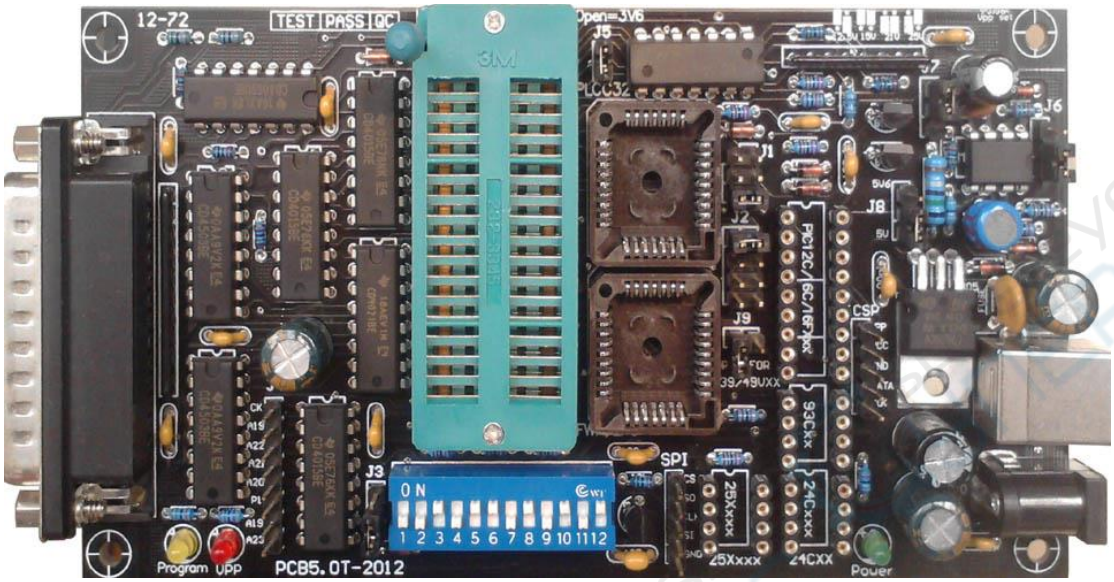
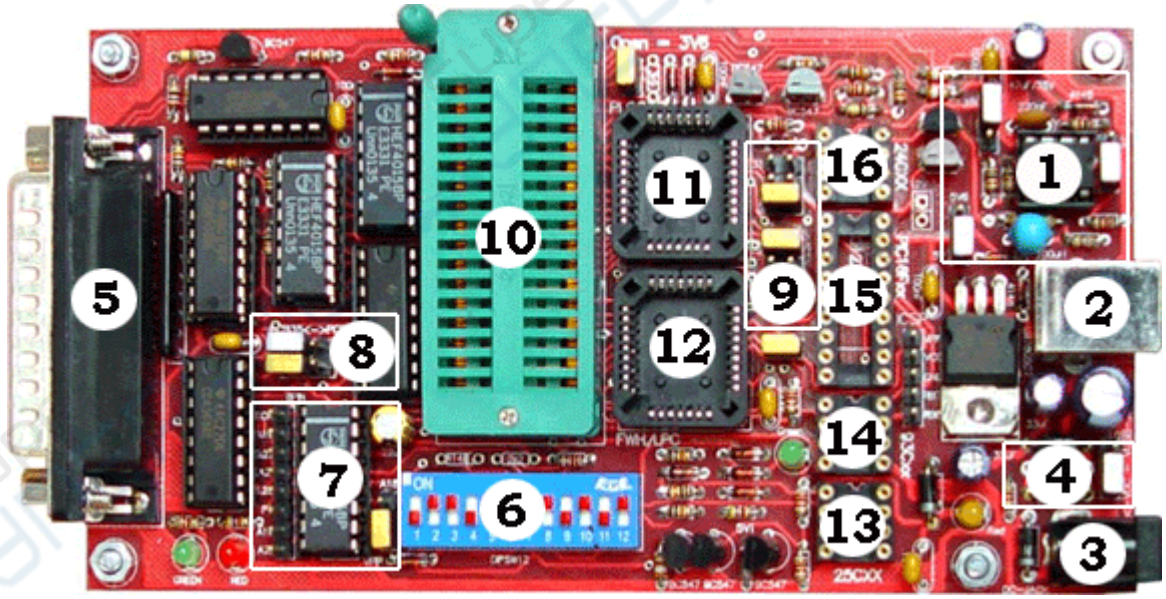
PCB5.0C EPROM Program Operating Manual (English language)



一. The hardware

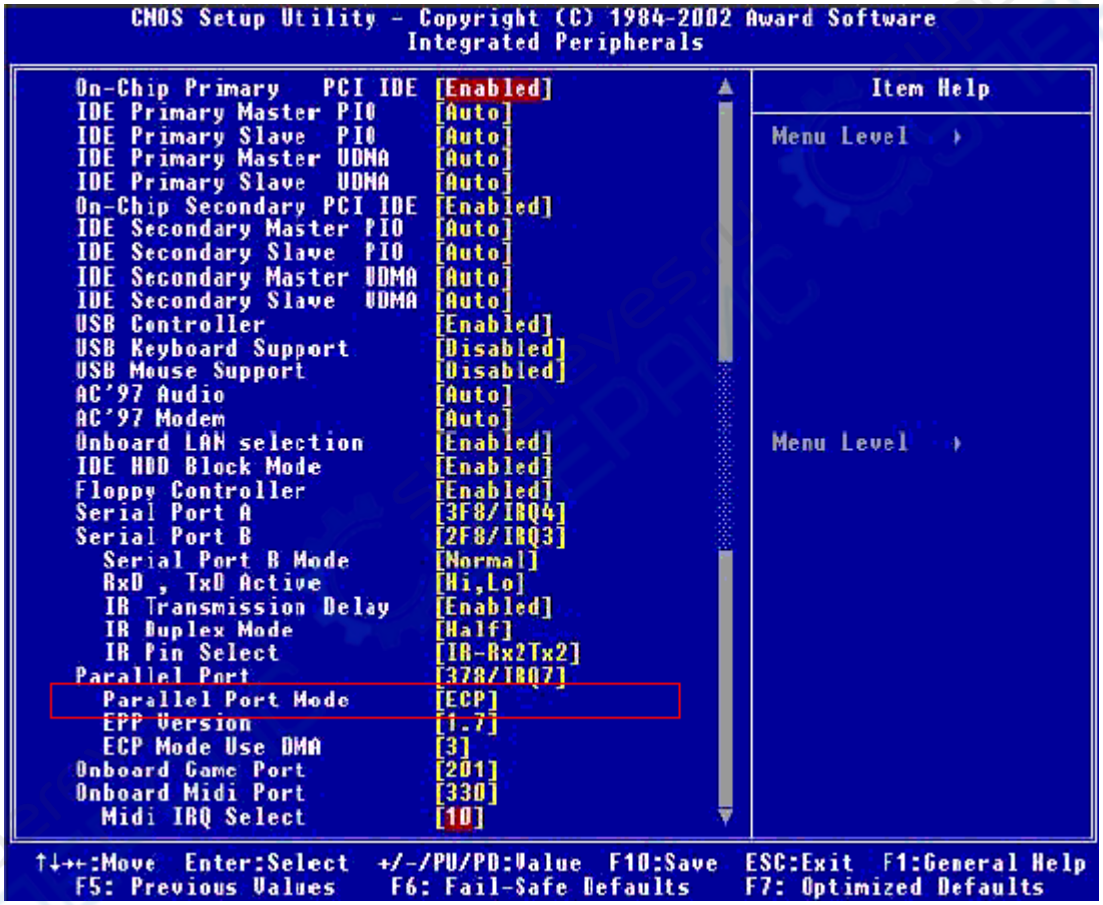


1. The jumpers for Volt set
2. The USB cable for power supply
3. The DC cable for power supply
4. The jumpers for power select(DC or USB)
5. The 25 SubD cable
6. DIP switch (see window STATUS of software)
7. The jumpers for special devices

8. Set PCB4.5C or PCB3B
9. The jumpers for special devices
10. The ZIF Socket for devices
11. For PLCC32 devices(Volt is 5V)
12. For PLCC32 FWH/LPC devices(Volt is 3.3V)
13. The ZIF Socket for 25XX devices
14. The ZIF Socket for 93XX devices
15. The ZIF Socket for PIC devices
16. The ZIF Socket for 24XX devices

二. The BIOS setting

Check the parallel port setting in the BIOS, it should be EPP or ECP+EPP



三. Hardware connection

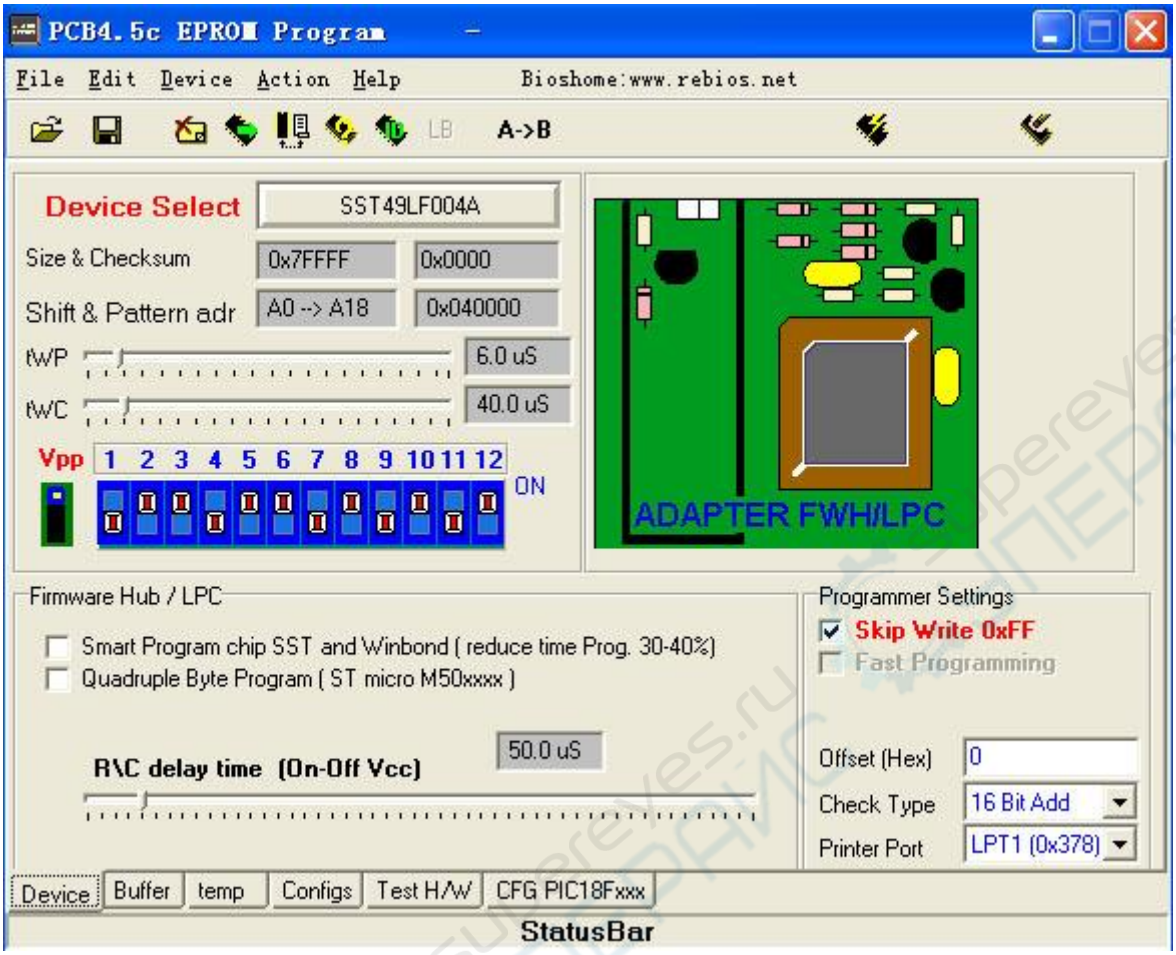
1. Connect to the printer port with a 25 SubD cable, the cable should not be longer
than 1.8 meter(6 feet standard cable).

This must be a fully wired 1:1 cable, a null modem or serial cable won't work.

2. Connect the power supply with a USB cable or DC power, the power led(green) must go on.

四. the software

1. Install the setup.exe, and run the software.



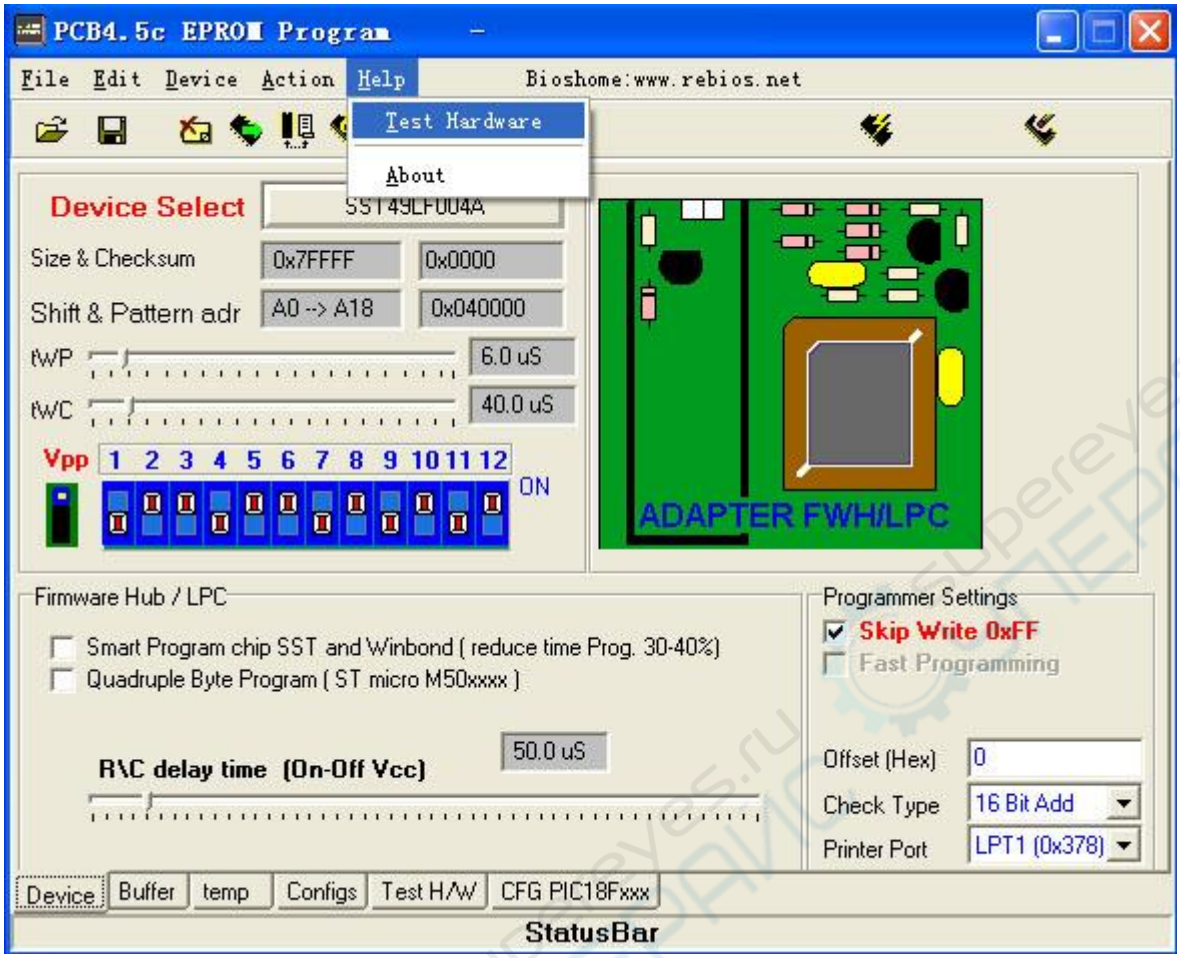
2. Some driver problems may occur under Windows 2000:

* first, delete an entry in the device manager as follows:

1. On the Start Menu, click Start --> Settings --> Control Panel.
2. In the Control Panel, double click the System icon.
3. In the System Properties window, click the Hardware tab.
4. On the Hardware tab, click the Device Manager button.
5. In the Device Manager menu, click View --> Show Hidden Devices.
6. In the device list find the Non-Plug and Play Drivers entry. Click the 'plus' sign on the left of the entry to expand the list.
7. Find the dlportio entry and right-click it. Click on Uninstall in the context menu that appears.

五. Test the connection with Test Hardware

Before put the IC in the programmer board, you have to run software fist for cutting Vdd and Vpp which will supply to EPROM. You can check programmer board connecting by using tab bar **Test H/W** on button of the panel or using menu **Help -> Text Hardware**

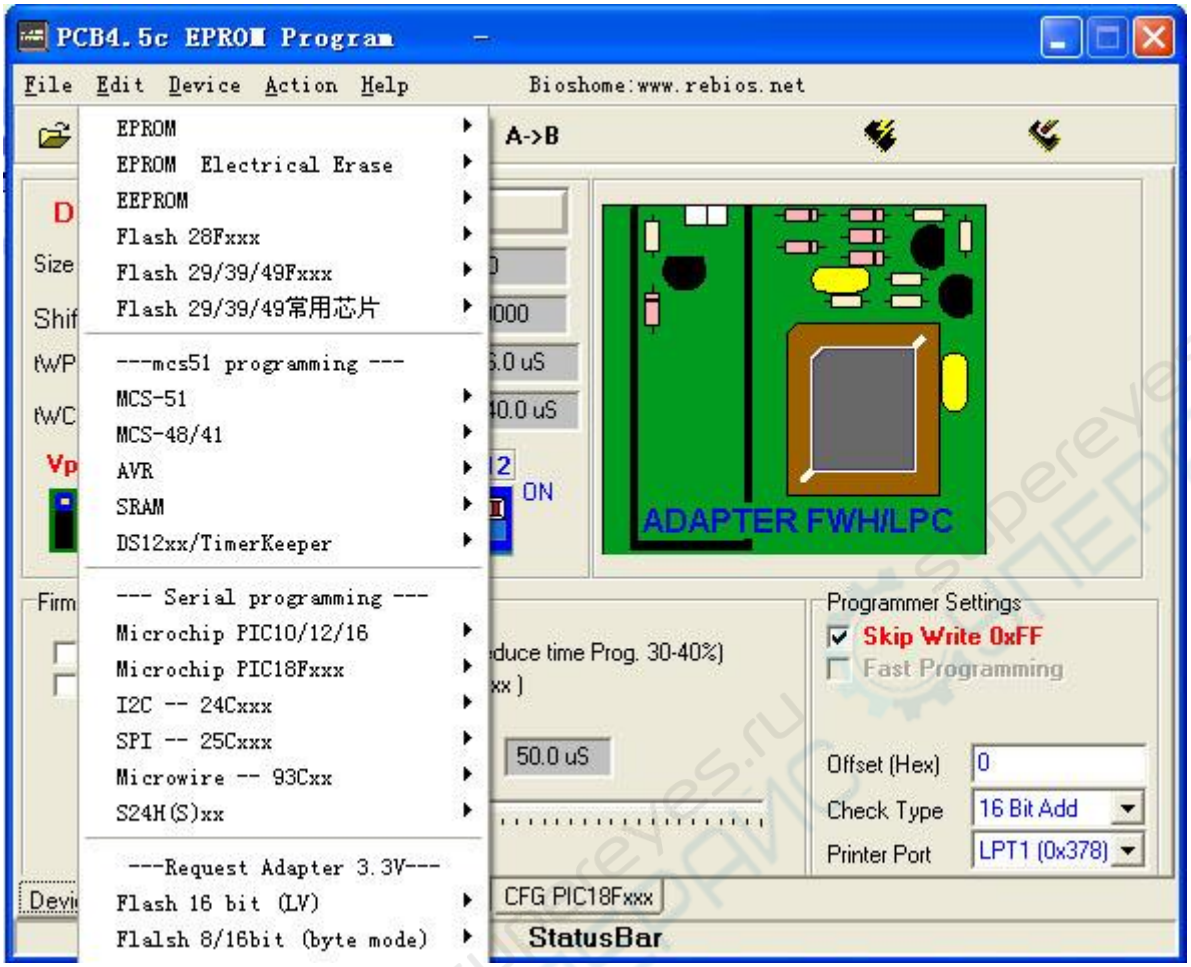


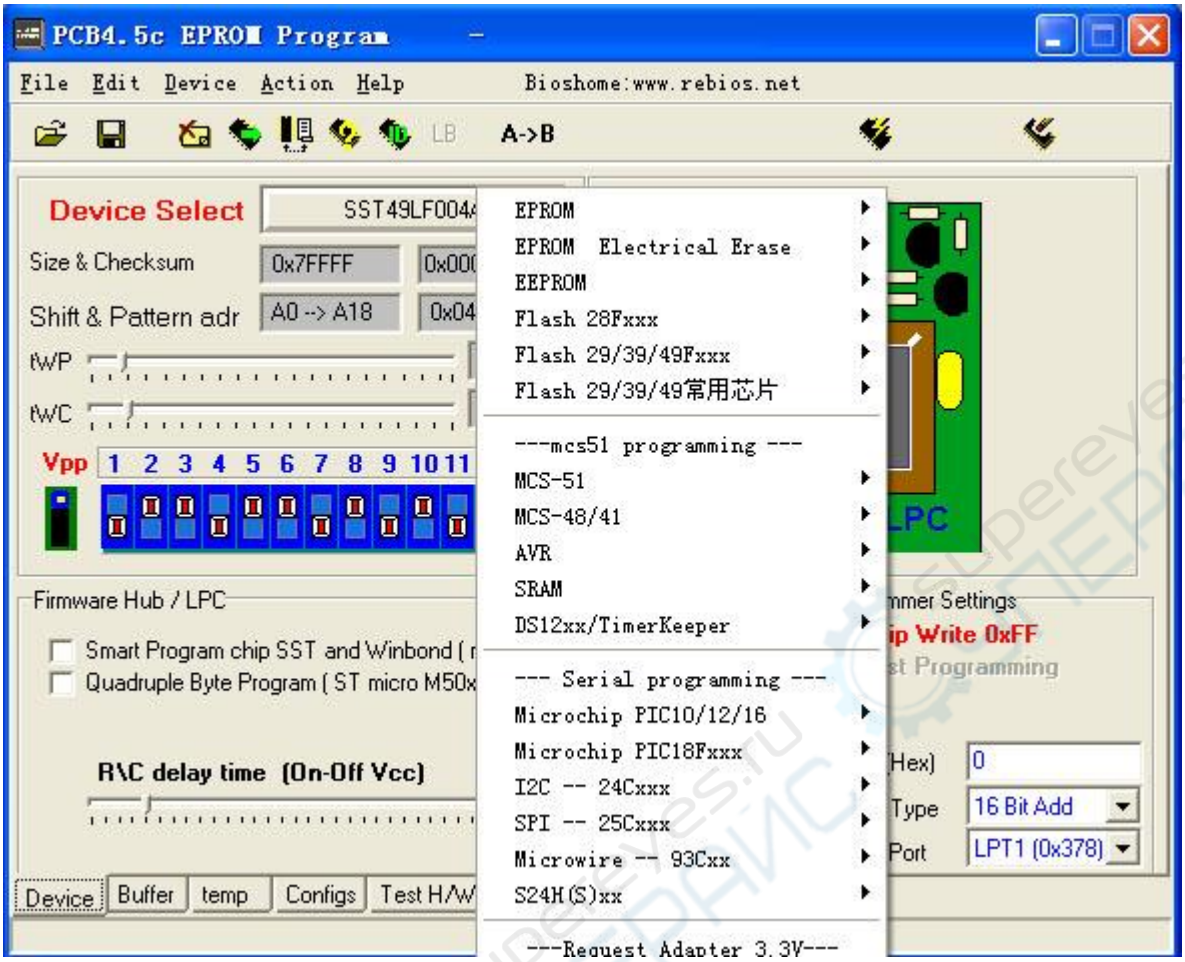
Hardware test fail,Causes:

1. The connect of printer port is error.
2. The connect of power supply is error.

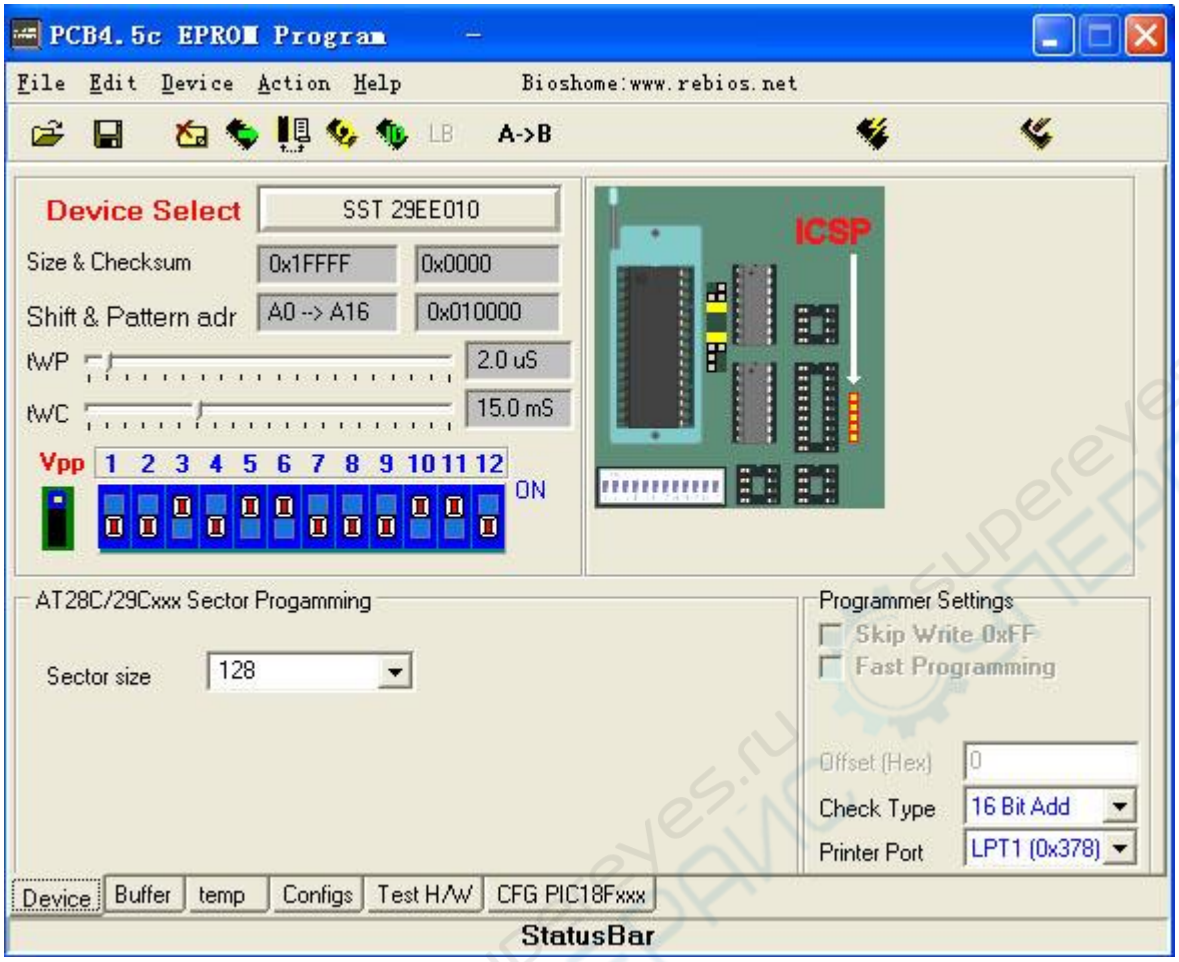
六.Burn a device

1. Selecting the IC number that you want to program by using menu **DEVICE** or click the button

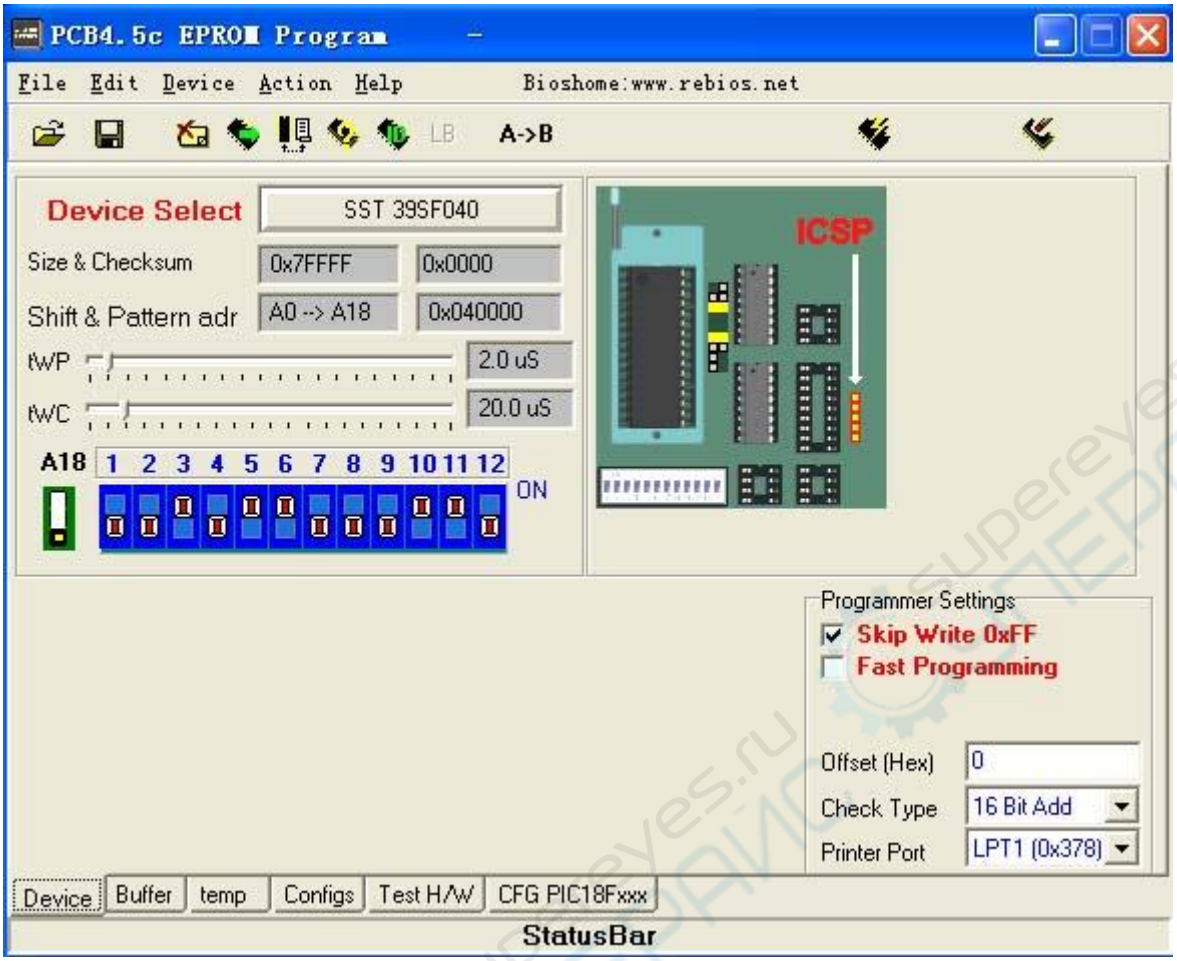

PCB4.5c EPROM Program
File Edit Device Action Help
Bioshome:www.rebios.net
EPROM
EPROM Electrical Erase
EEPROM
Flash 28Fxxx
Flash 29/39/49Fxxx
Flash 29/39/49常用芯片
---mcs51 programming ---
MCS-51
MCS-48/41
AVR
SRAM
DS12xx/TimerKeeper
--- Serial programming ---
Microchip PIC10/12/16
Microchip PIC18Fxxx
I2C -- 24Cxxx
SPI -- 25Cxxx
Microwire -- 93Cxx
S24H(S)xx
---Request Adapter 3.3V---
Flash 16 bit (LV)
Flalsh 8/16bit (byte mode)
A->B
ADAPTER FWH/LPC
Programmer Settings
Skip Write 0xFF
Fast Programming
Offset (Hex)
0
Check Type
16 Bit Add
Printer Port
LPT1 (0x378)
50.0 uS
CFG PIC18Fxxx
StatusBar



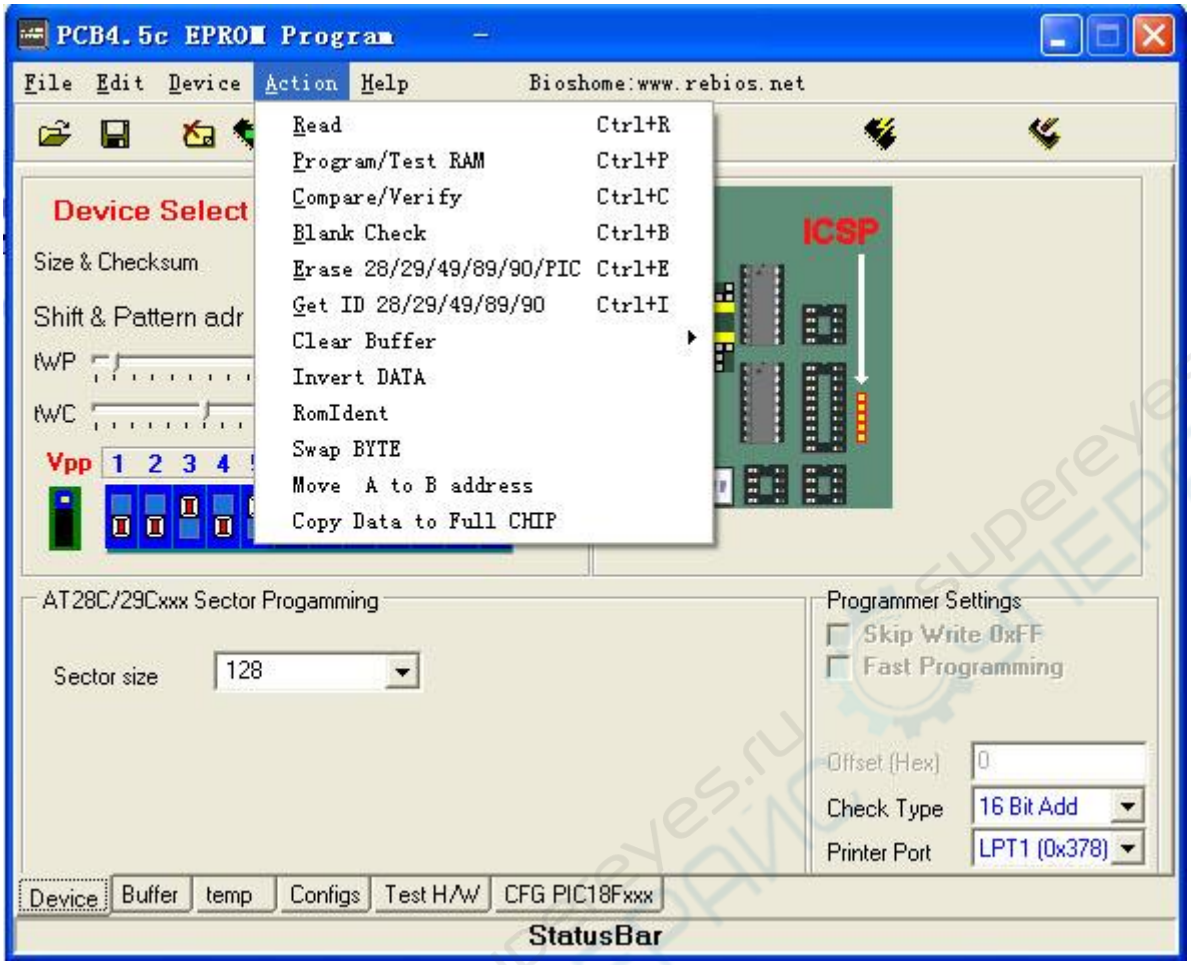
2. For **the IC type 8-pin,18-pin** setting DIPswitch doesn't need, but for **the IC type 28-pin, 32-pin** you have to set the DIPswitch same as the DIPswitchsetting picture.



Programming **the IC FLASH Memory 28C,29F,29C040 4 Mbit** you have to set the jumber, which locates on letf side of the DIPswitch, to the position 2-3(Default position is 1-2).

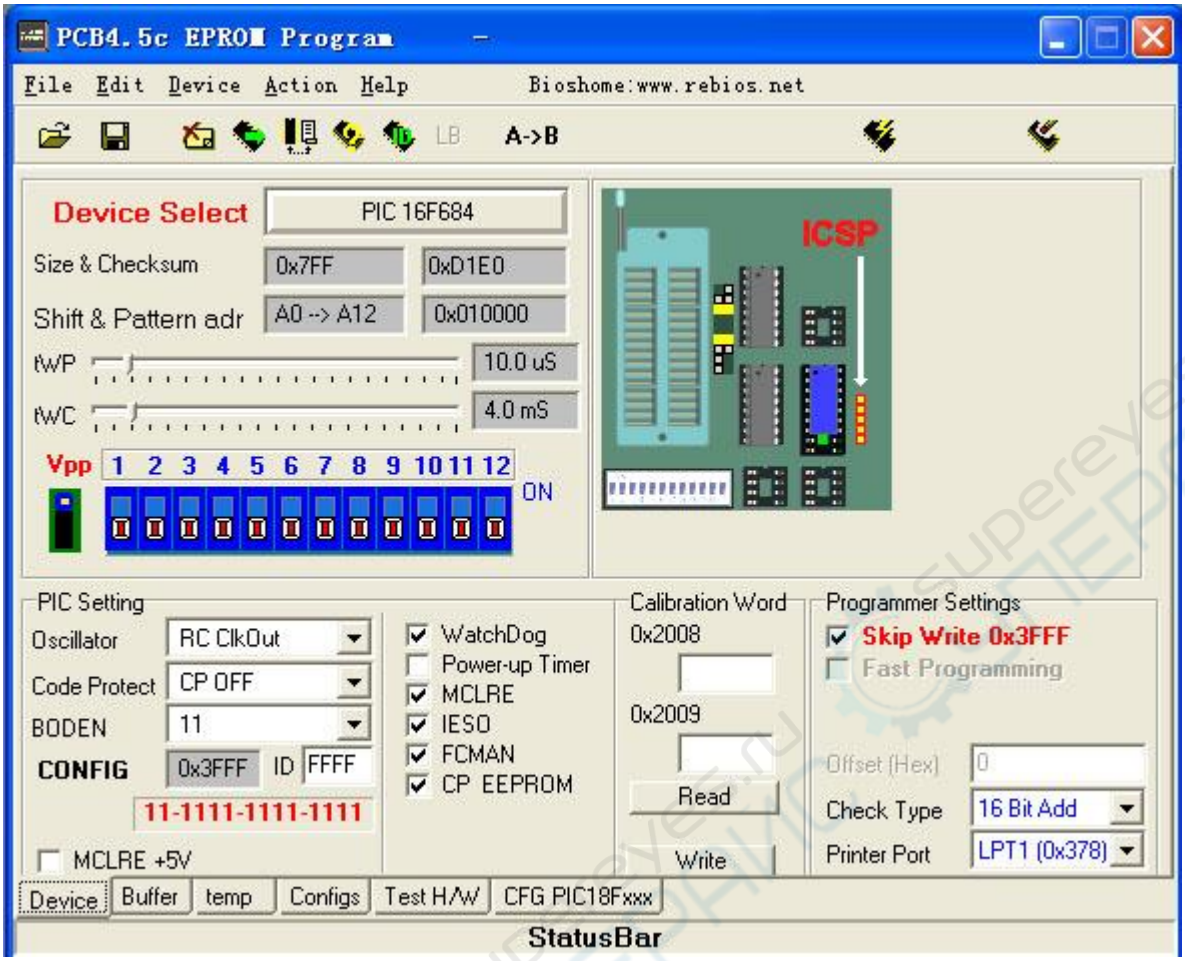


3. When you has finished the file, then select menu **ACTION** (as the picture below) or click icon on toolbar menu.


PCB4.5c EPRO Program
File Edit Device Action Help Bioshome:www.rebios.net
Read Ctrl+R
Program/Test RAM Ctrl+P
Compare/Verify Ctrl+C
Blank Check Ctrl+B
Erase 28/29/49/89/90/PIC Ctrl+E
Get ID 28/29/49/89/90 Ctrl+I
Clear Buffer
Invert DATA
RomIdent
Swap BYTE
Move A to B address
Copy Data to Full CHIP
Device Select
Size & Checksum
Shift & Pattern adr
tWP
tWC
Vpp 1 2 3 4
ICSP
AT28C/29Cxxx Sector Progamming
Sector size 128
Programmer Settings
Skip Write 0xFF
Fast Programming
Offset (Hex) 0
Check Type 16 Bit Add
Printer Port LPT1 (0x378)
Device Buffer temp Configs Test H/W CFG PIC18Fxxx
StatusBar

Toolbar Menu and Action Menu Description	
Read Chip	Reads program from the IC
Program/TestRAM	Writes program into the IC
Compare/Verify	Compares the program in the IC with the program in buffer
Erase 28/29/49/89/90/PIC	Erases the program in the IC **(* the IC number 27C has to erase by UV light)**
CheckEmpty	Checks the IC is empty (0xFF)
Get ID 28/29/49/89/90/PIC	Reads the ID code from CHIPS (For some devices when the software reads the ID code, it will set parameters to the CHIPS automatically)
Boot Block Lockout	Protects the data from rewriting. This data can not earase by **Erase** command. (Make sure you don't want to change this data anymore)
Lock Modes 89C	**Mode 1:** No protection **Mode 2:** Protects the program in the chip from reading of comand **MOVC** from outside memory, but it doesn't protect verification from the machine which's able to programming **Mode 3:** same mode 2 and protects verification **Mode 4:** same as mode 3 and protects the chip from out side memory programming
ClearBuffer (0xFF)	Erases program from buffer = 0xFF
CheckSumBuffer	Calculates CheckSum in buffer

4. **Programming PIC** you have to set more parameters as the picture below.


PCB4.5c EPROM Program
File Edit Device Action Help
Bioshome:www.rebios.net
LB
A->B
Device Select
PIC 16F684
Size & Checksum
0x7FF
0xD1E0
Shift & Pattern adr
A0 --> A12
0x010000
tWP
10.0 uS
tWC
4.0 mS
Vpp
1 2 3 4 5 6 7 8 9 10 11 12
ON
ICSP
PIC Setting
Oscillator
RC ClkOut
Code Protect
CP OFF
BODEN
11
CONFIG
0x3FFF
ID
FFFF
11-1111-1111-1111
MCLRE +5V
WatchDog
Power-up Timer
MCLRE
IESO
FCMAN
CP EEPROM
Calibration Word
0x2008
0x2009
Read
Write
Programmer Settings
Skip Write 0x3FFF
Fast Programming
Offset (Hex)
0
Check Type
16 Bit Add
Printer Port
LPT1 (0x378)
Device
Buffer
temp
Configs
Test H/W
CFG PIC18Fxxx
StatusBar

Programing Data (EPROM,EEPROM,FLASH,PIC)

1. Select device type (Menu Device)

2. Set the DIP switch (see window STATUS).DIPswitch switches can be red(like in the sofware),white or other colors.

3. Load program file (Menu File -> Load xxx)

4. Insert the IC to the ZIF Socket or the DIP socket

5. For:
Eprom 27Cxxx,27xxx make sure you earase all data (UV erase) by use (Menu Action -> Checkempty)

Flash,Eeprom erase data by (Menu Action -> Erase 28x, 29x, 49x, AT89x)

PIC check parameter setting first by use (Menu Progsettings)

6. Program (Menu Action -> Program)

Reading Data (EPROM,EEPROM,FLASH,PIC)

1. Select device type (Menu Device)

2. Set the DIP switch (see window STATUS)

3. Insert the IC to the ZIF Socket or the DIP socket

4. Read data (Menu Action -> Read)

5. Save data, You can save as two types 1. binary(.bin) or 2. Intel hex (.hex) (Menu File ->Save xxx)

Programming MCS-51 (Adapter board is needed

1. Select pin type (40 or 20pin) and number program (Menu Device)

2. Set the DIP switch (see window STATUS).

3. Insert the IC to Adaptor board

4. Select device type. For ATMEL chip you can read the ID code and set parameters automatically (auto select)

5. Load program file (Menu File -> Load xxx)

6. Erase old program existing in the IC (Menu Action -> Erase 28C,29C,AT89)

7. Burn program (Menu Action -> Program)

8. Protect your data (protect from copying) (Menu Action ->Lock Bit)

TIPS

Programming AT89C55WD is needed voltage at least 5.6V

Programming data into the IC (follow ATMEL specification, it guarantees at 6.5 V)

If voltage less than 5.6V, it maybe can't program some lot of CHIPs.

It can solve this promblem by attaching one diode at the second pin of the IC 7805.

The voltage that supply to the IC will be 0.6+0.6+5 = 6.2 V

and the voltage that supply other chips will be increase 5.6 V.

When you have finished programming, you should move the added diod out to decrease voltage to 5.6V.

Warning:

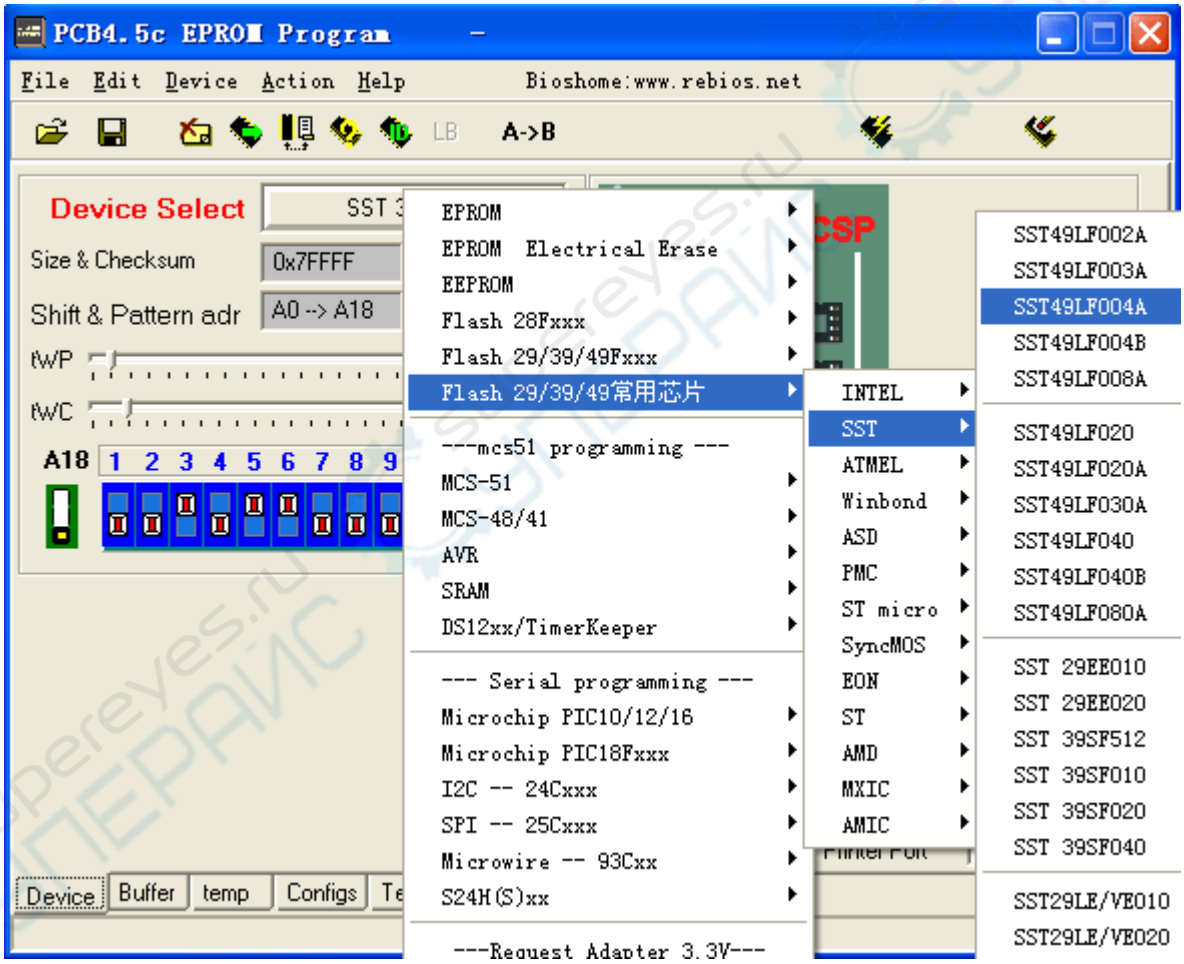
never insert an eprom when you haven't started the program yet and the Vpp and Vcc leds are still burning.

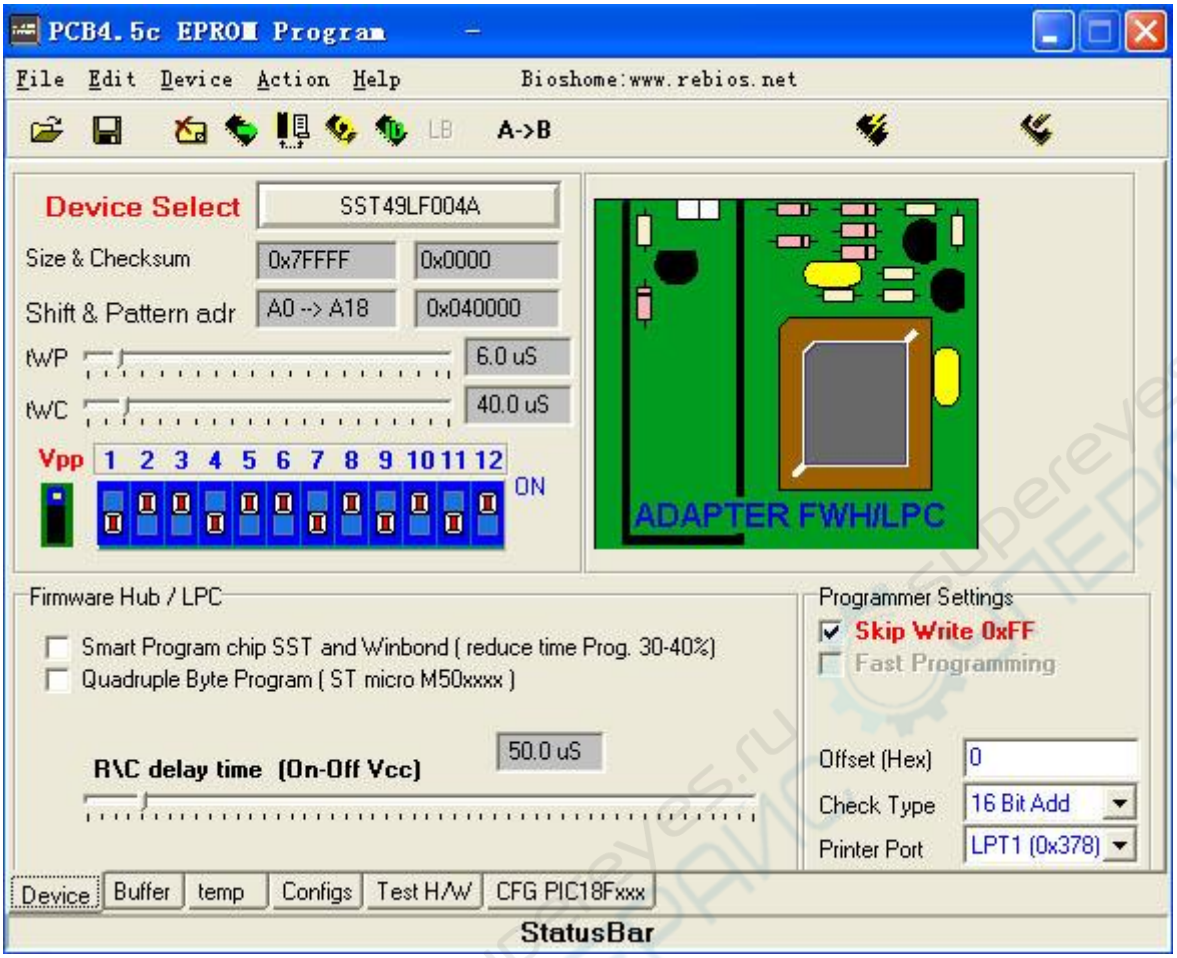
Never remove the power supply lead or disconnect the adapter when an eprom is still in the socket, also make sure the power lead is firmly connected to the board and can't become disconnected.

All of this can cause random "writes" to your eprom and change it's contents.

八.For example:to burn flash IC:SST49LF004A

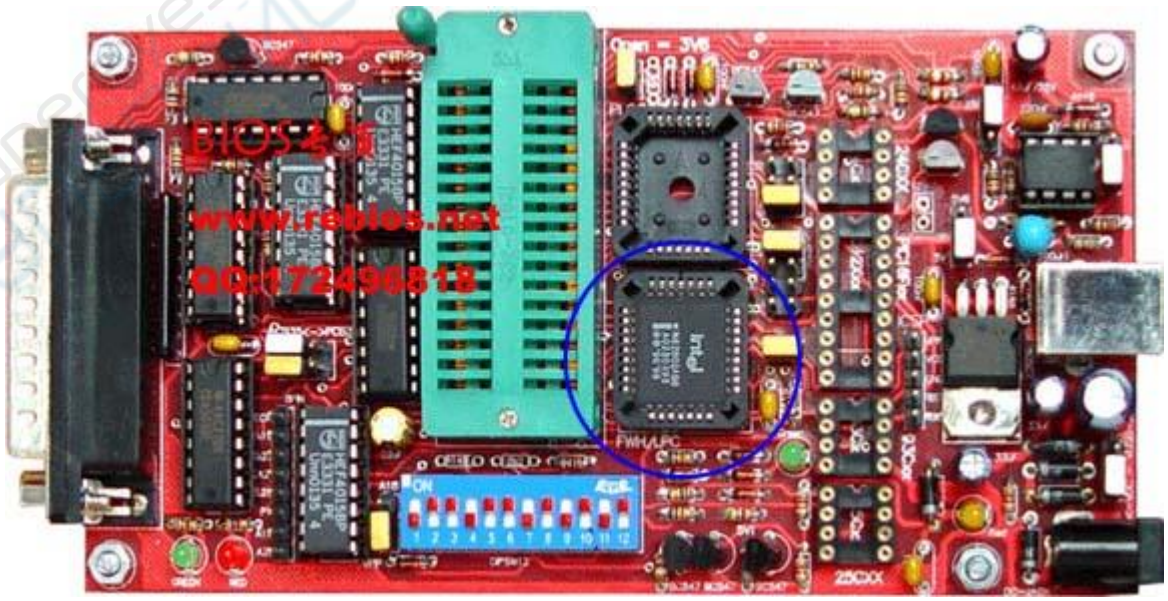
1. connect the hardware and power.run the software.
2. Select device type and set the DIPswitch .





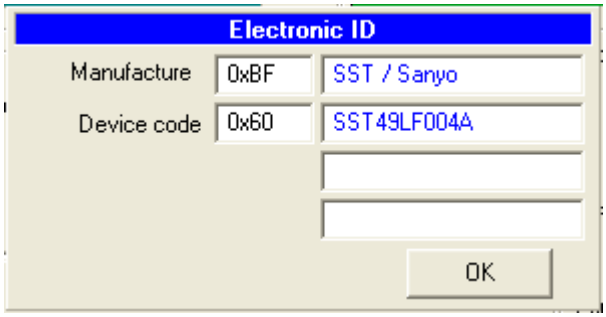
The DIPswitch must be ture

3. Insert chip to the FWH/LPC Socket



4. check ID. (not possible with older 27(C)XXXX devices), If you can't get a valid chip ID it's useless to try reading, erasing or writing.

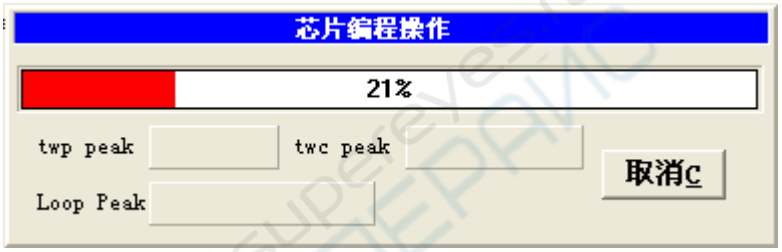
A valid ID gives the right manufacturer and chip type.



5. Erase IC, it is very fast

6. Click  , load program file

7. Click  to program, the Vcc and Vpp led will light.



九. Error

Programming can fail in different ways:

First byte, error message: error at 0x000000 Buffer=0xXX , Chip=0xFF or 0xXX.

Causes: chip not inserted right, faulty chip, Vpp too low.

random error, error message: error at 0xXXXXXX , Buffer=0xXX , Chip=0xXX

Causes: 27CXXX eprom not completely UV erased, tWP too low, other causes.

Normally you should not change tWP and tWC unless you know what you are doing.

If you get random write errors with 27(C)XXX eproms try higher settings.

Older eproms like the 2716 need higher settings.

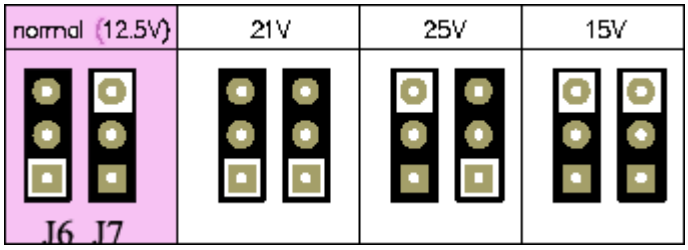
In the Buffer section you can see the contents of your program file or the chip if you have done a chip read.

The configs section give an overview of all settings and parameters.

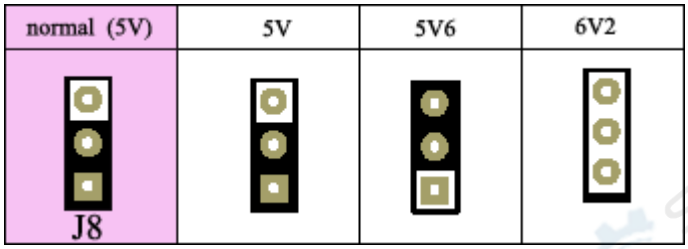
If you need PIC in circuit programming, you can use a DIP connector for the 18 pin PIC 16F84 socket(5 gnd., 12 clock, 13 data i/o, 14 Vcc).

The Vpp volt set

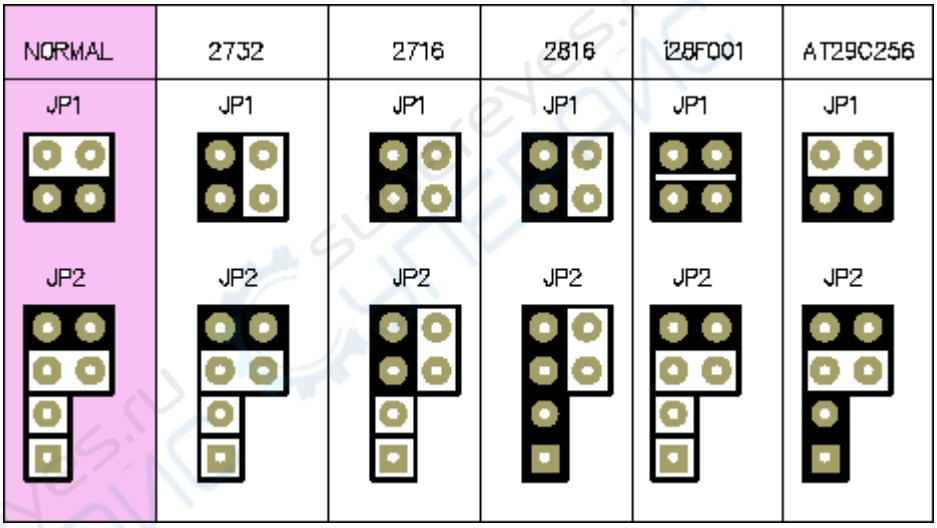
J6, J7



J8

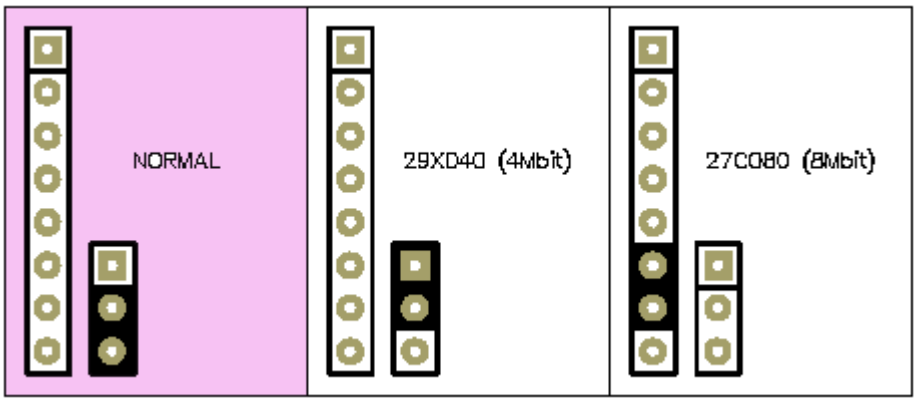


For the special devices



Close the erase jumper only to erase W27X or SST27SFXXX devices.

For the special devices



Set the jumpers to A18 and normal for standard use.

Set the jumper to A19 for XXX080 devices.

Set the jumper to 29X040 for the 29F040,29C040 and for the 27C080(801)

A19,A20,A21 are used to connect to the TSOP 48 adapter.

A19,A20,A21 are also used to connect to the 16 bit 42 pin adapter(27C400..27C322).