SEEIT France

TL866II+

Universal Programmer with ZIF40 socket and SPI connector
EPROMs / EEPROMs / I2C EEPROMs / FLASHs / SPI FLASHs / Microcontrollers / Logic IC test

CE RoHS

User manual (v1.20)

English:

Copyright :

Recycling of electronic products:

That equipment and its accessories shall be subject to a separate collection and correct disposal. This product has been made in agreement with the standard RoHS to regulate the use of lead in electronic devices. When this product will be obsolete, please, do not throw it to the household waste. According to the standard DEEE, Please, throw it in a collecting point, at a waste reception centre. He can also be head back to the supplier for the purchasing of a similar size and functions product. Please, do not throw the worn pile to the household waste.

Introduction:

The TL866II+ is an universal programmer which supports more than 13.000 components. Its device list contains all the manufacturers of FLASHs memories who use SPI serial acces mode, EPROMs and FLASHs EPROMs which use parallel acces mode (VPP from 3,3V to 21V), standard microcontrollers manufacturers (Atmel, Intel, Microchip, NXP, Philips, SST, Syncmos et Winbond), PLD/GAL from Lattice, as well as SRAM/DRAM test. Its program components are the fastest than others programmers because it supports Fast SPI algorithm mode. Thanks to its USB port, this programmer does not require any external power supply. It is also protected against shorts and overvoltage. It is possible to program the components on it ZIF40 socket or through it HE10 connector and with the ICSP cable provided. This programmer is very practical to use with a laptop computer at the office, on a business trip, or for automotive application. Support for Windows XP / VISTA / 7 / 8 / 10 (32 and 64 bits).

Hardware & Electrical specifications:

Dimensions board : 100 x 60 x 25mm, Weight : 95g
Dimensions package : 188 x 115 x 34mm, Weight : 250g
Power supply on USB port.
Interface : connect to laptop or PC throught USB port (USB 1.1, 2.0 or higher).

Product contents:

Programmer with zif 40 socket.
ICSP cable with 6 wires.
USB cable type A-B.
Software on CD-ROM.
User manual in English.

Chip supporting range:

All kinds 26 27 28 29 37 39 49 50 Parallel ROM, EPROM, EEPROM:

High-speed and wide-support. It can support TSOP32 TSOP40 TSOP48 chip to 64MBits and the programming speed is 5-10 times as fast as the similar.

24 25 35 45 85 93 95 Series EEPROM:

It can widely support series chips and the 8-16 PIN 25 series chips can be supported to 64MBits capacity.

Hundreds of the 51 series microcontroller:

AVR microcontroller:

Including ATMEGA series, ATtiny series, AT90XXX series microcontroller. AVR microcontroller can complete a one-to-one soft encryption by RC calibrating bytes. It can support high-speed parallel programming and at the same time all AVR ATMEGAxxx chips can be supported SPI series download programming by using ICSP interface. TQFP64, TQFP100PIN AMEGAxxx chips can be supported.

Microchip PIC10 PIC12 PIC16 PIC18 Series microcontrollers:

As for PIC series chips, it can support more than 300 models and more than 900 types of packages. It is one of the most comprehensive programmers of supporting PIC chips. For all kinds of PIC chips, it can program with optimization and high speed strictly according to the manufacturer manual. For the majority of chips, it can support ISCP in-circuit programming and at the same time it can program by using programming socket.

GAL programmable logic device programming:

It can support the common PLD device.

SRAM Test:

It can support common 24 61 62 DS12 series SRAM test, respectively data line testing, the address line testing, memory cell incremental testing and unit testing.

Superb performance in 54/74F/LS/HC CMOS4000 series IC comprehensive function test:

This is the first development programmer that can test common logic IC. This test can locate the logic gate errors and get any possible input combinations of IC.

Performance of this programmer:

Well-designed cheap professional programmer, Production of high-density SMD technology, a unified user interface, easy to use, fully functional, reliable program running of application software, ultra-small code -runs faster, supports bilingual(English and Chinese), it can automatically identify the operating system to install and run under WIN 2000/WIN XP/VISTA/WIN78/10 (32BIit/64Bit).

The great parts of other development programmers are not comparable to its functions that is not easy to reach.

This programmer has Built-in MCU with high-performance and high-capacity USB interface at the communication speed of 12Mbps being in line with (For each chip) well-designed programming algorithm and USB high-speed communications. It may be one of the fastest integrated development programmers, the speed has been met the needs of small-quantity efficient production.

Compared to similar products, some chips' programming speed is several times faster, even more than 10 times. For 4Mbits parallel FLASH ROM, the upgrade programmer (Version 3.01 or above) takes only about 35 seconds to finish programming (the total time of erase, write, verify). It only takes about 32 +79 seconds to read and write a 32MB TE28F320. In most cases, the parallel flash chip can be programmed at the same time it can be verified. The programming will be immediately stopped if there is an error. It only takes about 12 sec (read) +18 sec (write) to read and write an 8 Mbits of serial 25P80. It only takes about 98 sec +160 sec to read and write a chip of 64MB capacity. It supports common 8-PIN and 16-PIN 25 series chip with large capacity.

Note: 16MB or larger capacity flash chip cannot be programmed by general programmers because of programming speed, while the TL866II+ programmer can widely support 64MB Serial and parallel series of chips to 48PIN. It provides with the remarkable quality that is distinct from other common programmer.

Support a wide range of chips. At present, it can actually program more than **13000** chips. More chips will be supported in the process of the future upgrade.

Unique ultra-low power. The whole programmer is equipped with the ultra-low power chips and it is furnished with electricity via USB Interface. It is the first comprehensive programmer to program all the chips without an external power supply. Their own power consumption is less than 20mA (it is 7mA when the programmer is not programming, LED power indicator use largest electricity, 5mA each one) and Programming power loss rate is less than 20% so that the programmer can supply the high VCC VPP programming electric current. Programmable chip can be provided with enough programming power (the largest programming power output is 2 watts that is impossible for a chip to use 2 watts of programming power). And you hardly feel the heat of the programmer after such long continuous work.

Easily portable performance. This is one of the smallest products in the world and the dimensions are 10CM*6CM*2.5CM (it is as small as a driving license). In addition, you don't need to carry with an external power supply because of its ultra-low power that makes it more portable.

Programmable programming power supply: VPP and VCC programming voltages are independently program-controlled: programmable VCC is from 3.3V to 6.5V; VPP is from 3.3V to 21V. The fluctuation of power supply is minor because of the multi-stage LC filter.

Best over-voltage, over-current protection: VCC, VPP power supply of the Programmer is furnished with the independent Grade 3 over-current protection and the protection of automatically cutting off power supply. Each pin of 40-pin programming socket has VPP over-voltage protection. It can effectively prevent from putting a chip in the wrong place or short circuit due to other reason. In this programming case, it can also stop VPP high voltage from coming back to the internal of the programmer and damaging the device. Really make sure that the programmer will not be damaged when there is any worst-case short circuit. At the same time, the programmed chip can be efficiently protected.

This programmer will cut off the programming power supply VPP and VCC within 100us and send the message to the application program when there is short circuit. The programmer and PC won't be reset when there is short circuit because of the multilevel over-current protection.

40PIN universal pin: It is the most versatile pin among 40PIN quasi-universal pins. You don't need to move or turn around the chip when programming, just congruously put the chip forward and the handle direction of the programmer is the PIN1 place. Its design accords with the common operating habit of user.

This programmer is equipped with upgrading Function of the built-in hardware firmware program that can make sure your programmer's firmware flash and application software can be timely updated. You can complete the upgrade by downloading the upgrading program through the manufacturer's website.

Second development function of chip serial number. This programmer has a variety of automatic numbering functions that are used commonly. You can get any serial number through DLL Dynamic Link Libraries by using the custom algorithm. In mass production, the function enables each chip to produce only one identifying information that can be encrypted by the custom algorithm. So you can effectively protect your rights as a customer.

This TL866II+ programmer can program through the 40-PIN universal socket and is provided with an ICSP serial programming port. For some in-circuit serial programmable chips, you can program MCU by choosing ICSP port. You can get the clear instruction diagram in the programming software for the ICSP port wiring method. That is to say, you can directly program and update the chip soldered on the board.

Note: Now ICSP can in-circuit serial program ATMEL89S51, ATMEL89S52, AT45DBxxx, a whole series of AVR ATMEGAxxx, MICROCHIP PIC10Fxxx 12Fxxx 16Fxxx 18Fxxx, as well as a full serial of SYNCMOS SM59Dxx SM59Rxx. The variety of microcontroller that can be supported in-circuit programming will be continually increased in the future. Six ICSP wires of this programmer, except a ground wire, other wires led full functional I2C, SPI and UART serial main wire, be suitable for all kinds of serial communication. In addition, each wire can supply VCC, VPP or GND with high current.

Superb 54/74F/LS/HC CMOS4000 series IC functional tests: This is the first development programmer to test the common logic integrated circuit and this test can be located the errors of logic gate circuit, as well as test any possible input combinations of integrated circuit.

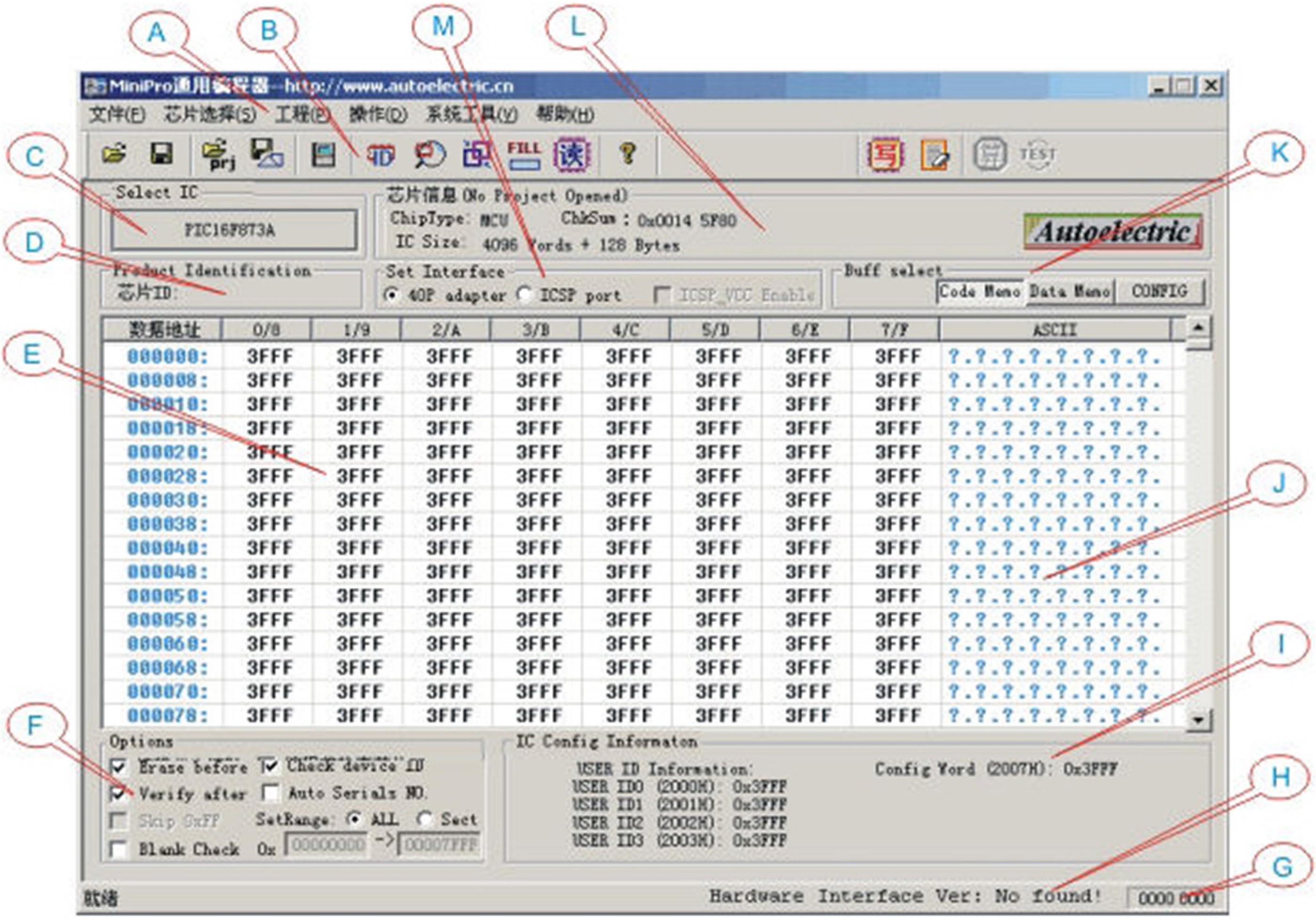
Programmer self-testing function: This programmer can test itself on each pin of VPP, VCC, GND and I/O information, at the same time it can run an inside short-circuit test on VPP, VCC current.

AVR microcontroller one-to-one soft encryption: AVR microcontroller has an RC Calibration (calibrate bytes). Only one of dozens of chips may have the same bytes value and it cannot be modified. Microcontroller software can read this value and determine whether the code is used by other chips. Through custom encryption algorithm, it can stop those who decrypt chips with ulterior motives from directly using. The encryption algorithm is so complex that it is not easy to decrypt. But, about "encryption", there is a problem for developers - each chip is different - it is impossible to manually calculate one by one and respectively compile source code if the algorithm is complex. This programmer can automatically read into RC bytes before programming. The developer can get the bytes value of the chip in the DLL dynamic function and then automatically calculate the encrypted data according to the request and put it in the memory, efficiently completing mass production. (A detailed encrypted instance of the ATMEGA8 in the installation package is available for reference)

Unified and convenient user interface: The user interface is well-designed and is in complete accord with the operating habit of the Windows series of software. Built-in binary editer is comparable to pure professional editing software. You can directly read, write and modify the files such as BIN format, HEX format, JED format and so on. In addition, it has the complete and practical project mode that makes the mass production more convenient and safer.

User interface:

Run the program, then the interface is shown as below:


A
B
M
L
C
D
E
F
K
J
I
H
G
MiniPro通用编程器—http://www.autoelectric.cn
文件(F) 芯片选择(S) 工程(P) 操作(O) 系统工具(Y) 帮助(H)
prj
ID
FILL
读
写
TEST
Autoelectric
Code Memo
Data Memo
CONFIG

Select IC: PIC16F873A

芯片信息 (No Project Opened)
ChipType: MCU   ChkSum : 0x0014 5F80
IC Size: 4096 Words + 128 Bytes

Product Identification
芯片ID:

Set Interface
● 40P adapter ○ ICSP port □ ICSP_VCC Enable

Buff select

数据地址	0/8	1/9	2/A	3/B	4/C	5/D	6/E	7/F	ASCII
000000:	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	?.?.?.?.?.?.?.?.
000008:	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	?.?.?.?.?.?.?.?.
000010:	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	?.?.?.?.?.?.?.?.
000018:	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	?.?.?.?.?.?.?.?.
000020:	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	?.?.?.?.?.?.?.?.
000028:	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	?.?.?.?.?.?.?.?.
000030:	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	?.?.?.?.?.?.?.?.
000038:	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	?.?.?.?.?.?.?.?.
000040:	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	?.?.?.?.?.?.?.?.
000048:	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	?.?.?.?.?.?.?.?.
000050:	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	?.?.?.?.?.?.?.?.
000058:	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	?.?.?.?.?.?.?.?.
000060:	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	?.?.?.?.?.?.?.?.
000068:	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	?.?.?.?.?.?.?.?.
000070:	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	?.?.?.?.?.?.?.?.
000078:	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	?.?.?.?.?.?.?.?.

Options
☑ Erase before ☑ Check device ID
☑ Verify after □ Auto Serials NO.
□ Skip 0xFF SetRange: ● ALL ○ Sect
□ Blank Check 0x 00000000 -> 00007FFF

IC Config Informaton
USER ID Information:
USER ID0 (2000H): 0x3FFF
USER ID1 (2001H): 0x3FFF
USER ID2 (2002H): 0x3FFF
USER ID3 (2003H): 0x3FFF

Config Word (2007H): 0x3FFF

就绪   Hardware Interface Ver: No found!   0000 0000

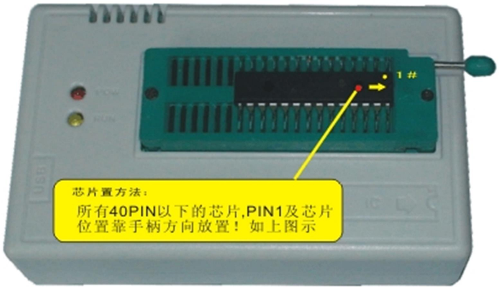
A. Main menu: all operation command of the application software can be found and performed.
B. Toolbar: provide the normal command such as Open, Save, Read, Blank check, Erase, Verify and so on.
C. The chip select shortcut buttons.
D. ID Information Bar: the present chip ID can be shown here
E. data buffer : hexadecimal data you need to program can be shown in the form of 8 bits or 16 bits according to the chip type.
F. Programming options
G. Show present specified address when editing data buffer.
H. Communication status indicator: If there is a USB device, display firmware version number. Conversely, display “No Device”.
I. IC Configuration Information: display the configuration information of the present programmed chip (here different chip has different information)
J. data buffer: display the ASCII data of the present chip
K. Buffer select button: select the present buffer, more than one buttons will be displayed if the chip has multiple buffers.
L. Basic Information Bar: show the present programmed chip information, showing project information in the project mode.
M. Programming port select button: ICSP button will become gray and invalid when the ICSP port programming is not available.

Quick start guide:

I/ Be ready for the hardware:

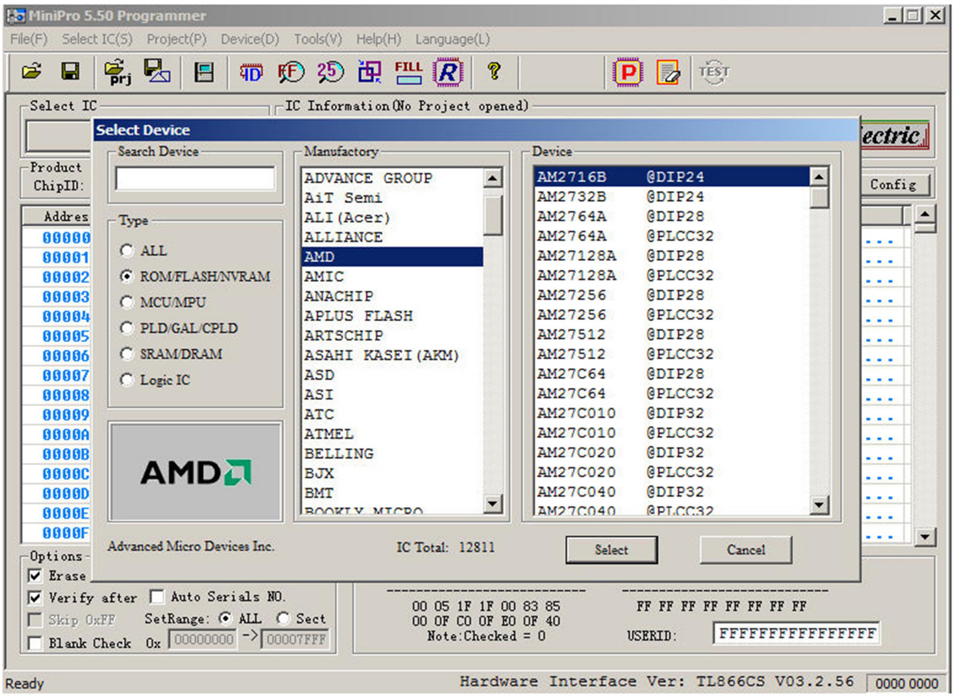
Please make sure properly installed the application software and USB driver of the universal programmer before connecting the USB communication line. At this time, the red power supply indicator shows proper connection (lights up) and the yellow power supply indicator goes out waiting for programming. (If the yellow power supply indicator flashes at all times, it indicates that the USB driver installation is wrong or there is no installation of the USB programmer device driver). You can continue to do the next one if the programmer application software displays the firmware version number in the lower right.

Chip Place Way : PIN1 of the within-40-pins chips should be placed near the ZIF socket handle, just as illustrated:



II/ Select the programmed chip:

Click “Select IC” to select the present chip model you need to program, as below:



IC Information (No Project opened)

Type: ○ ALL ● ROM/FLASH/NVRAM ○ MCU/MPU ○ PLD/GAL/CPLD ○ SRAM/DRAM ○ Logic IC

Manufactory: ADVANCE GROUP, AiT Semi, ALI (Acer), ALLIANCE, AMD, AMIC, ANACHIP, APLUS FLASH, ARTSCHIP, ASAHI KASEI (AKM), ASD, ASI, ATC, ATMEL, BELLING, BJX, BMT, BOOKLY MICRO

Device	
AM2716B	@DIP24
AM2732B	@DIP24
AM2764A	@DIP28
AM2764A	@PLCC32
AM27128A	@DIP28
AM27128A	@PLCC32
AM27256	@DIP28
AM27256	@PLCC32
AM27512	@DIP28
AM27512	@PLCC32
AM27C64	@DIP28
AM27C64	@PLCC32
AM27C010	@DIP32
AM27C010	@PLCC32
AM27C020	@DIP32
AM27C020	@PLCC32
AM27C040	@DIP32
AM27C040	@PLCC32

Advanced Micro Devices Inc. IC Total: 12811

Addres: 00000 00001 00002 00003 00004 00005 00006 00007 00008 00009 0000A 0000B 0000C 0000D 0000E 0000F

☑ Erase
☑ Verify after ☐ Auto Serials NO.
☐ Skip 0xFF SetRange: ● ALL ○ Sect
☐ Blank Check 0x 00000000 -> 00007FFF

```
00 05 1F 1F 00 83 85        FF FF FF FF FF FF FF FF
00 0F C0 0F E0 0F 40
Note:Checked = 0            USERID: FFFFFFFFFFFFFFFF
```

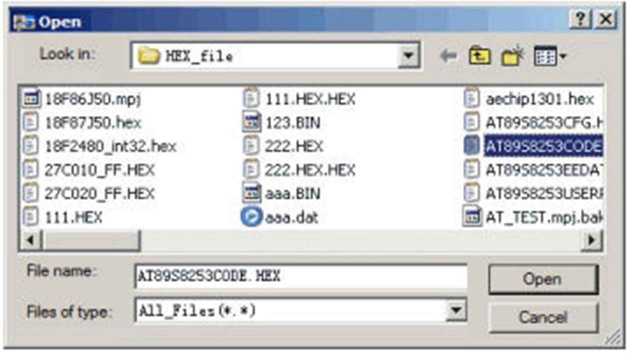
Ready Hardware Interface Ver: TL866CS V03.2.56 0000 0000

Please note: if some type of packages are not listed in the menu or the present chips are non-DIP packages, you can program by checking the IC product instruction and directly connecting the one-to-one pin.

III/ Load the buffers data:

Programming operation can be performed only when the present chip data is loaded to the buffers. Click “Open file” and open the present chip data file and then bring out the dialogue box as below:

1. select the file you want to program



Look in: HEX_file

18F86J50.mpj, 18F87J50.hex, 18F2480_int32.hex, 27C010_FF.HEX, 27C020_FF.HEX, 111.HEX, 111.HEX.HEX, 123.BIN, 222.HEX, 222.HEX.HEX, aaa.BIN, aaa.dat, aechip1301.hex, AT89S8253CFG.H, AT89S8253CODE, AT89S8253EEDAT, AT89S8253USER, AT_TEST.mpj.bak

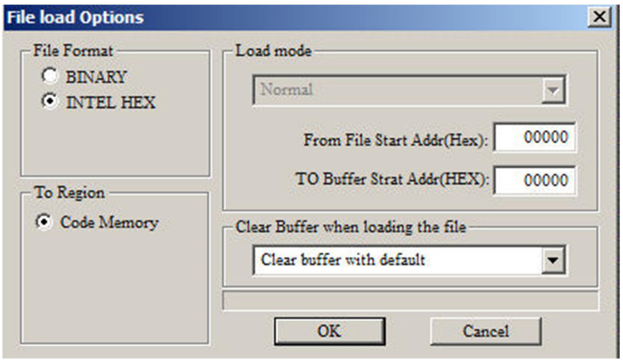
File name: AT89S8253CODE.HEX

Files of type: All_Files(*.*)

2. Select the load mode: generally, specifying the buffer is okay if there are multiple buffers, others are default.

Load all the data to the specified buffer in the same way.

For Microchip PIC microcontroller, HEX file can be once loaded to all buffers if it is in accord with MICROCHIP IDE environment, including configuration information.



File load Options

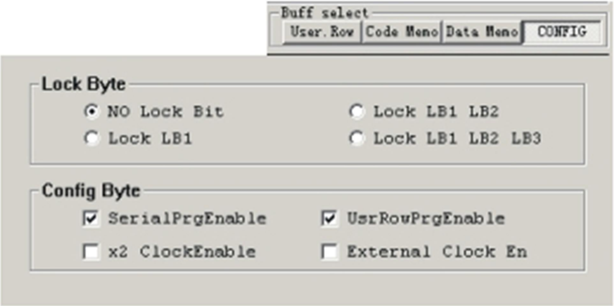
File Format
○ BINARY
● INTEL HEX

To Region
● Code Memory

Load mode
Normal
From File Start Addr(Hex): 00000
TO Buffer Strat Addr(HEX): 00000

Clear Buffer when loading the file
Clear buffer with default

IV/ Set chip configuration information and lock option:
Please press "CONFIG" button in the Buffer select if you need to protect the chip or do other config operations. And then bring out the config dialogue box. The config information is different from the chip model. For example, if you select as AT89S8253, the below dialogue box will be brought out:

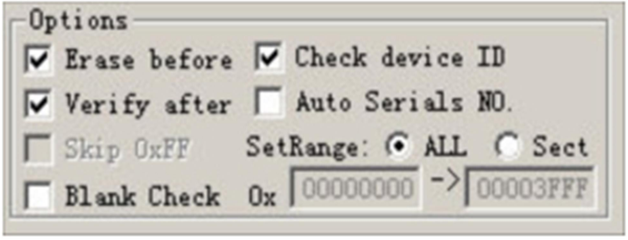


Lock Byte
● NO Lock Bit
○ Lock LB1
○ Lock LB1 LB2
○ Lock LB1 LB2 LB3

Config Byte
☑ SerialPrgEnable
☑ UsrRowPrgEnable
□ x2 ClockEnable
□ External Clock En

Do the next one after setting up the configuration information and protection option

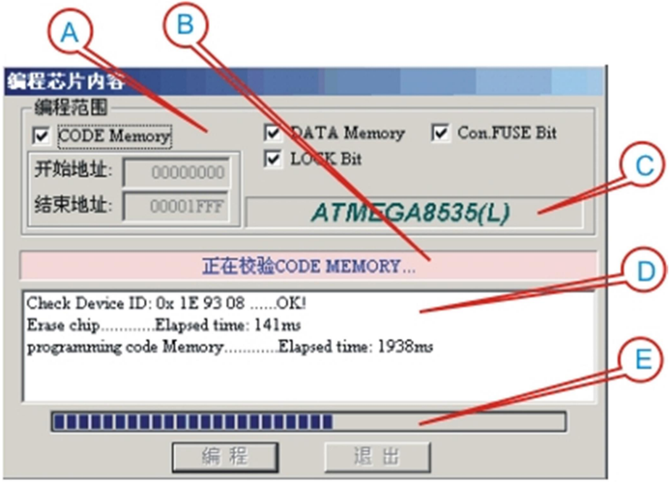
V/ programming set:
In most cases, the Default Settings is ok. You can tick off "Auto Serials No." if you need to number chip.
The specific method reference: <programming details> - <set IC serials number>



Options
☑ Erase before
☑ Check device ID
☑ Verify after
□ Auto Serials NO.
□ Skip 0xFF
SetRange: ● ALL ○ Sect
□ Blank Check
0x 00000000 -> 00003FFF

Please note: these options, such as "Erase Before", "Blank Check", "Skip 0xFF", "Check device ID", can be ticked off according to your needs. "Verify After": most of programmers contain the inner verify check, but you'd better perform the "Verify After" operation in order to make sure the proper programming.

VI/ Program: click "Read" button to bring out the dialog box, as show below:



编程芯片内容

编程范围
☑ CODE Memory
开始地址: 00000000
结束地址: 00001FFF
☑ DATA Memory
☑ Con.FUSE Bit
☑ LOCK Bit
ATMEGA8535(L)

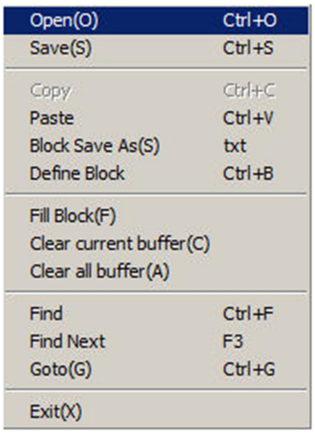
正在校验CODE MEMORY...

```
Check Device ID: 0x 1E 93 08 ......OK!
Erase chip...........Elapsed time: 141ms
programming code Memory...........Elapsed time: 1938ms
```

A. select programming buffer, default as all buffers
B. Present operating state prompt area
C. Present chip model
D. Programming operation information: you can see the programming time of every step. Units: MS
E. progress bar
Prompt: the above-mentioned operation is indispensable to programming a chip. The operations are different from the chip model.

File menu :

File menu items are as follows:



◆Open file

Load the hexadecimal file or binary file to the specified buffer, GAL chip should be loaded JED format file.

◆Save file

Save the present buffer as the HEX file of hexadecimal format or BIN file of binary format. Save as JED format file when programming GAD chip.

Note: MICROCHIP MCU can be loaded the HEX file generated by MICROCHIP IDE development environment to all buffers and all the buffers can be saved to HEX file. At the same time it is fully compatible with MICROCHIP IDE development environment.

◆Copy, Paste, Block Save As, Define Block, Fill Block, Clear current buffer, Clear all buffer

You can use shortcut keys or right-click menu to realize these menu functions.

See the detailed functions of editing file -> "Edit Buffer".

◆Find, Find Next, address, Goto

You can use shortcut keys or right-click menu to realize these menu functions.

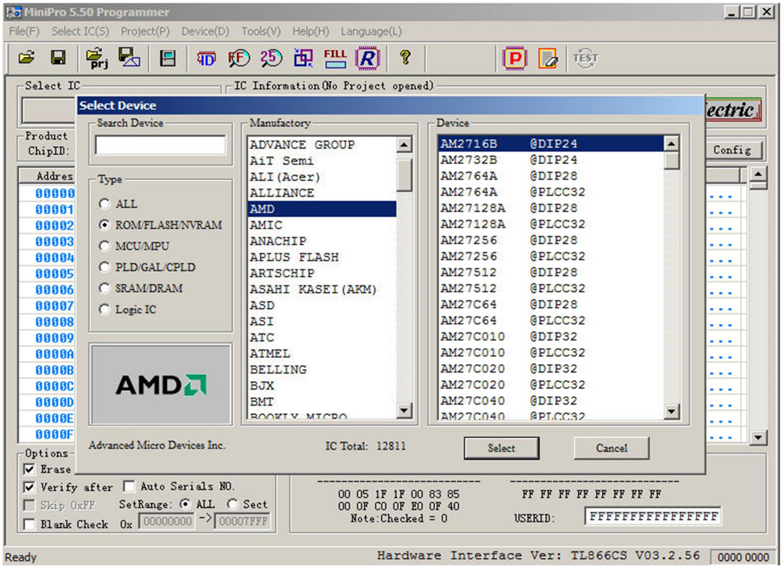
See the detailed functions of editing file -> "Edit Buffer".

◆Exit

Exit TL866II+ programming application program

Select IC menu:

Directly select the chip you want to program according to the IC type that is easy and convenient to operate.



Type

○ ALL
● ROM/FLASH/NVRAM
○ MCU/MPU
○ PLD/GAL/CPLD
○ SRAM/DRAM
○ Logic IC

Manufactory:
ADVANCE GROUP
AiT Semi
ALI (Acer)
ALLIANCE
AMD
AMIC
ANACHIP
APLUS FLASH
ARTSCHIP
ASAHI KASEI (AKM)
ASD
ASI
ATC
ATMEL
BELLING
BJX
BMT
BOOKLY MICRO

Device	
AM2716B	@DIP24
AM2732B	@DIP24
AM2764A	@DIP28
AM2764A	@PLCC32
AM27128A	@DIP28
AM27128A	@PLCC32
AM27256	@DIP28
AM27256	@PLCC32
AM27512	@DIP28
AM27512	@PLCC32
AM27C64	@DIP28
AM27C64	@PLCC32
AM27C010	@DIP32
AM27C010	@PLCC32
AM27C020	@DIP32
AM27C020	@PLCC32
AM27C040	@DIP32
AM27C040	@PLCC32

00000 00001 00002 00003 00004 00005 00006 00007 00008 00009 0000A 0000B 0000C 0000D 0000E 0000F

Advanced Micro Devices Inc. IC Total: 12811

Options
☑ Erase
☑ Verify after ☐ Auto Serials NO.
☐ Skip 0xFF SetRange: ● ALL ○ Sect
☐ Blank Check 0x 00000000 -> 00007FFF

00 05 1F 1F 00 83 85
00 0F C0 0F E0 0F 40
Note:Checked = 0

FF FF FF FF FF FF FF FF
USERID: FFFFFFFFFFFFFFFF

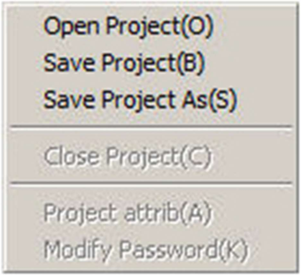
Ready Hardware Interface Ver: TL866CS V03.2.56 0000 0000

Note: For the IC with same model but different package, if all of the packages (no including DIP package) cannot be listed, you can directly connect the corresponding pins to program by referring to the IC product manual.

Project menu:

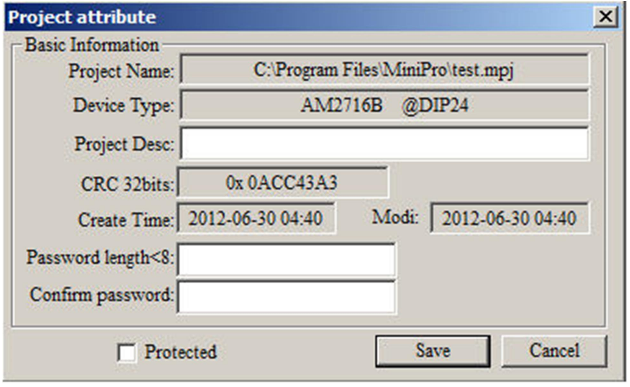
In order to make the chip programming process more reliable, the project file needs to be set up. This file has the current buffer data and working environment settings, including the current device information, all Options settings and related settings of automatic numbering. It is convenient to use for daily mass production. The password-protected project can be set, that can protect the security of the product program to some extent.

Project menu items are as follows:



Save project:

Select [Project] - [Save Project] to set up a project after setting parameters of the chip in the application program. The project information can be shown. Click [Save Project], input the project name and then click OK. The following dialog box will appear:



Project attribute

Basic Information

Project Name: C:\Program Files\MiniPro\test.mpj

Device Type: AM2716B @DIP24

Project Desc:

CRC 32bits: 0x 0ACC43A3

Create Time: 2012-06-30 04:40 Modi: 2012-06-30 04:40

Password length<8:

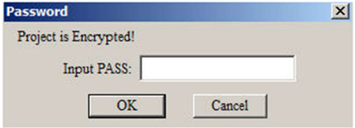
Confirm password:

□ Protected

1. The password can be emptied, that means the password-protected project is not set.
2. The password must be inputted if the project is set as protected mode. The related data of the project cannot be modified after setting protected mode. In addition, partial functions of programmer are not allowed to use.

Open Project:

Open an current project, select [Project] - [Open Project], select the project name in the window and click OK. If the project is password-protected, the following dialog box will pop up. (the project can be directly opened if no password)



Password

Project is Encrypted!

Input PASS:

Save Project As:

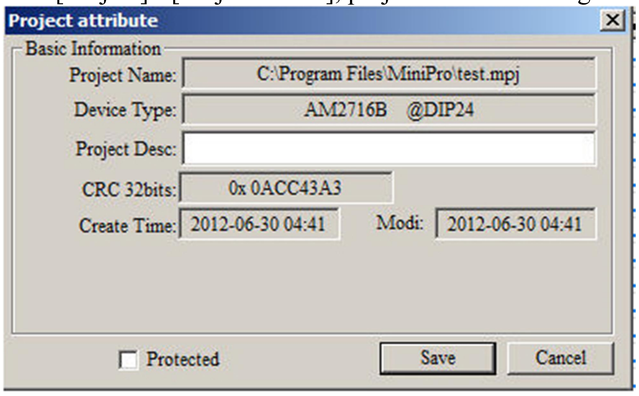
Save the current project as another project name. Refer to [Save project].

Close project:

Close the current project. Switch to the normal programming mode and clear the current buffer data.

Project Attrib:

Select [Project] - [Project Attrib], project attribute dialog box pop up.



Project attribute

Basic Information

Project Name: C:\Program Files\MiniPro\test.mpj

Device Type: AM2716B @DIP24

Project Desc:

CRC 32bits: 0x 0ACC43A3

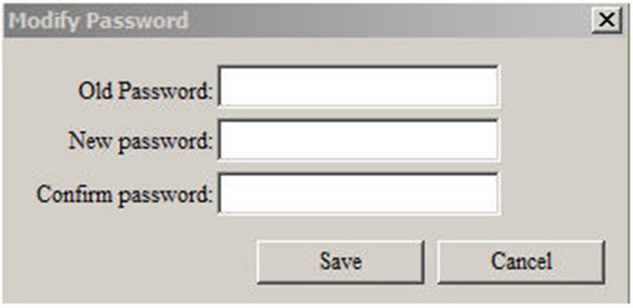
Create Time: 2012-06-30 04:41 Modi: 2012-06-30 04:41

□ Protected

The Project attribute dialog box can change the project description and project protection mode. The project password needs to be inputted when saving.

Modify password:

Re-set the project password



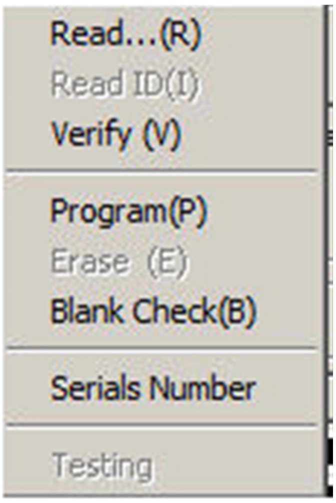
Prompt ：

An exact description of the project can distinguish from a large number of projects. The project mode is suitable for mass production. The project file has been encrypted. Proper protection of the project password can stop from copying. It can protect data to some extent.

The project file includes 32-bit CRC check information when saving or opening. It can avoid damage of the file or other uncertainties

Device menu:

The menu functions are for the chip programming operation. Device menu items are as follows:



Read...: View: <detailed description> -<Read the chip>

Read ID: simply read the chip ID and display information in the ID display area.

Verify: View: <detailed description> -<Check chip>

Program: View: <detailed description> -<Program>

Erase: View: <detailed description> -<Chip Erase>

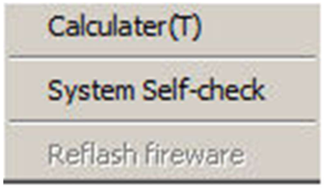
Blank Check: View: <detailed description> -<Blank check>

Serials Number: View: <detailed description> -<Serials Number>

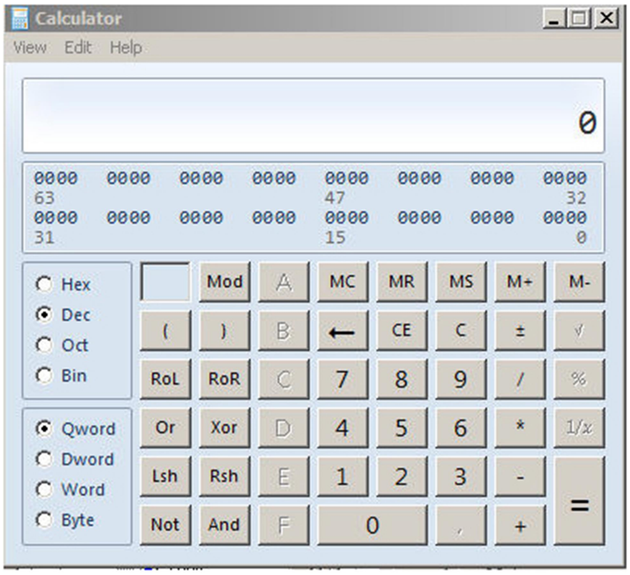
Testing: View: <detailed description> -<Testing>

Tools menu:

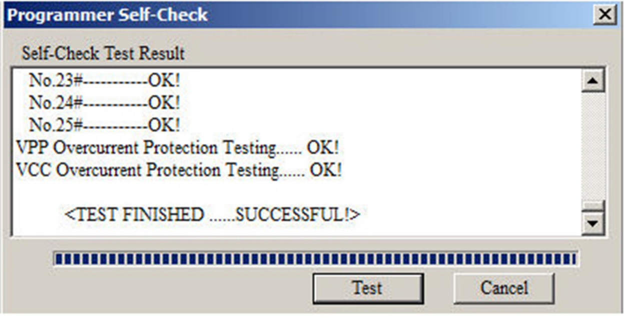
The menu functions are for the chip programming operation. Tools menu items are as follows:



Calculator:
This is a calculator that comes with Windows and the scientific model calculation is very convenient for a variety of formats.



Programmer Self-Check:
Self-test on the programmer hardware
Click to pop up the following dialog box:


Programmer Self-Check

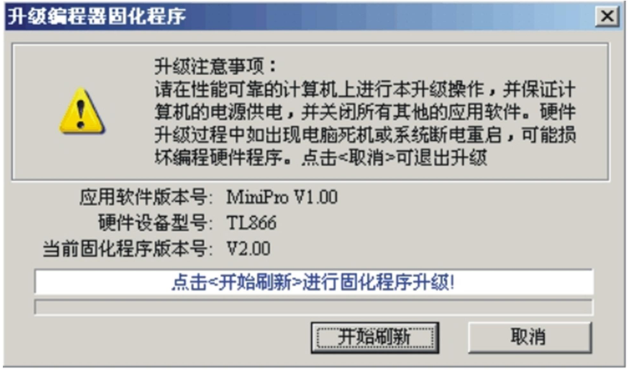
Self-Check Test Result

```
  No.23#-----------OK!
  No.24#-----------OK!
  No.25#-----------OK!
VPP Overcurrent Protection Testing...... OK!
VCC Overcurrent Protection Testing...... OK!

        <TEST FINISHED ......SUCCESSFUL!>
```

Note: Please remove the IC in the 40-PIN socket and ICSP cable before programmer begins to self-check. The IC may be damaged if no removing. Because when self-checking, programmer will test by applying VPP, VCC and GND to all pins and will perform an inside short-circuit overcurrent test (at the same time apply VPP, VCC and GND to the same pin). The testing information will be shown in the dialog box.

Firmware FLASH refresh:
Refresh and upgrade the firmware program
After you upgrade the application, if there is an upgrading need, the application will prompt to refresh the firmware; otherwise his refresh function is disabled. Click <Refresh firmware > to pop up the following dialog box:


升级编程器固化程序

升级注意事项：
请在性能可靠的计算机上进行本升级操作，并保证计算机的电源供电，并关闭所有其他的应用软件。硬件升级过程中如出现电脑死机或系统断电重启，可能损坏编程硬件程序。点击<取消>可退出升级

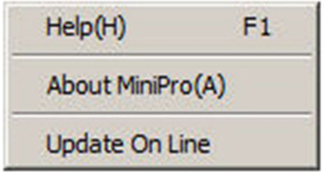
应用软件版本号: MiniPro V1.00
硬件设备型号: TL866
当前固化程序版本号: V2.00

点击<开始刷新>进行固化程序升级!

Refresh Note: Please make sure the reliable performance of your PC and the uninterrupted electricity supply to your PC. At the same time, please close other application programs. The programming firmware program may be damaged if there is a computer crash or power failure in the process of upgrade. Click <Cancel> to exit upgrade.
Close all other programs, and ensure reliable computer power!
Click <Refresh> to begin, the refresh total time is about 30 seconds. Click <Cancel> to exit refresh.

Help menu:

Help menu items are as follows:

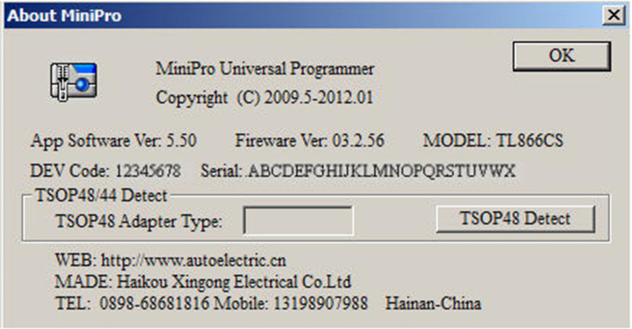


Help:

Shortcut keys F1 or click <help> to pop up the help files

About TL866II+ :

The programmer information is shown below:



MiniPro Universal Programmer
Copyright (C) 2009.5-2012.01

App Software Ver: 5.50 Fireware Ver: 03.2.56 MODEL: TL866CS
DEV Code: 12345678 Serial: ABCDEFGHIJKLMNOPQRSTUVWX

TSOP48/44 Detect
TSOP48 Adapter Type:

WEB: http://www.autoelectric.cn
MADE: Haikou Xingong Electrical Co.Ltd
TEL: 0898-68681816 Mobile: 13198907988 Hainan-China

As shown above, "DEV Code" and "Serial" are the unique number of each programmer and this encrypted serial number is randomly generated 24 digits within the programmer hardware. The pirates cannot copy all of the serial number. You can verify whether the product you bought is original according to the number in order to protect users' rights.

Update online:

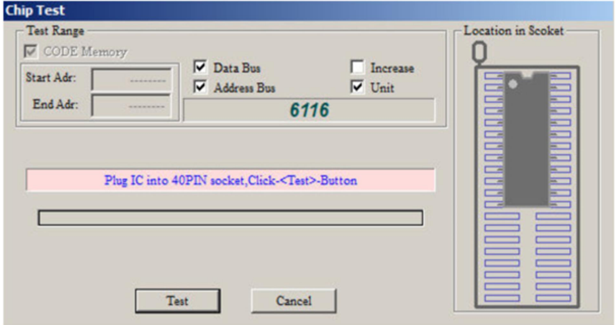
Open this Programmer manufacturer's website to see if there is the upgrade version.

Menu Language:

To select your language.

RAM test:

Select IC as RAM chips and click [test] button in the toolbar to pop up the following dialog box:



Test Range
☑ CODE Memory
Start Adr:
End Adr:
☑ Data Bus
☑ Address Bus
□ Increase
☑ Unit
6116

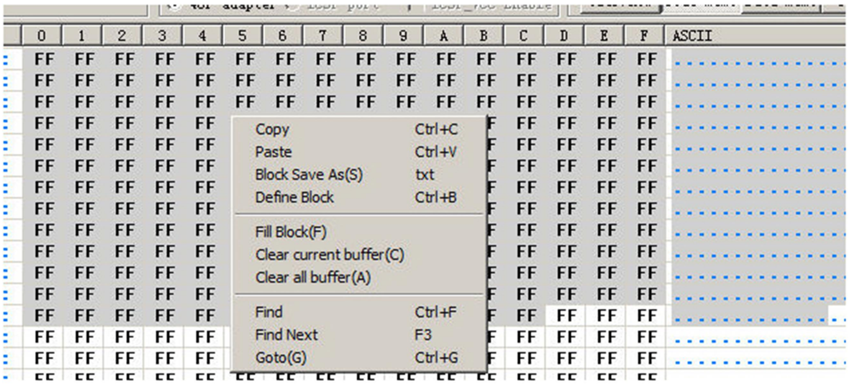
Plug IC into 40PIN socket,Click-<Test>-Button

RAM test: There are four methods and the RAM unit can be tested whether the function is normal by these testing methods. General programmer cannot test whether RAM unit is good or bad because it only read and write the RAM units. For example, if there is a short circuit between two adjacent address lines, it is not possible to check out the problem to simply read and write the RAM units data. So each testing way is not complete.

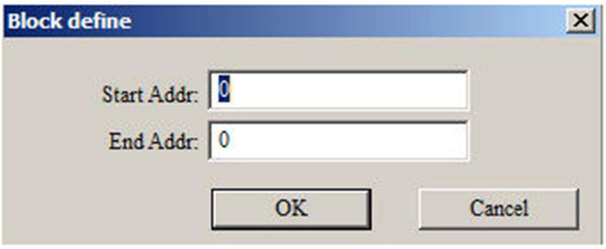
Insert chip and click [test] button to start testing RAM.

How to edit the Buffer:

Define Block:
Define block in two ways.
1. The first method： press the mouse left key and move the mouse to select a block of buffer data, right click to pop up the dialog box as shown below:



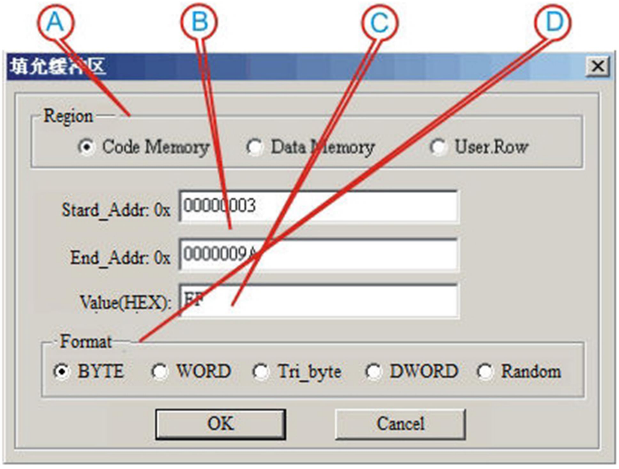
2. The second method: Select 【Define block】 in 【Main menu】 or mouse 【Right-click menu】 or direct press shortcut keys "CTRL + B" to pop up the following dialog box, input a start address and end address, and then press "OK" to complete the block definition.



Start Addr: 0
End Addr: 0

You can follow-up operation for the defined data block: Copy Block, Fill Block, Block Save As TXT file.

Fill Block:
Fill Block it means replacing a certain period of data that includes consecutive addresses with a fixed value.
To fill the buffer, a certain period of data consecutive addresses in the code buffer replaced with a fixed value。
In 【Right-click menu】, Select 【Fill Block】 to pop up the following dialog box:



Region: ● Code Memory ○ Data Memory ○ User.Row
Stard_Addr: 0x 00000003
End_Addr: 0x 0000009A
Value(HEX): FF
Format: ● BYTE ○ WORD ○ Tri_byte ○ DWORD ○ Random

A. Select the filled buffer region, the default value is the current buffer in the window.
B. Set the start and end address. If you do not define the block, the default value will be all the area of the current buffer.
C. Value (HEX): to be allowed a maximum of 4 bytes. If the fill mode is random, this value can be ignored.
D. Fill Format, the default format: the default is single-byte if the chip is programmed in 8-byte way; the fault is double-byte if the chip is programmed in 16-byte way. It is up to you.

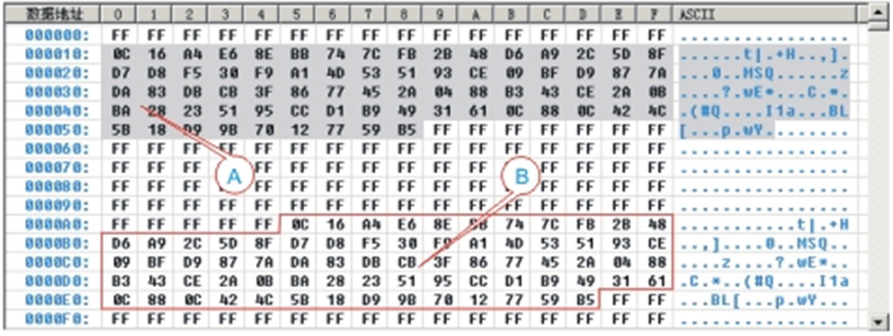
Copy:
After defining the data block, you can select 【Copy】 in【Right-click menu】 and then the contents of the block has been copied to the WINDOWS clipboard. Also you can press shortcut key <CTRL + C to complete the copy.

Paste:

Function: fill the buffer with the copied block

Operation: move the cursor to allow the buffer to the start address and press <CTRL + V> shortcut key to complete the paste.

A region data is copied to B region as below:



```
数据地址  0  1  2  3  4  5  6  7  8  9  A  B  C  D  E  F  ASCII
000000:  FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF  ................
000010:  0C 16 A4 E6 8E BB 74 7C FB 2B 48 D6 A9 2C 5D 8F  ......t|.+H..,].
000020:  D7 D8 F5 30 F9 A1 4D 53 51 93 CE 09 BF D9 87 7A  ...0..MSQ......z
000030:  DA 83 DB CB 3F 86 77 45 2A 04 88 B3 43 CE 2A 0B  ....?.wE*...C.*.
000040:  BA 28 23 51 95 CC D1 B9 49 31 61 0C 88 0C 42 4C  .(#Q....I1a...BL
000050:  5B 18 09 9B 70 12 77 59 B5 FF FF FF FF FF FF FF  [...p.wY........
000060:  FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF  ................
000070:  FF FF FF    FF FF FF FF FF FF FF    FF FF FF FF  ................
000080:  FF FF FF    FF FF FF FF FF FF FF    FF FF FF FF  ................
000090:  FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF  ................
0000A0:  FF FF FF FF FF 0C 16 A4 E6 8E BB 74 7C FB 2B 48  ...........t|.+H
0000B0:  D6 A9 2C 5D 8F D7 D8 F5 30 F9 A1 4D 53 51 93 CE  ..,]....0..MSQ..
0000C0:  09 BF D9 87 7A DA 83 DB CB 3F 86 77 45 2A 04 88  ....z....?.wE*..
0000D0:  B3 43 CE 2A 0B BA 28 23 51 95 CC D1 B9 49 31 61  .C.*..(#Q....I1a
0000E0:  0C 88 0C 42 4C 5B 18 D9 9B 70 12 77 59 B5 FF FF  ...BL[...p.wY...
0000F0:  FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF  ................
```

Note: In order to speed up the paste, the clipboard data format is binary format this programmer exclusively uses, so other WINDOW applications can not directly use the copied data in the clipboard. If you want to copy the block of data to other applications, please use 【Blocks Save As】 TXT file function.

Block Save As:

You can output the defined data block as TXT files to enable designers to conveniently use when programming. The text format can be automatically arranged in 16-byte or 8-byte way.

Operation: After the definition of buffer block, click the mouse right key to pop up context menu, select 【Block Save As】.

Clear current buffer:

Function: Clear the current buffer that application window displays.

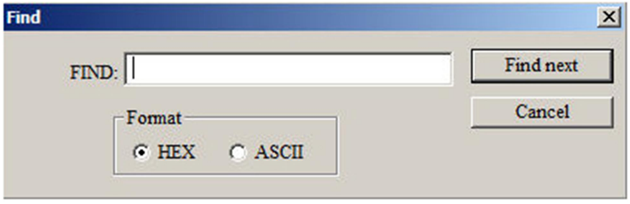
Clear all buffer:

Function: Clear all chip buffer as the default value.

Find, Find Next：

Function: Find HEX or ASCII character strings in the current buffer.

Operation: Press <CTRL + F> shortcut key or click 【Find】 in right-click menu to pop up the following dialog box:



FIND:

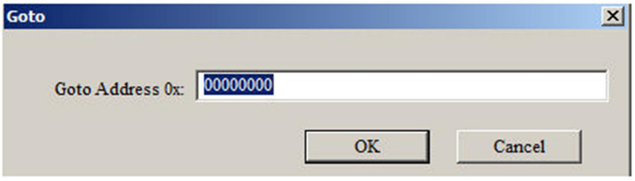
Format ● HEX ○ ASCII

Input the HEX value or ASCII character strings you want to find and click "Find" button in the dialog box. When there is matching hexadecimal data or character string in program code buffer, the cursor will be positioned to the first matching address found. Press F3 key to continue to find the next until the search in the whole buffer is completed.

Go to Address：

Function: Move the cursor to the address specified by the current buffer.

Operation: Click shortcut key <CTRL + G> or select 【Go to】 in the right-click menu to pop up the following dialog box:



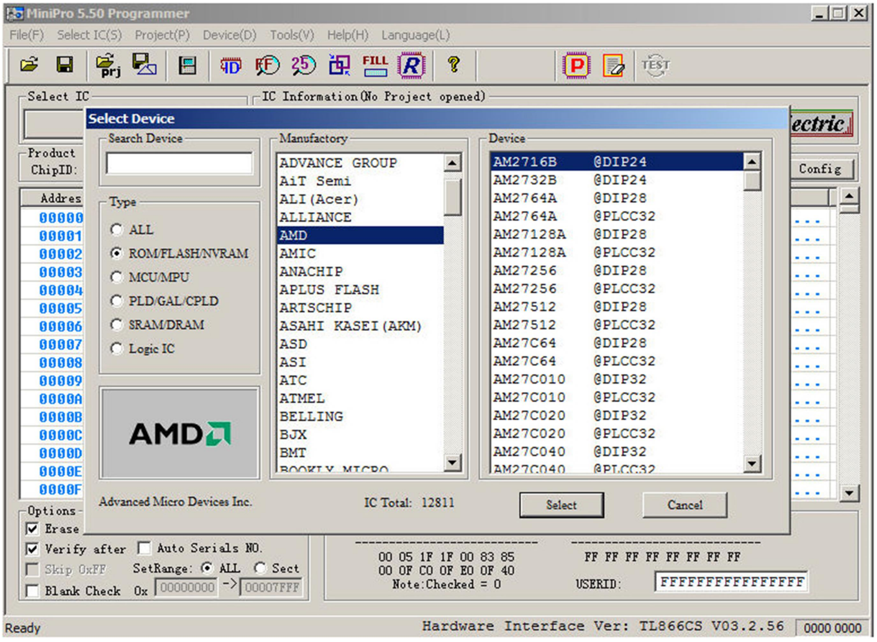
Goto Address 0x: 00000000

Enter the address, press OK button and then the cursor will move to the specified address.

How to program a component:

I/ Select IC:

Directly select the chip you want to program according to the IC type that is easy and convenient to operate.



IC Information (No Project opened)

Search Device

Type
- ○ ALL
- ● ROM/FLASH/NVRAM
- ○ MCU/MPU
- ○ PLD/GAL/CPLD
- ○ SRAM/DRAM
- ○ Logic IC

Manufactory: ADVANCE GROUP, AiT Semi, ALI (Acer), ALLIANCE, AMD, AMIC, ANACHIP, APLUS FLASH, ARTSCHIP, ASAHI KASEI (AKM), ASD, ASI, ATC, ATMEL, BELLING, BJX, BMT, BOOKLY MICRO

Device	
AM2716B	@DIP24
AM2732B	@DIP24
AM2764A	@DIP28
AM2764A	@PLCC32
AM27128A	@DIP28
AM27128A	@PLCC32
AM27256	@DIP28
AM27256	@PLCC32
AM27512	@DIP28
AM27512	@PLCC32
AM27C64	@DIP28
AM27C64	@PLCC32
AM27C010	@DIP32
AM27C010	@PLCC32
AM27C020	@DIP32
AM27C020	@PLCC32
AM27C040	@DIP32
AM27C040	@PLCC32

Advanced Micro Devices Inc. IC Total: 12811

Options
- ☑ Erase
- ☑ Verify after □ Auto Serials NO.
- □ Skip 0xFF SetRange: ● ALL ○ Sect
- □ Blank Check 0x 00000000 -> 00007FFF

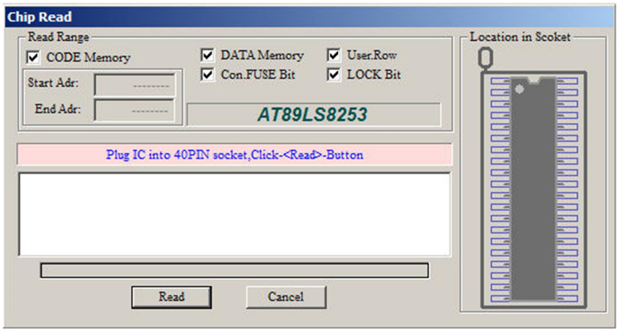
```
00 05 1F 1F 00 83 85        FF FF FF FF FF FF FF FF
00 0F C0 0F E0 0F 40
 Note:Checked = 0           USERID: FFFFFFFFFFFFFFFF
```

Ready   Hardware Interface Ver: TL866CS V03.2.56   0000 0000

Note: For the IC with same model but different package, if all of the packages (no including DIP package) cannot be listed, you can directly connect the corresponding pins to program by referring to the IC product manual.

II/ Device\Read:

Read the chip data to the buffer. May be different chip reads in different window. Taking the AT89S8253 chip for example to explain how to read the chip. Click [Read] Button in the toolbar to pop up the following dialog box:



Read Range
- ☑ CODE Memory ☑ DATA Memory ☑ User.Row
- ☑ Con.FUSE Bit ☑ LOCK Bit
- Start Adr: --------
- End Adr: --------

AT89LS8253

Plug IC into 40PIN socket,Click-<Read>-Button

[Read Range], at first set the range, including [CODE] [DATA] [FUSE] [LOCK], and it's invalid when reading start address and end address. Press [Read] button to start reading the chip data. Note: If the chip is encrypted, all the value read out shows 0xFF.

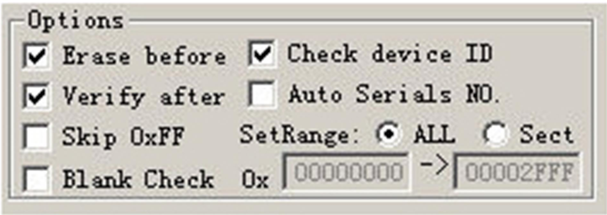
After reading is completed, in the information column, reading time for each buffer will be shown.

Note: in the process of reading chip, the programmer will not test the error. You can use <verify> function if you want to verify whether the read data is correct. You can get the detailed operation by following <verify> instructions. The programmer will check chip ID before operation.

III/ Device\Program:

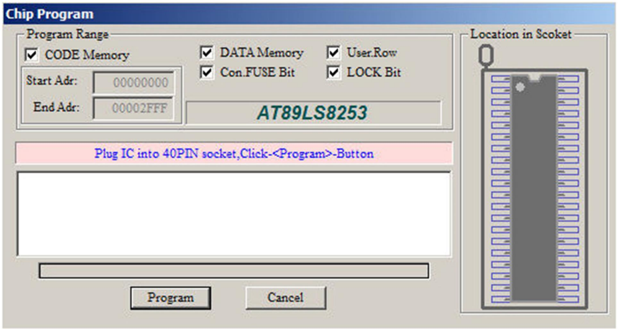
Program the data in the buffer into the chip. May be different chip programs in different window. Taking the AT89S8253 chip for example to explain how to program the chip.

1. Load the programming data to the buffer.
2. The programming options are as shown below:



Options
- ☑ Erase before ☑ Check device ID
- ☑ Verify after □ Auto Serials NO.
- □ Skip 0xFF SetRange: ● ALL ○ Sect
- □ Blank Check 0x 00000000 -> 00002FFF

3. Click [Write] Button in the toolbar to pop up the following dialog box:



Chip Program

Program Range

☑ CODE Memory ☑ DATA Memory ☑ User.Row

☑ Con.FUSE Bit ☑ LOCK Bit

Start Adr: 00000000

End Adr: 00002FFF

AT89LS8253

Plug IC into 40PIN socket,Click-<Program>-Button

Firstly set [Program Range], including [CODE] [DATA] [FUSE] [LOCK]. Press [Program] button to start programming the chip.

Tips:

After programming, the programming time for each buffer is shown in the information column.

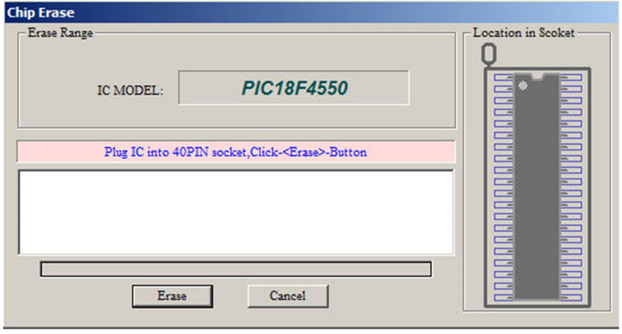
Most of the chips will be automatically checked in the process of programming and the program operation will be immediately terminated if there is an error.

If the user selects "Auto Serials No.", after programming the chip number in the buffer will be automatically increased according to the settings.

To ensure the accuracy of programming data, users are always recommended to perform [Verify After].

IV/Device\Erase:

For the chip that can be erased electronically, click [Erase] button in the toolbar to pop up the following dialog box:



Chip Erase

Erase Range

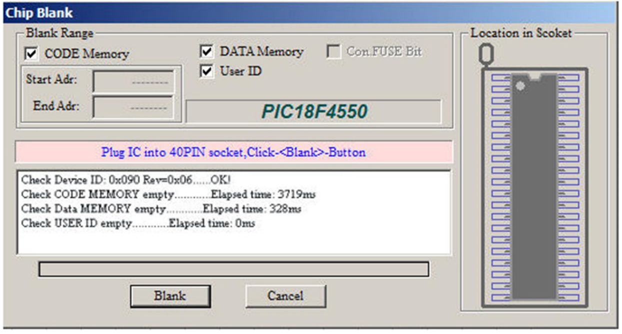
IC MODEL: PIC18F4550

Plug IC into 40PIN socket,Click-<Erase>-Button

By default, chip ID will be checked before erase. For a small part of the microcontroller, the chip ID cannot be read after encrypted. At that time, don't tick off [check device ID] in the options, otherwise there is an error of checking ID. Click [Erase] button in the dialog box and the erase time will be shown after erase is complete.

V/ Device\Blank Check:

Click [Blank Check] Button in the toolbar to pop up the following dialog box:



Chip Blank

Blank Range

☑ CODE Memory ☑ DATA Memory □ Con.FUSE Bit

☑ User ID

Start Adr: --------

End Adr: --------

PIC18F4550

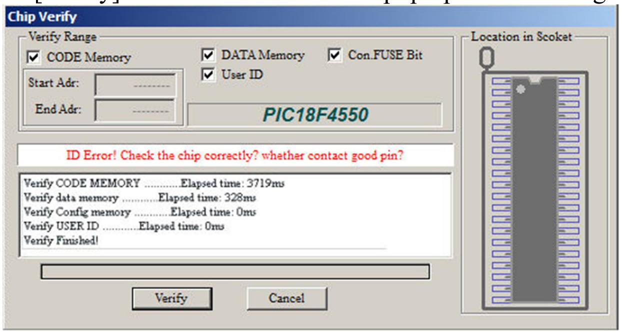
Plug IC into 40PIN socket,Click-<Blank>-Button

```
Check Device ID: 0x090 Rev=0x06......OK!
Check CODE MEMORY empty...........Elapsed time: 3719ms
Check Data MEMORY empty...........Elapsed time: 328ms
Check USER ID empty...........Elapsed time: 0ms
```

By default, chip ID will be checked before erase. You can select the region you want to check blank and the default is the entire region. And then click [Blank check] button in the dialog box to start checking blank. The spending time for each region will be shown after checking. In the meantime, the operation will be terminated if it is found that the chip is not empty and the address and storing value in non-empty region will be shown.

VI/ Device\Verify:

Click [Verify] Button in the toolbar to pop up the following dialog box:

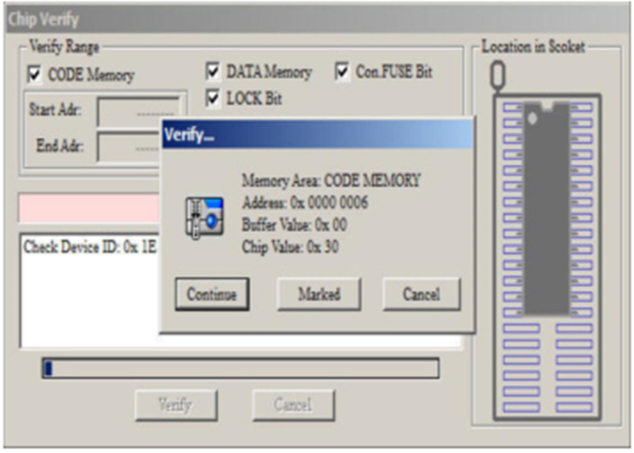


ID Error! Check the chip correctly? whether contact good pin?

```
Verify CODE MEMORY ............Elapsed time: 3719ms
Verify data memory ............Elapsed time: 328ms
Verify Config memory ............Elapsed time: 0ms
Verify USER ID ............Elapsed time: 0ms
Verify Finished!
```

By default, chip ID will be checked before erase. You can select the region you want to verify and the default is the entire region. Click [Verify] button in the dialog box to start. If it is verified that all the chip data is same, the spending time for each region will be shown after verifying, as shown above.

In the meantime, if it is found that the chip data is not same, pop up the following dialog box:



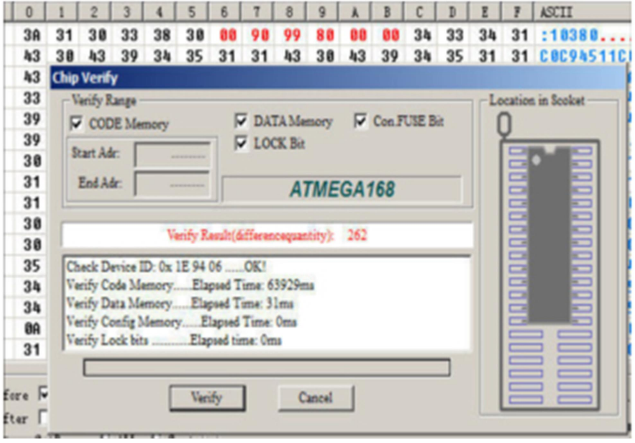
Check Device ID: 0x 1E

Memory Area: CODE MEMORY
Address: 0x 0000 0006
Buffer Value: 0x 00
Chip Value: 0x 30

Click [continue to verify]: will continue to verify if there are different data, the same prompt dialog box will be popped up.

Click [Mark differences]: the prompt dialog box will not be popped up in the process of verifying until completion. Finally, all the differences will be prompted and the different units will be shown in red font in the buffer, as shown below.

Click [exit]: exit to stop verifying.



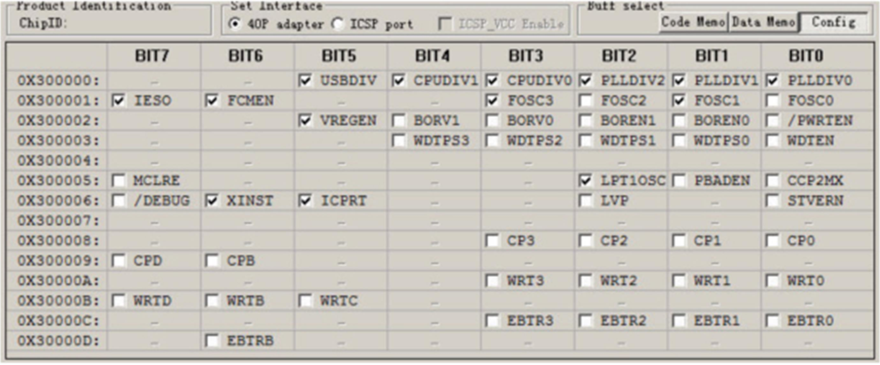
```
 0  1  2  3  4  5  6  7  8  9  A  B  C  D  E  F  ASCII
3A 31 30 33 38 30 00 90 99 80 00 00 34 33 34 31 :10380...
43 30 43 39 34 35 31 31 43 30 43 39 34 35 31 31 C0C94511C
43
33
39
39
30
31
31
30
30
35
34
34
0A
31
```

Verify Result(differencequantity): 262

```
Check Device ID: 0x 1E 94 06 ......OK!
Verify Code Memory......Elapsed Time: 63929ms
Verify Data Memory......Elapsed Time: 31ms
Verify Config Memory......Elapsed Time: 0ms
Verify Lock bits ............Elapsed time: 0ms
```

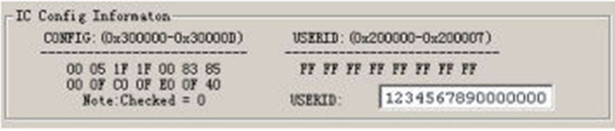
VII/ Config button:

Click 【CONFIG】 Button in chip buffer select bar (on the right of the window) to pop up the following interface (select ID: PIC18F4550):



	BIT7	BIT6	BIT5	BIT4	BIT3	BIT2	BIT1	BIT0
0X300000:	–	–	☑ USBDIV	☑ CPUDIV1	☑ CPUDIV0	☑ PLLDIV2	☑ PLLDIV1	☑ PLLDIV0
0X300001:	☑ IESO	☑ FCMEN	–	–	☑ FOSC3	□ FOSC2	☑ FOSC1	□ FOSC0
0X300002:	–	–	☑ VREGEN	□ BORV1	□ BORV0	□ BOREN1	□ BOREN0	□ /PWRTEN
0X300003:	–	–	–	□ WDTPS3	□ WDTPS2	□ WDTPS1	□ WDTPS0	□ WDTEN
0X300004:	–	–	–	–	–	–	–	–
0X300005:	□ MCLRE	–	–	–	–	☑ LPT1OSC	□ PBADEN	□ CCP2MX
0X300006:	□ /DEBUG	☑ XINST	☑ ICPRT	–	–	□ LVP	–	□ STVERN
0X300007:	–	–	–	–	–	–	–	–
0X300008:	–	–	–	–	□ CP3	□ CP2	□ CP1	□ CP0
0X300009:	□ CPD	□ CPB	–	–	–	–	–	–
0X30000A:	–	–	–	–	□ WRT3	□ WRT2	□ WRT1	□ WRT0
0X30000B:	□ WRTD	□ WRTB	□ WRTC	–	–	–	–	–
0X30000C:	–	–	–	–	□ EBTR3	□ EBTR2	□ EBTR1	□ EBTR0
0X30000D:	–	□ EBTRB	–	–	–	–	–	–

The value of IC config information in the lower right is corresponding to config interface: Click Config interface and the value of the config information will be automatically changed.



IC Config Infornaton

CONFIG: (0x300000-0x30000D)

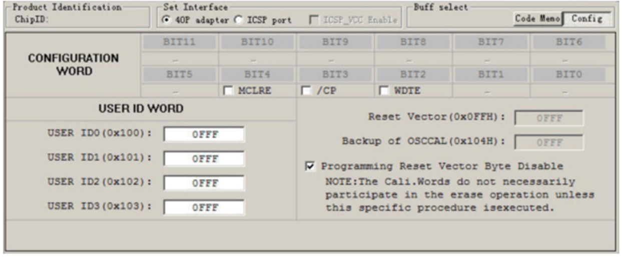
00 05 1F 1F 00 83 85
00 0F C0 0F E0 0F 40
Note:Checked = 0

USERID: (0x200000-0x200007)

FF FF FF FF FF FF FF FF

USERID: 1234567890000000

1. Different chip has different configuration information, so firstly users should check the IC datasheets in order to properly configure the chip.
2. IC configuration interface is well-designed and users can conveniently check the IC datasheet.
3. Some chips have no configuration information.
4, The common configuration interfaces are shown as below:
  - PIC18FXXX interface is as shown above, ID can be edited in the main screen, different model has different contents in the table.
  - PIC10xxx 12xxx 16xxx configuration interface is generally as below and different chip has different contents.



Product Identification
ChipID:

Set Interface
● 40P adapter ○ ICSP port □ ICSP_VCC Enable

Buff select
Code Memo | Config

CONFIGURATION WORD	BIT11	BIT10	BIT9	BIT8	BIT7	BIT6
	-	-	-	-	-	-
	BIT5	BIT4	BIT3	BIT2	BIT1	BIT0
	-	□ MCLRE	□ /CP	□ WDTE	-	-

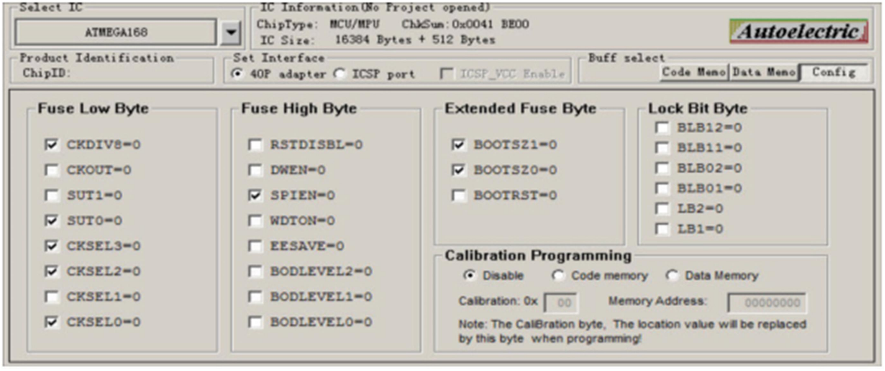
USER ID WORD

USER ID0(0x100): 0FFF
USER ID1(0x101): 0FFF
USER ID2(0x102): 0FFF
USER ID3(0x103): 0FFF

Reset Vector(0x0FFH): 0FFF
Backup of OSCCAL(0x104H): 0FFF

☑ Programming Reset Vector Byte Disable
NOTE:The Cali.Words do not necessarily participate in the erase operation unless this specific procedure isexecuted.

For parts of the PIC chips, by default the programmer will not erase the Reset Vector of the chip when erasing. If you program the verified bytes in configure interface, the Reset Vector will be erased. If the chip has no backup verified value and at the same time you make a mistake with the verified bytes, if you use inside clock, the clock skew may appear and the chip may not be used.
Note: Under normal circumstances, The verified bytes don't need to be changed because it has been verified at factory.
The ATMEGA configuration information is generally as below and different chip has different contents.



Select IC
ATMEGA168

IC Information(No Project opened)
ChipType: MCU/MPU ChkSum: 0x0041 BE00
IC Size: 16384 Bytes + 512 Bytes

Product Identification
ChipID:

Set Interface
● 40P adapter ○ ICSP port □ ICSP_VCC Enable

Buff select
Code Memo | Data Memo | Config

Fuse Low Byte
☑ CKDIV8=0
□ CKOUT=0
□ SUT1=0
☑ SUT0=0
☑ CKSEL3=0
☑ CKSEL2=0
□ CKSEL1=0
☑ CKSEL0=0

Fuse High Byte
□ RSTDISBL=0
□ DWEN=0
☑ SPIEN=0
□ WDTON=0
□ EESAVE=0
□ BODLEVEL2=0
□ BODLEVEL1=0
□ BODLEVEL0=0

Extended Fuse Byte
☑ BOOTSZ1=0
☑ BOOTSZ0=0
□ BOOTRST=0

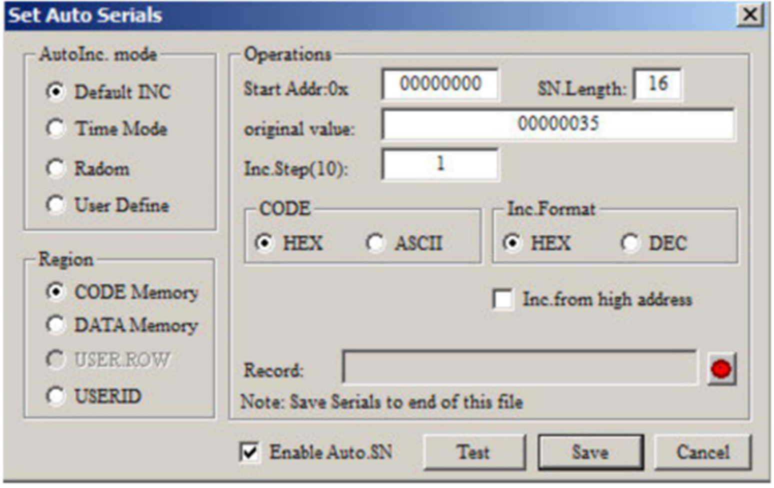
Lock Bit Byte
□ BLB12=0
□ BLB11=0
□ BLB02=0
□ BLB01=0
□ LB2=0
□ LB1=0

Calibration Programming
● Disable ○ Code memory ○ Data Memory
Calibration: 0x 00 Memory Address: 00000000
Note: The CaliBration byte, The location value will be replaced by this byte when programming!

You can test by yourself in applications for other more interfaces. You are sure to use it well.

<u>Menu « Device\Serial Number »:</u>

A IC serial number is automatically added to a certain buffer when programming. It is convenient to the chip programming settings, time settings or unique serial number settings at factory. The programmer has many kinds of numbering algorithms that can meet the needs of users.
Click <main menu>--- <Device> --- <Serials Number> to pop up the following dialog box:



Set Auto Serials

AutoInc. mode
● Default INC
○ Time Mode
○ Radom
○ User Define

Region
● CODE Memory
○ DATA Memory
○ USER ROW
○ USERID

Operations
Start Addr:0x 00000000 SN.Length: 16
original value: 00000035
Inc.Step(10): 1

CODE
● HEX ○ ASCII

Inc.Format
● HEX ○ DEC

□ Inc.from high address

Record:
Note: Save Serials to end of this file

☑ Enable Auto.SN

Firstly select the Auto Inc. mode. There are four algorithm modes to choose from the dialog box and the detailed instructions are as below:

1. The default increment algorithm <Default INC.>

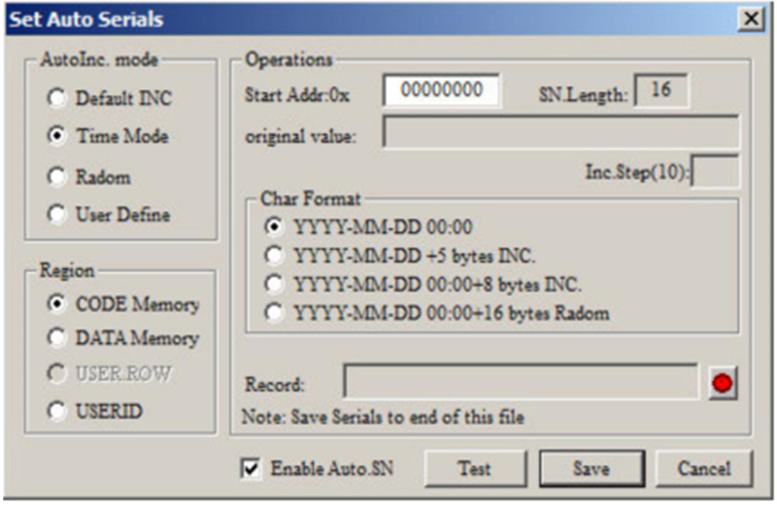
This algorithm interface is shown above, a set length of number is placed in the start address and the number will be increased according to the <Inc. Step>. After setting the parameters, click <Test> to start testing and check the change regularity of different set parameters. <original Value> and <Inc. Step> can be set in the above dialog box.

You can set <record> file after the parameters are set and the testing result is correct. If blank, the record file is invalid and the data cannot be recorded into the file when programming; If the <record>file is set, the set serial number will be added at the end of the record file after programming.

Finally, tick off <Enable Auto. SN> and click <Save> button.

2. time algorithm <Time Mode>

Time algorithm dialog interface is as shown below:


Set Auto Serials

AutoInc. mode
○ Default INC
● Time Mode
○ Radom
○ User Define

Region
● CODE Memory
○ DATA Memory
○ USER.ROW
○ USERID

Operations
Start Addr:0x 00000000 SN.Length: 16
original value:
Inc.Step(10):

Char Format
● YYYY-MM-DD 00:00
○ YYYY-MM-DD +5 bytes INC.
○ YYYY-MM-DD 00:00+8 bytes INC.
○ YYYY-MM-DD 00:00+16 bytes Radom

Record:
Note: Save Serials to end of this file

☑ Enable Auto.SN

There are four time encoding format as below:

(1) date + time Total Length: 16 bytes

The date and time will be added in the specified place, total length is 16bytes.

(2) The date +5 bytes increment Total Length: 16 bytes

The incremental parts can be set original value and step.

(3) Date + time + 8 bytes increment Total Length: 24 bytes

The incremental parts can be set original value and step.

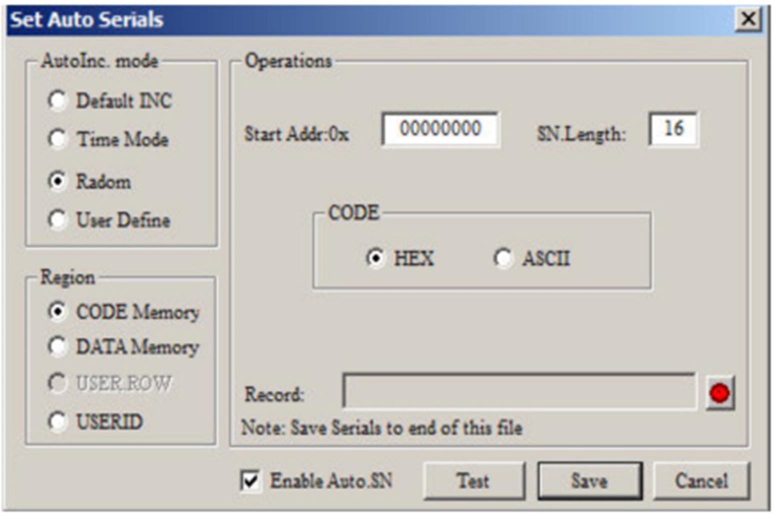
(4) Date + time + 16 bytes random number Total Length: 32 bytes

The16 bytes are random and it can generate a unique product serial number. In this way, the <Record> file must be set so that the generated code can be recorded in the file. Otherwise, your don't know what is the product serial number.

The following operating steps are the same as the above **<Default INC.>**

3. the random sequence number algorithm <Random>

The algorithm generates a specified length of random number, as shown below :


Set Auto Serials

AutoInc. mode
○ Default INC
○ Time Mode
● Radom
○ User Define

Region
● CODE Memory
○ DATA Memory
○ USER.ROW
○ USERID

Operations
Start Addr:0x 00000000 SN.Length: 16

CODE
● HEX ○ ASCII

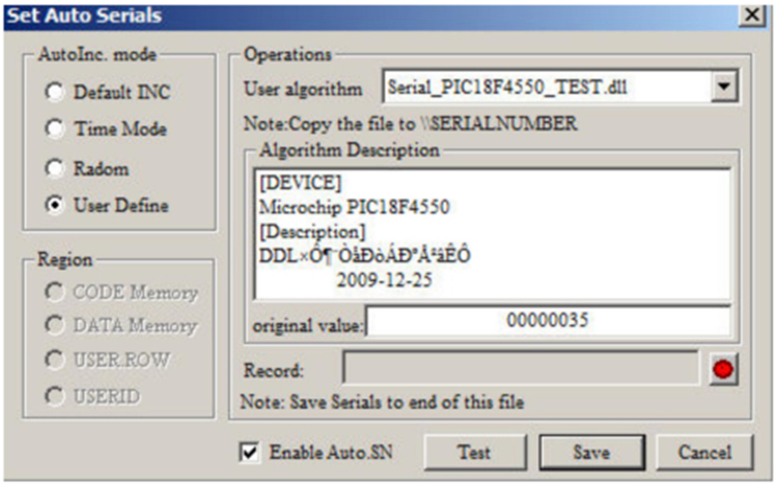
Record:
Note: Save Serials to end of this file

☑ Enable Auto.SN

4. user-defined algorithm <user define>

This user-defined algorithm has great flexibility. You can set any ways of numbering algorithms, for the detailed usage, see the subdirectory: Serialnumber\SOURCE_DLL. The interface is as below:

For AVR Microcontroller, encryption of RC verified byte can be fully achieved by invoking the DLL dynamic link library. Here are all source program and testing ways, see the directory : \ATMEGA_LED



Set Auto Serials

AutoInc. mode: ○ Default INC ○ Time Mode ○ Radom ● User Define

Region: ○ CODE Memory ○ DATA Memory ○ USER.ROW ○ USERID

Operations

User algorithm: Serial_PIC18F4550_TEST.dll

Note:Copy the file to \\SERIALNUMBER

Algorithm Description

[DEVICE]
Microchip PIC18F4550
[Description]
DDL×Ô¶¨ÒåÐòÁÐºÅ²âÊÔ
2009-12-25

original value: 00000035

Record:

Note: Save Serials to end of this file

☑ Enable Auto.SN

After making DLL file, you copy them to the application subdirectory : \Serialnumber, that's OK. You can select your algorithm file in the <user algorithm> list. The following operating steps are the same as other algorithms.

Important note:

1. After setting the above, the programmer will not automatically add the serial number you set to the chip when programming, unless you tick off <Auto Serials No.> in the main interface Options.

2.Please firstly set algorithm and tick off<Enable Auto SN>（setting path： <main menu>-<Device>-<serials number>）and then the <Auto Serials No.> option can be ticked off.

3. After <Auto Serials No.> option is ticked off, if you reset the numbering algorithm, in main interface <Auto Serials No.> option must be ticked off again.

4. You must reset the numbering algorithm if the chip model is changed.

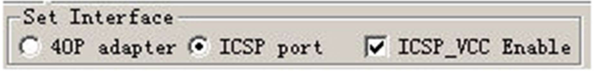
5. In the project mode, the algorithm can be saved in the project file. You can directly open the project file, and automatically invoke the automatic numbering algorithm. Therefore, it is easier and more convenient to use for the mass production in the project mode.

ICSP programming mode:

Only TL866II+ has this ICSP programming function.

For the serial in-circuit programmed chips, this programmer can program microcontroller on the target board through ICSP port. Firstly select <ICSP port> in the main interface and then by default <ICSP_VCC Enable> is ticked off. That means the target board will be provided VCC power when programming. (Note: The maximum current of programmer VCC power is 120ma. Please use the target board's power supply if larger current is needed. You'd better isolate the CPU power from other high current components on the board and use programmer's power supply that is more convenient.

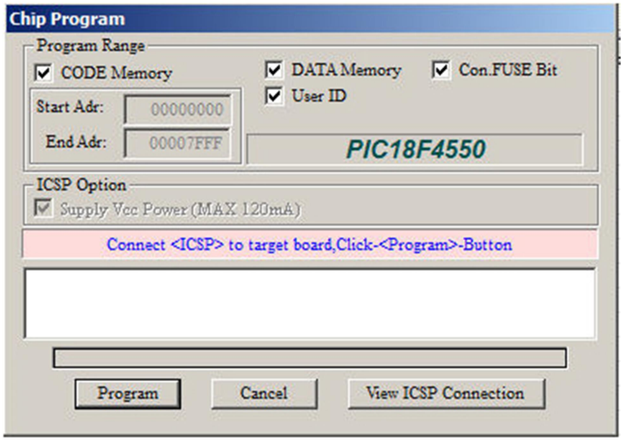
If the power don't need to be supplied by programmer, don't tick off the【ICSP_VCC Enable】. Then there is no VCC power in the VCC pin when programming, as shown below:



Set Interface: ○ 40P adapter ● ICSP port ☑ ICSP_VCC Enable

The next step: Read, erase, verify, program, etc. Such operations will be finished through the ICSP port. At that time, you are not allowed to put the chip on the 40PIN universal socket. Click 【Write】 button to pop up the following dialog box:

(Note: the dialog box of read, erase, verify, etc. is nearly the same as the 【Write】, just one more ICSP prompt.)



Chip Program

Program Range: ☑ CODE Memory ☑ DATA Memory ☑ Con.FUSE Bit ☑ User ID

Start Adr: 00000000

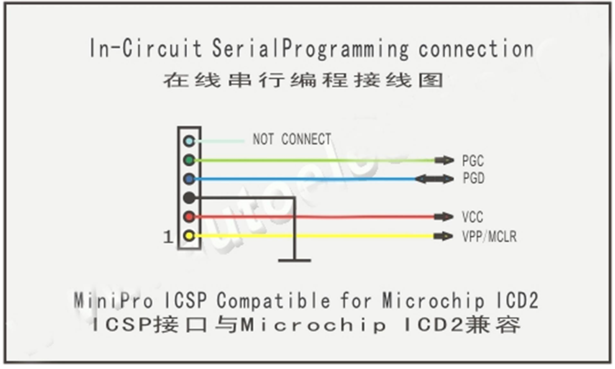
End Adr: 00007FFF

PIC18F4550

ICSP Option: ☑ Supply Vcc Power (MAX 120mA)

Connect <ICSP> to target board,Click-<Program>-Button

Click [View ICSP Connection] button to pop up the in-circuit serial programming wiring diagram, as shown below:
(Different chip has different ICP connection method)


In-Circuit SerialProgramming connection
在线串行编程接线图
NOT CONNECT
PGC
PGD
VCC
VPP/MCLR
1
MiniPro ICSP Compatible for Microchip ICD2
ICSP接口与Microchip ICD2兼容

Note:

1. Now ICSP can in-circuit serial program ATMEL89S51, ATMEL89S52, AT45DBxxx, a whole series of AVR ATMEGAxxx, MICROCHIP PIC10Fxxx 12Fxxx 16Fxxx 18Fxxx, as well as a full serial of SYNCMOS SM59Dxx SM59Rxx. The variety of microcontroller that can be supported in-circuit programming will be continually increased in the future.

2. Under normal circumstances, the 40PIN socket programming is high-speed Parallel Programming and ICSP programming for the target board is serial in-circuit programming.

3. The programmings of the PIC10 12 16 series chips, 40PIN and ICSP port are high-voltage serial programming. Different 18 series chip has different VPP voltage. The programming ways of ICSP port and the 40PIN socket are the same, but Programming rate of ICSP port is a bit slower than which of 40PIN socket.

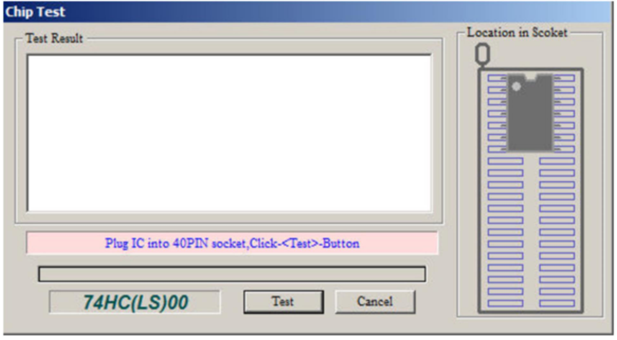
4. Atmel AT89Sxx ATMEGAxxx SPI programming speeds are very different from the parallel programming. This programmer is one of the highest parallel programming speed and it can fully meet the needs of mass production.

5. TL866CS Model programmer has no this ICSP port and it cannot in-circuit program.

Digital circuit testing:

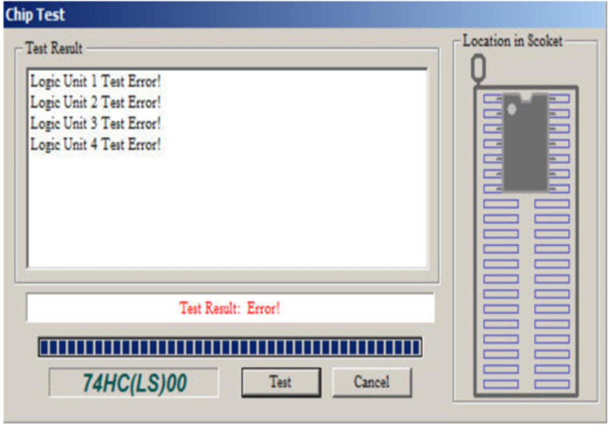
Maybe this is the first development comprehensive programmer to test the common 74 series CMOS4000 series IC and this test can be located the errors of logic gate circuit.

After select corresponding 74HC00 IC, click [TLL/CMOS Test] button to pop up the following dialog box:


Chip Test

Plug IC into 40PIN socket,Click-<Test>-Button

Under normal circumstances, testing information of each logical unit with a variety of input combinations will be shown. If there is an error with IC gate circuit, for example, If you disconnect the PIN1 of 74HC00 chip, the testing results will be shown as follows: prompt chip error.


Chip Test

Logic Unit 1 Test Error!
Logic Unit 2 Test Error!
Logic Unit 3 Test Error!
Logic Unit 4 Test Error!

Test Result: Error!

Different chip has different logical unit number. Logical unit numbering is the same as the IC manual.