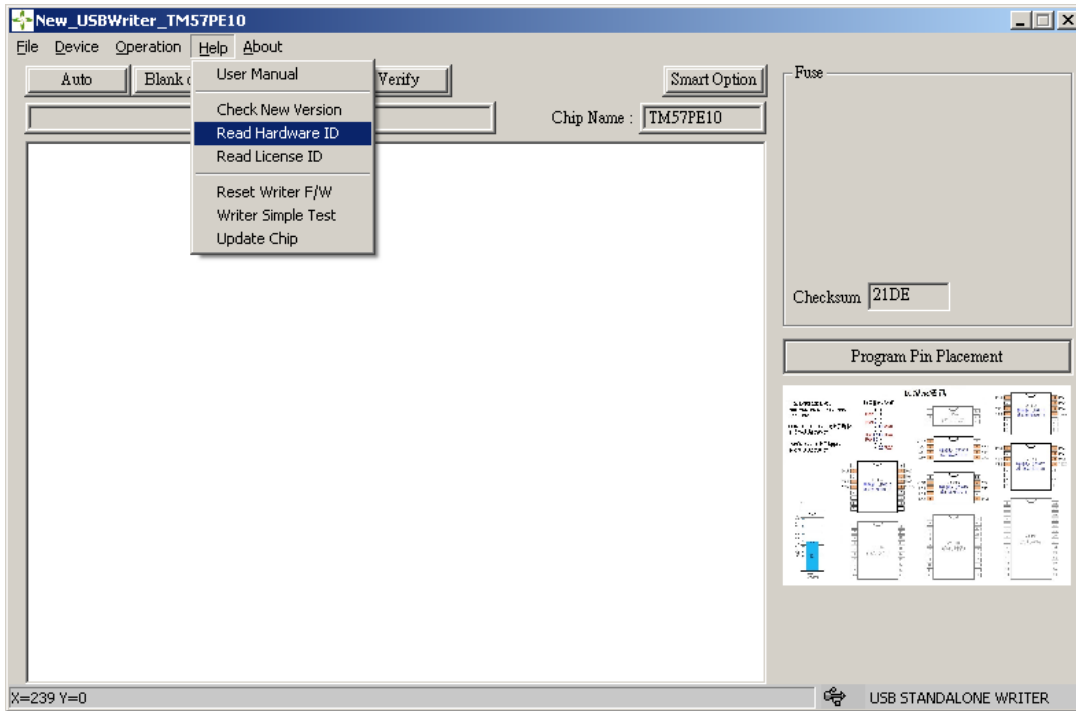


Step 3: Press “ Read ” button, start reading, wait for completed

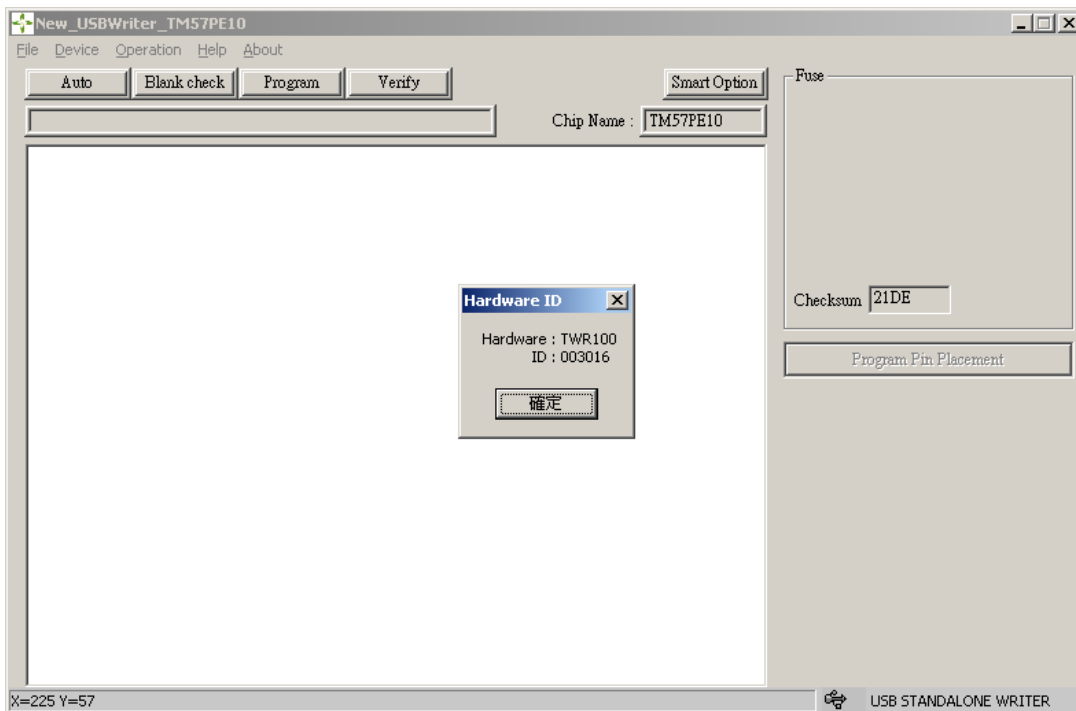


## 17. Read Hardware ID Operation

Step 1: Select Help ->Read Hardware ID

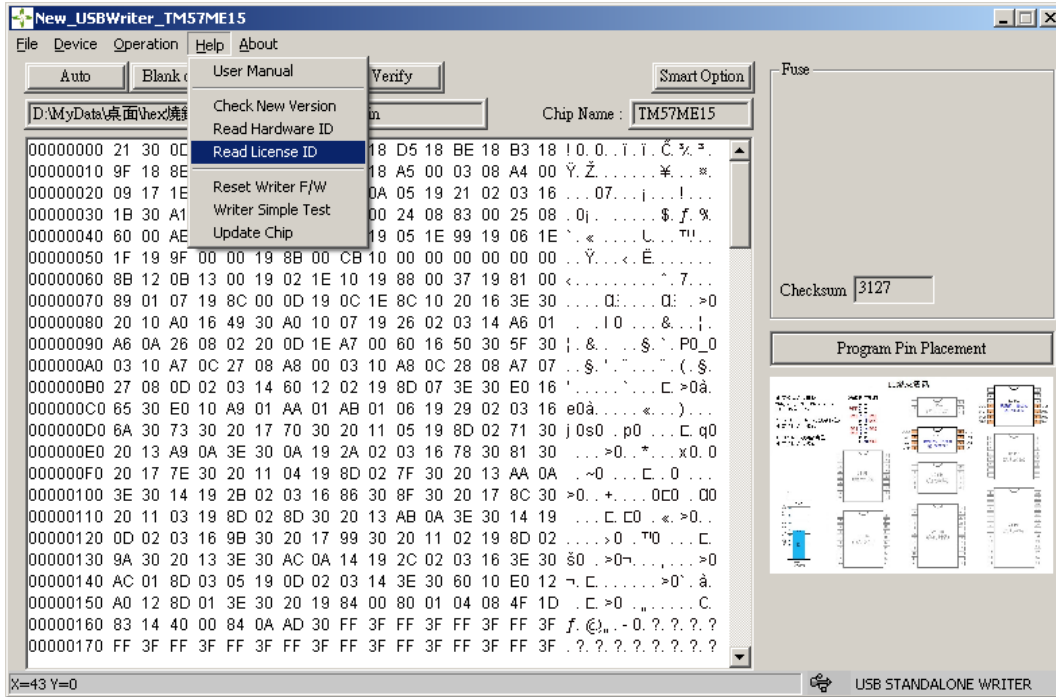


Step 2: Click on OK, read writer hardware ID successfully

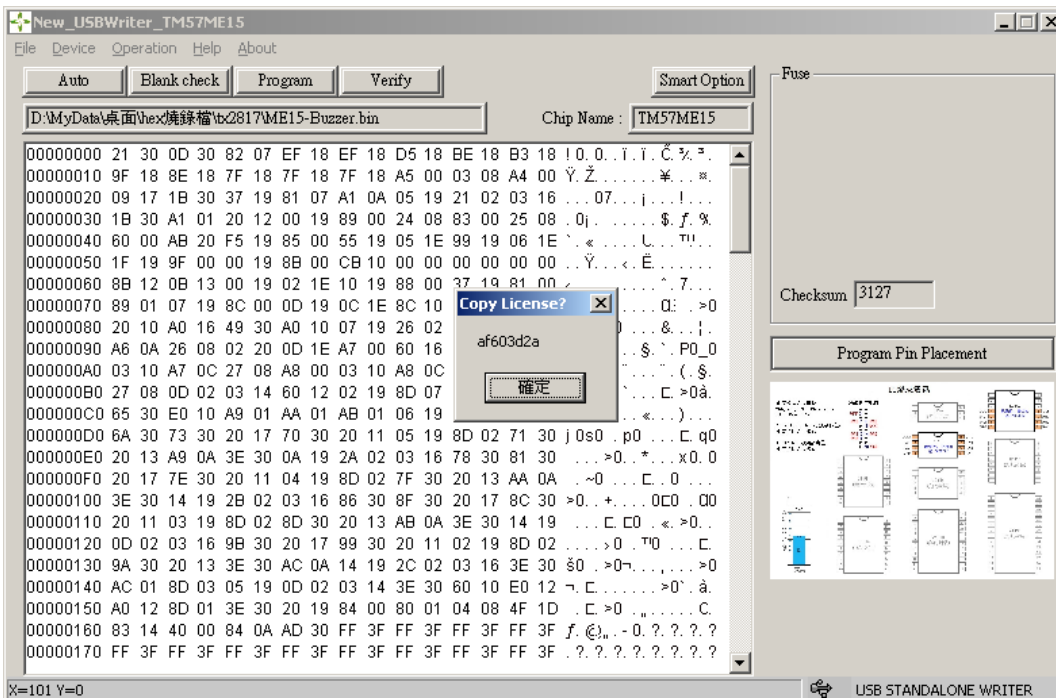


### 18. Read License ID Operation

Step 1: Select Help ->Read License ID

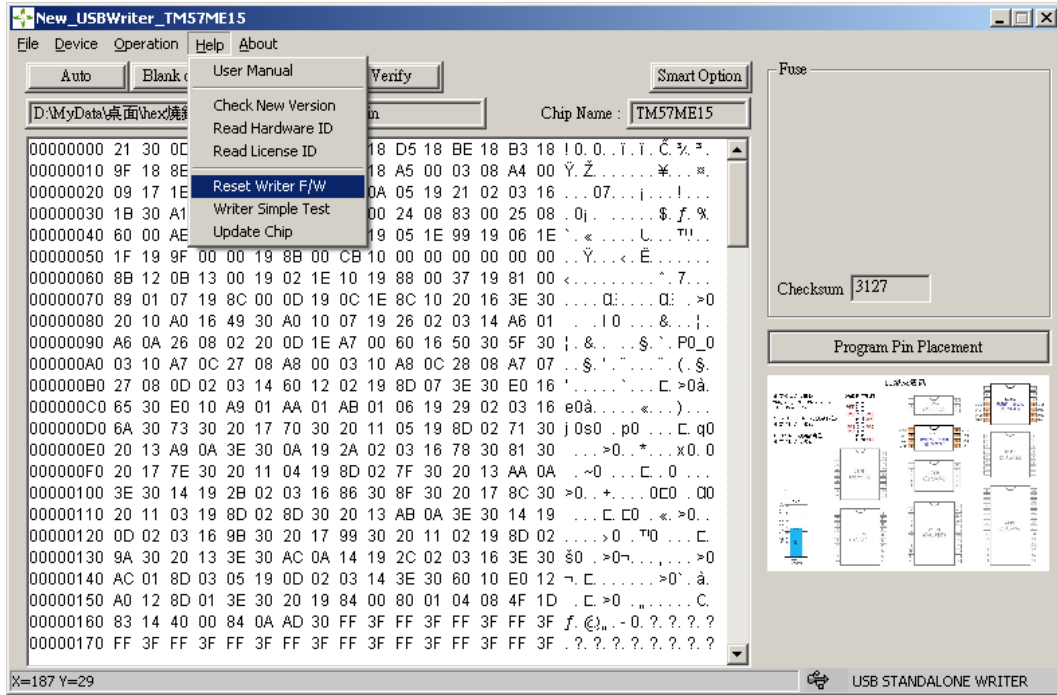


Step 2: Read Writer License ID successfully (details, please refer to License User Manual)

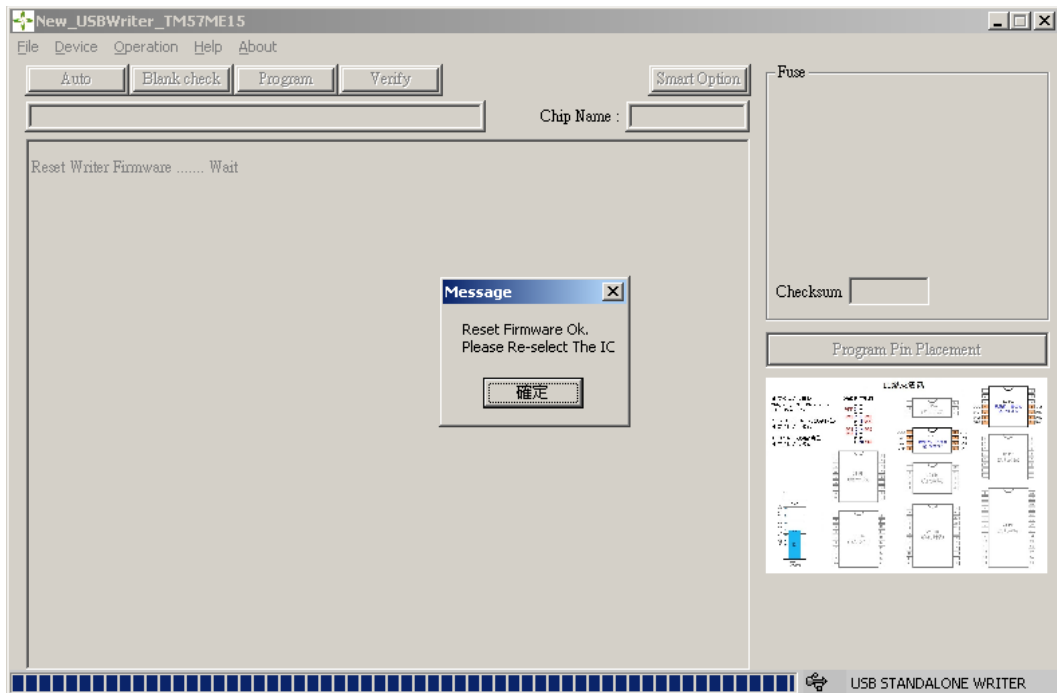


### 19. Reset Firmware Operation

Step 1: Select Help ->Reset Writer F/W ->TWR98 or TWR99

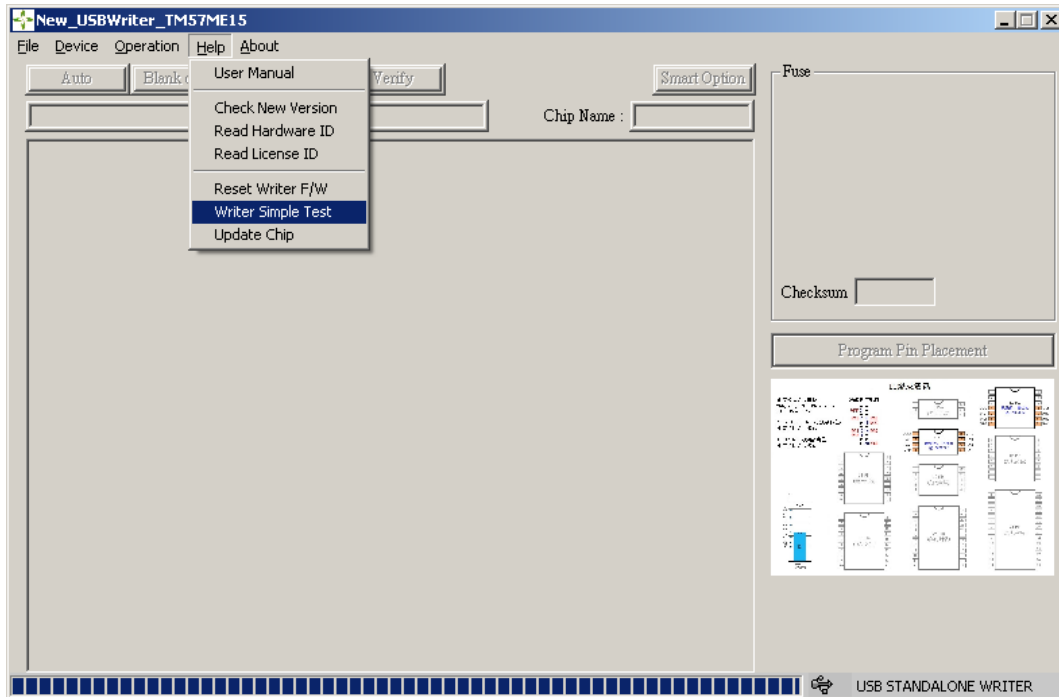


Step 2: Click on OK, reset firmware successfully

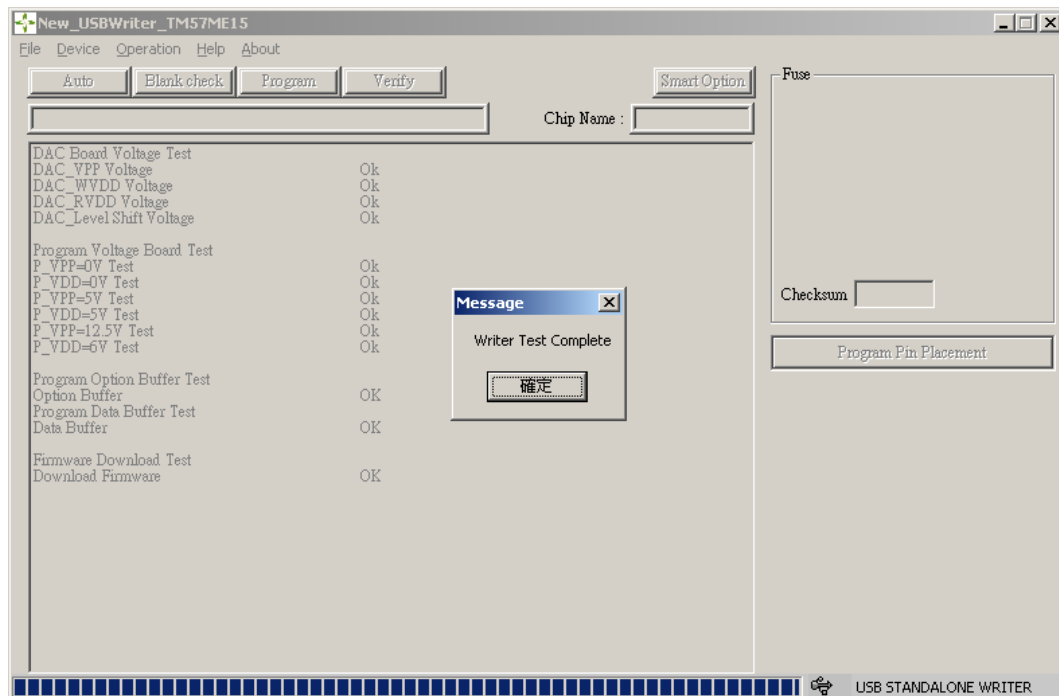


## 20. Writer Simple Test Operation

Step 1: Select Help ->Writer Simple Test (Please remove the program port cable and chip first)

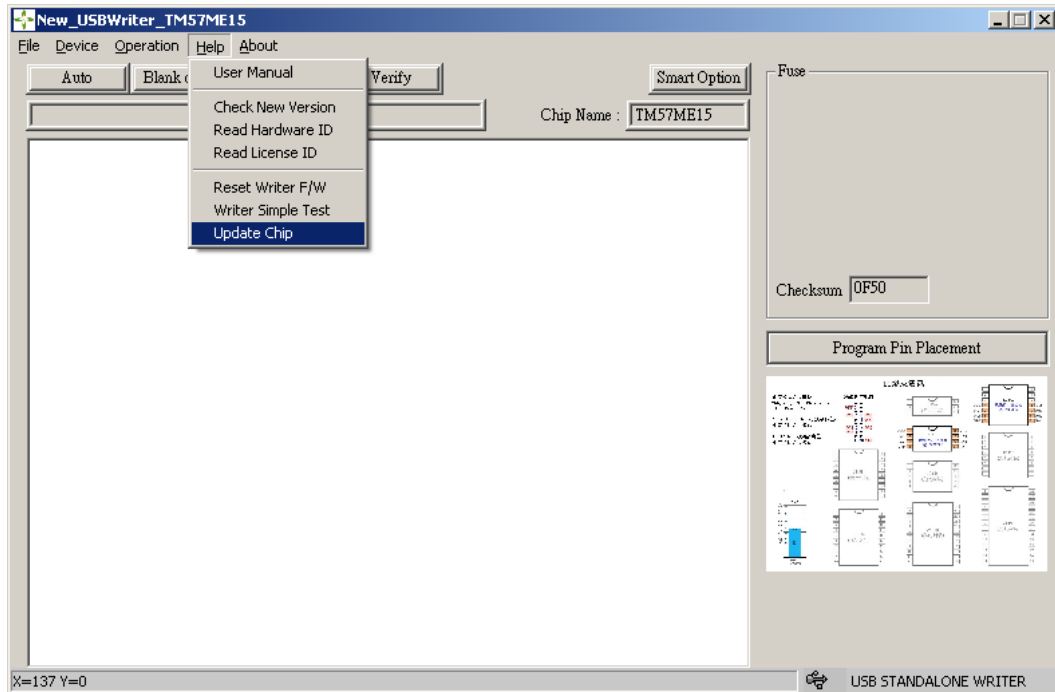


Step 2: Click on OK, writer simple test complete

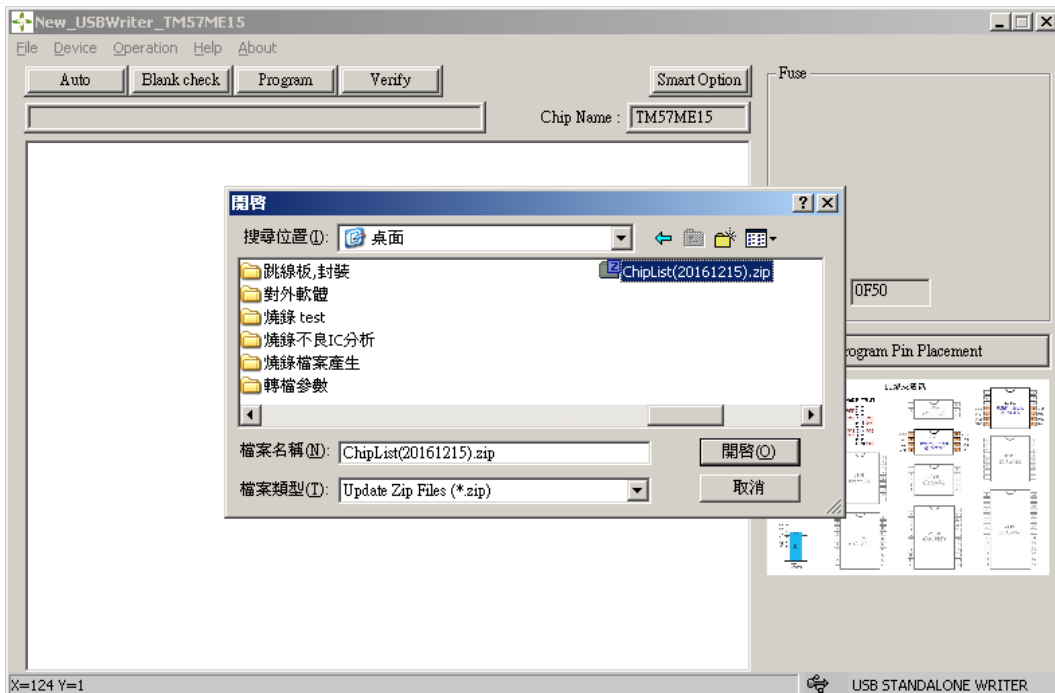


## 21. Software Plugin Operation

Step 1: Select Help ->Update Chip



Step 2: Select plugin file.zip



Step 3: Click on OK, software update successfully

