PRODUCT OF

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It's just an idea until you execute it

AVR/8051 USB PROGRAMMER

USER MANUAL

FOR WINDOWS 7 OS

For more Information Visit us at **www.JustExecuteIt.com**

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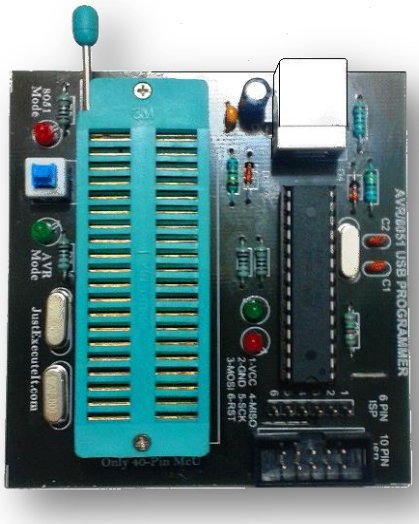
c. 10-Pin FRC cable

d. CD with Software guide to AVR/8051 Programmer with 20-20 AR/8051 Projects Tutorials



(a). AVR/8051 USB ZIF PROGRAMMER

(b). A USB cable of type B-to-A, for connecting Programmer to a PC

(c).10-Pin FRC cable

(d). CD with Software guide to AVR/8051 Programmer with 20-20 AVR/8051 Projects Tutorials

2. INTRODUCTION

Microcontroller programming has been made simpler than ever before. AVR/8051 PROGRAMMER is very powerful yet Low cost and comfortable tool for any developer. Programmer gives the user a friendly environment with USB communication and easy GUI.

Features:

- ✓ Supports Windows Xp , Windows 7, Windows 8 , Windows Vista OS
- ✓ USB powered, No external supply is required.
- ✓ On Board 10-Pin FRC Socket, designed to connect Programmer to target development boards
- ✓ On Board 6-Pin Burg Strip, designed to connect programmer to Bread boards.
- ✓ 40 Pin ZIF Socket for programming only 40-Pin 8051/AVR Microcontrollers
- ✓ Enabled with SCK option to support targets with low clock speed (< 1,5MHz).
- ✓ supports wide range of AVR and 8051 microcontrollers such as:

ATMEGA:		**ATTINY:**	**AT90CAN:**	**AT90SXX:**
ATmega128, ATmega1280, ATmega1281, ATmega1284P, ATmega128A, **ATmega16,** ATmega162, ATmega164P, ATmega165, ATmega165P ATmega168, ATmega168P, ATmega169, ATmega169P, **ATmega32,** ATmega324P, ATmega324PA, ATmega325, ATmega3250, ATmega3250P, ATmega325P, ATmega328P, ATmega329, ATmega3290,	ATmega3290P, ATmega329P, ATmega32A, ATmega32HVB, ATmega32M1, ATmega32U4, ATmega32U6, ATmega48, ATmega48P, ATmega64, ATmega640, ATmega644, ATmega644P, ATmega645, ATmega6450, ATmega649, ATmega6490, ATmega64A, **ATmega8,** ATmega8515, ATmega8535, ATmega88, ATmega88P, ATmega88PA, **ATmega8A.**	ATtiny12, ATtiny13, ATtiny13A, ATtiny15, ATtiny167, ATtiny22, ATtiny2313, ATtiny24, ATtiny25, ATtiny26, ATtiny261, ATtiny434, ATtiny44, ATtiny45, ATtiny461, ATtiny48, ATtiny84, ATtiny85, ATtiny861, ATtiny88.	AT90CAN128, AT90CAN32, AT90CAN64. **AT90PWM:** AT90PWM2, AT90PWM2B, AT90PWM3, AT90PWM3B, AT90PWM81, AT90PWM216, AT90PWM2B, AT90PWM316. **AT90USB:** AT90USB1286, AT90USB1287, AT90USB162, AT90USB646, AT90USB647, AT90USB82.	AT90S1200, AT90S2313, AT90S2323, AT90S2343, AT90S4414, AT90S4433, AT90S4434, AT90S8515, AT90S8535, AT90SCR100H **AT89SXX:** **AT89S51,** **AT89S52,** **AT89S53,** AT86RF401, AT89S2051 AT89S4051, AT89S8252, AT89S8253,

3. IMPORTANT SAFETY WARNING AND HANDLING PROCEDURES

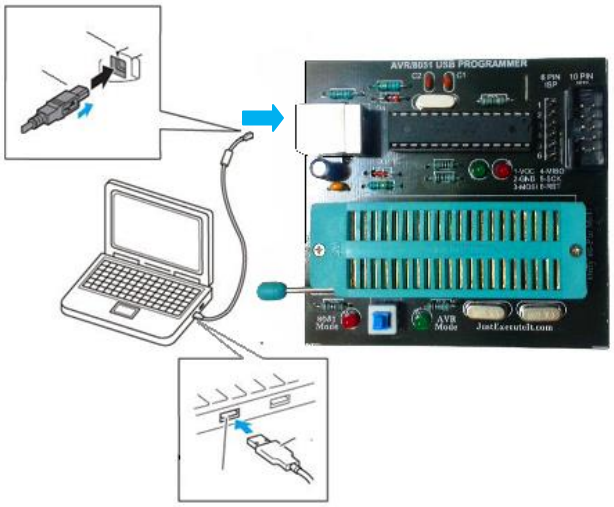
The AVR/8051 USB programmer is not intended for small children! Younger users should use this product only under adult supervision. By using this product, you agree not to hold "JustExecuteit.com" liable for any injury or damage related to the use or to the performance of this product. This product is not designed for, and should not be used in, applications where the malfunction of the product could cause injury or damage. Please take note of this additional precaution:

Since the PCB and its components are exposed, take standard precautions to protect your programmer from ESD (electrostatic discharge), such as first touching the surface the programmer is resting on before picking it up. When handing the programmer to another person, first touch their hand with your hand to equalize any charge imbalance between you so that you don't discharge through the programmer as the exchange is made.

4. GETTING STARTED WITH WINDOWS 7

i. Connecting Programmer

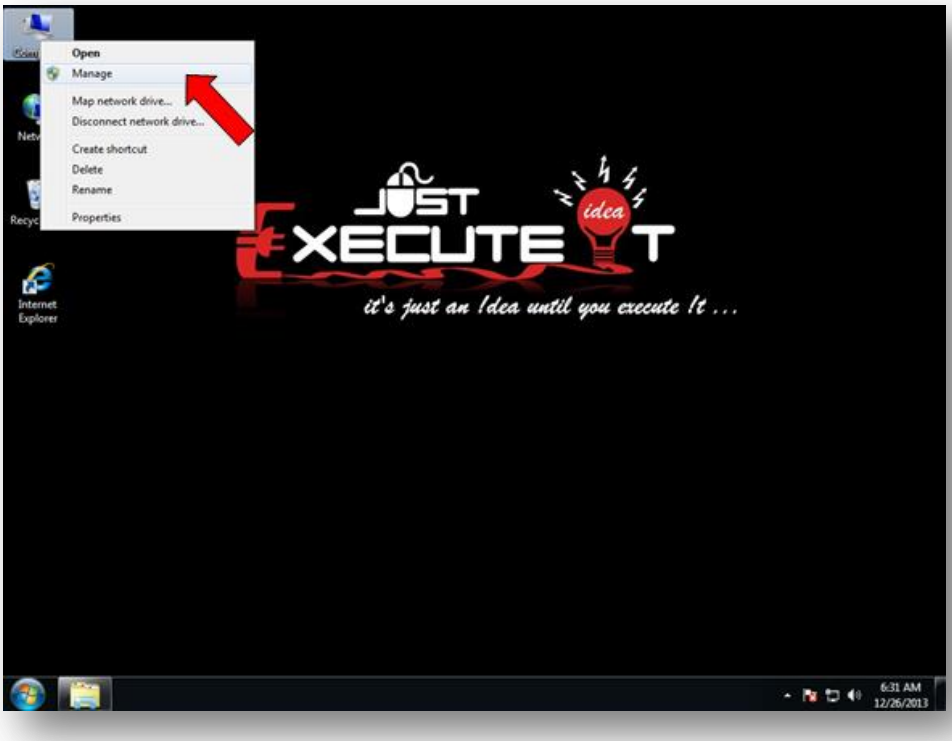
Plug one end of the USB cable into the USB connector on AVR/8051 USB PROG. Plug the other end into a USB port on your PC/Laptop as shown in the figure below.



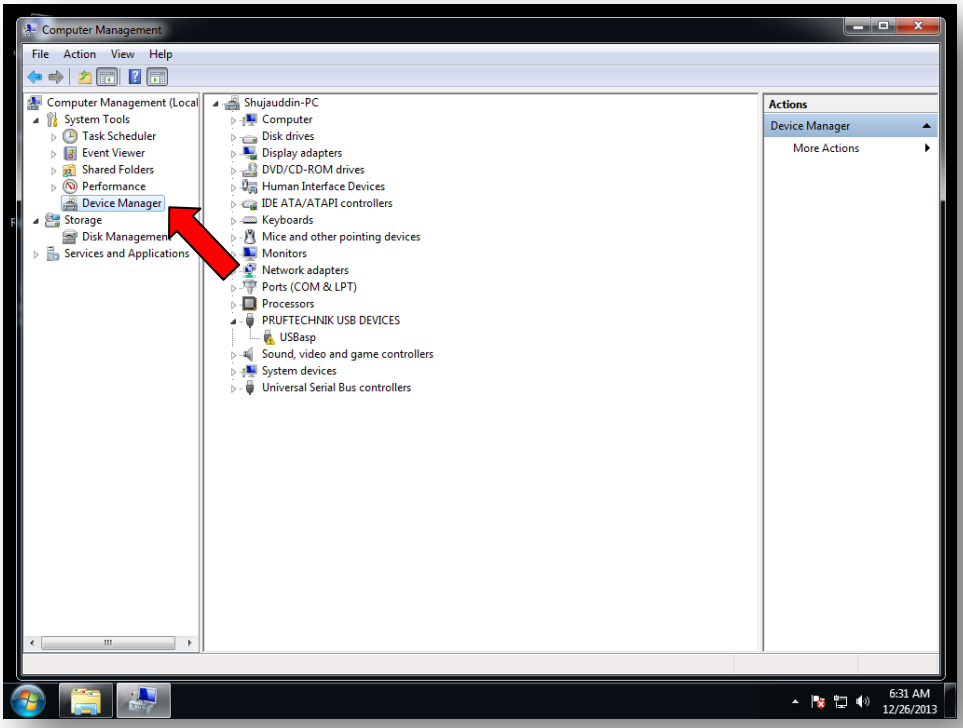
ii. Installing Drivers

Step1: After connecting USB Programmer into PC you will get a pop up as **"Installing Device Driver Software"** as shown in the image below

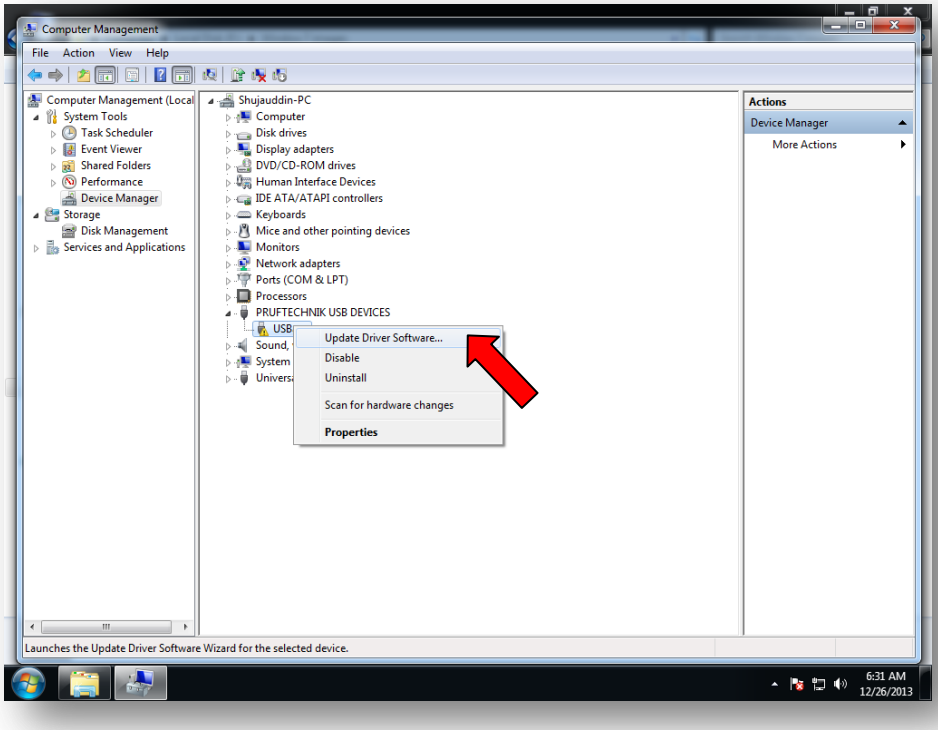
Step 2: Go to the **desktop screen** then right click on **My computer** and select **Mange**



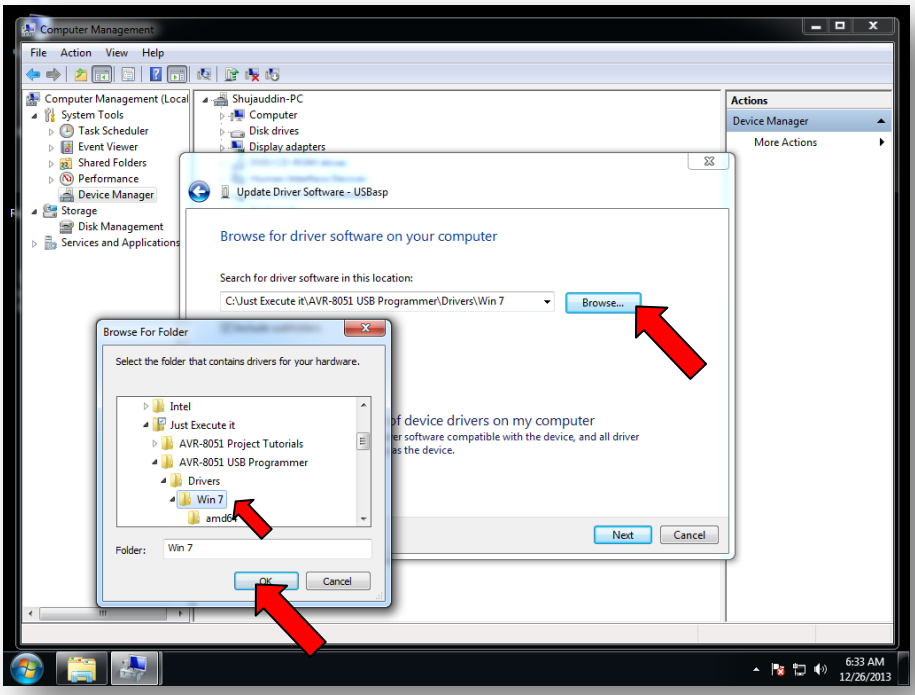
Step 3: Click on **Device Manager**



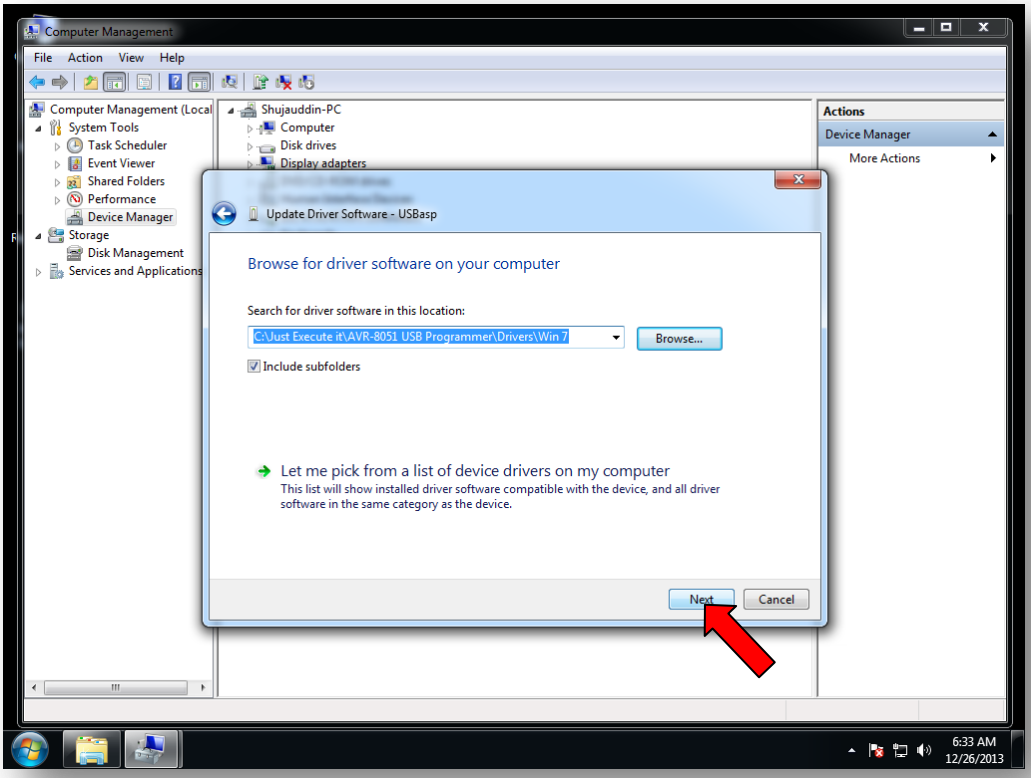
Step 4: Select **PRUFTSCHNIK USB DEVICE** and right click on **USBasp** then select **Update Driver Software**



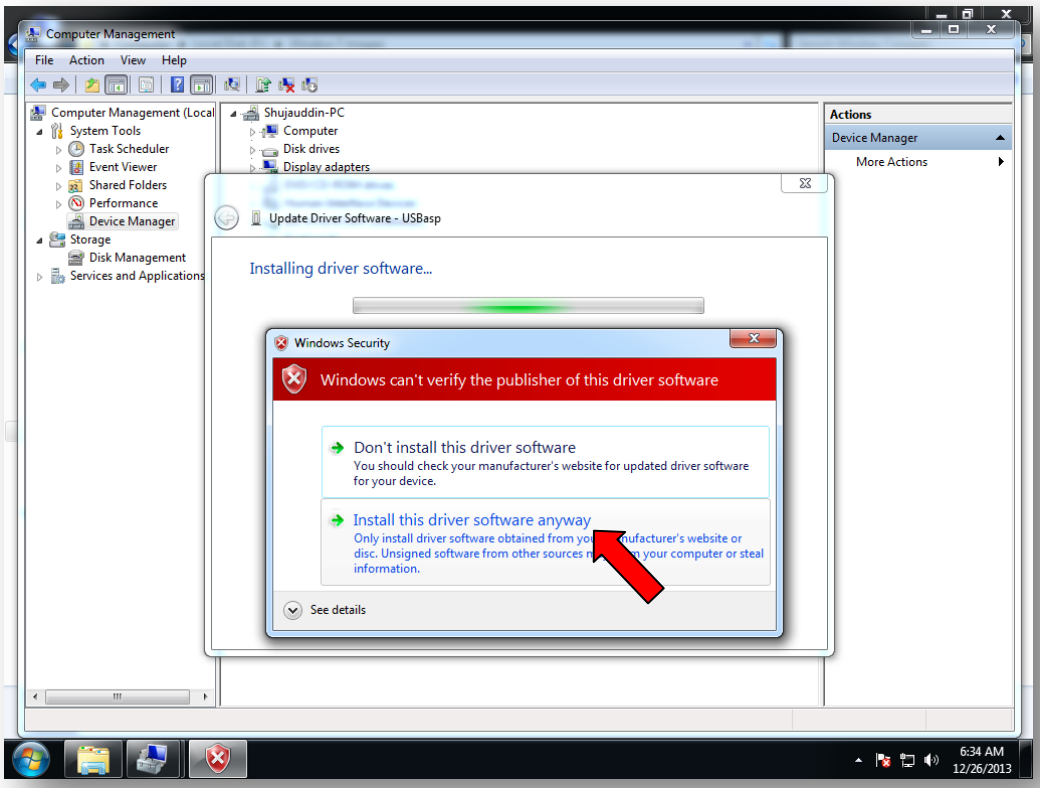
Step 5: Click on **Brows** and locate the **Win 7** Folder from the **CD,** then click **ok**



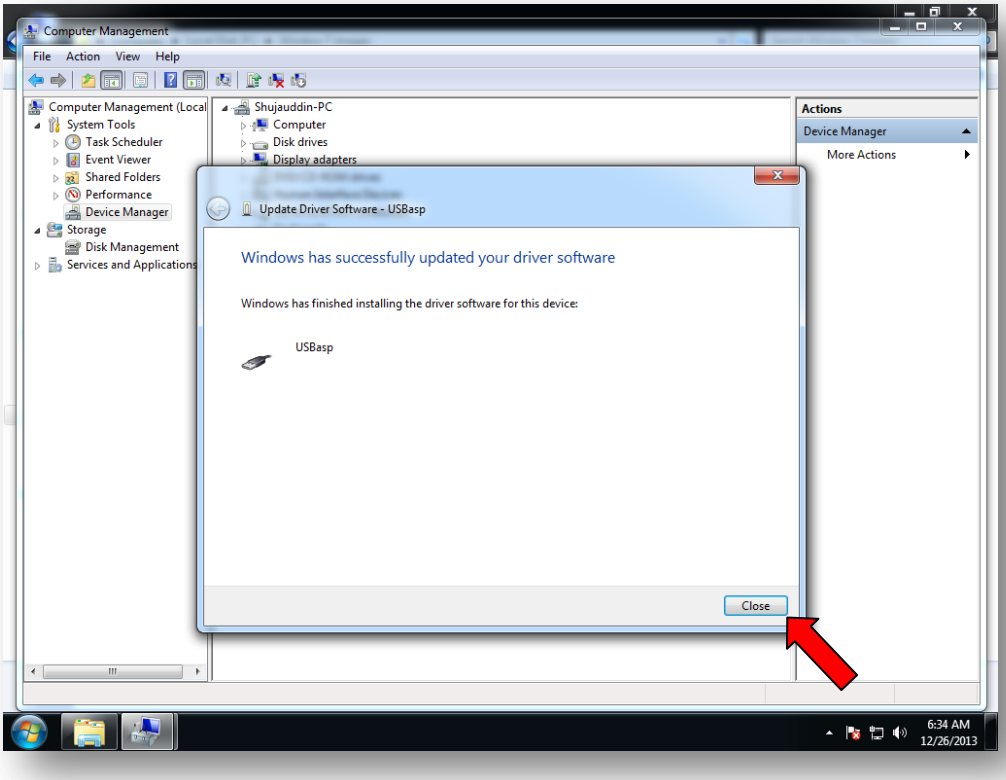
Step 6: Click on **Next**



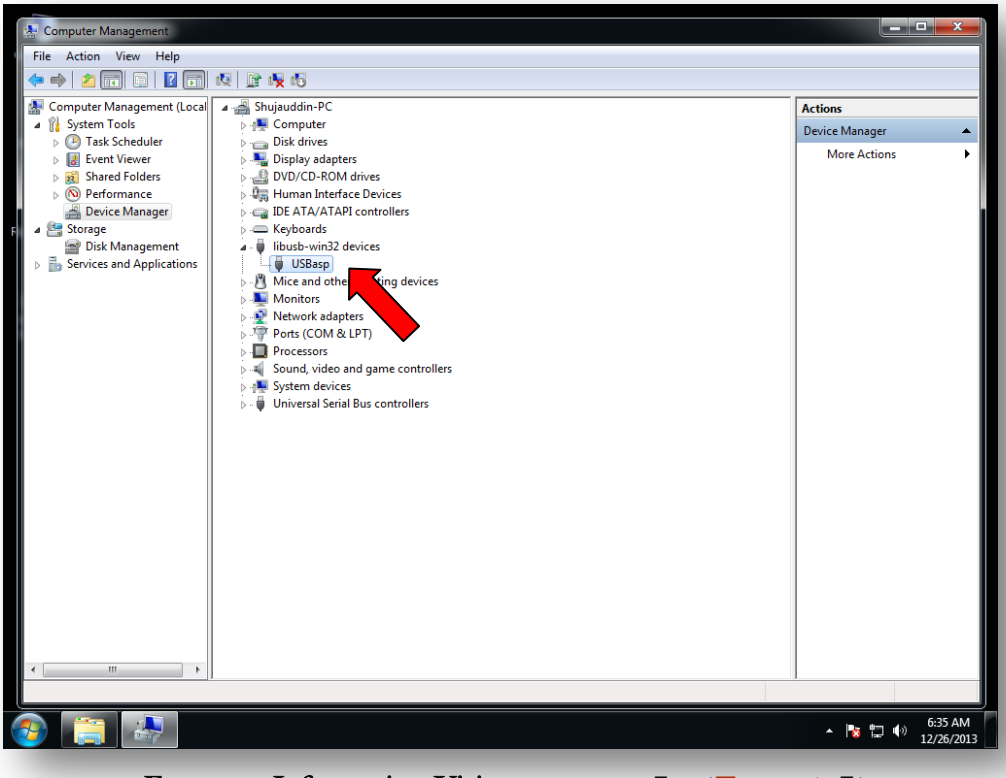
Step 7: Click on **"Install this driver software any way "**



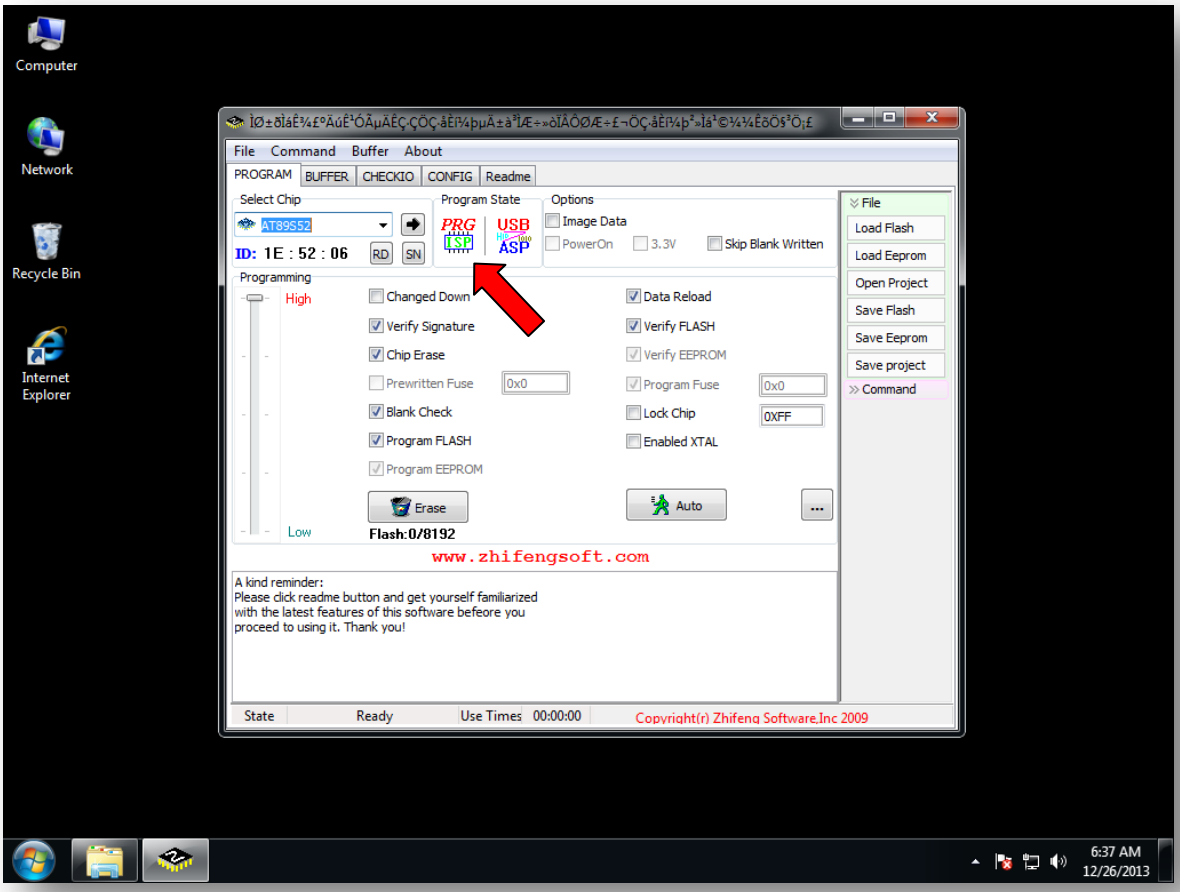
Step 8: This will install the driver successfully, and then click on **Close**



Step 9: Now click the status at the device manger as "**libusb 32-devices** "



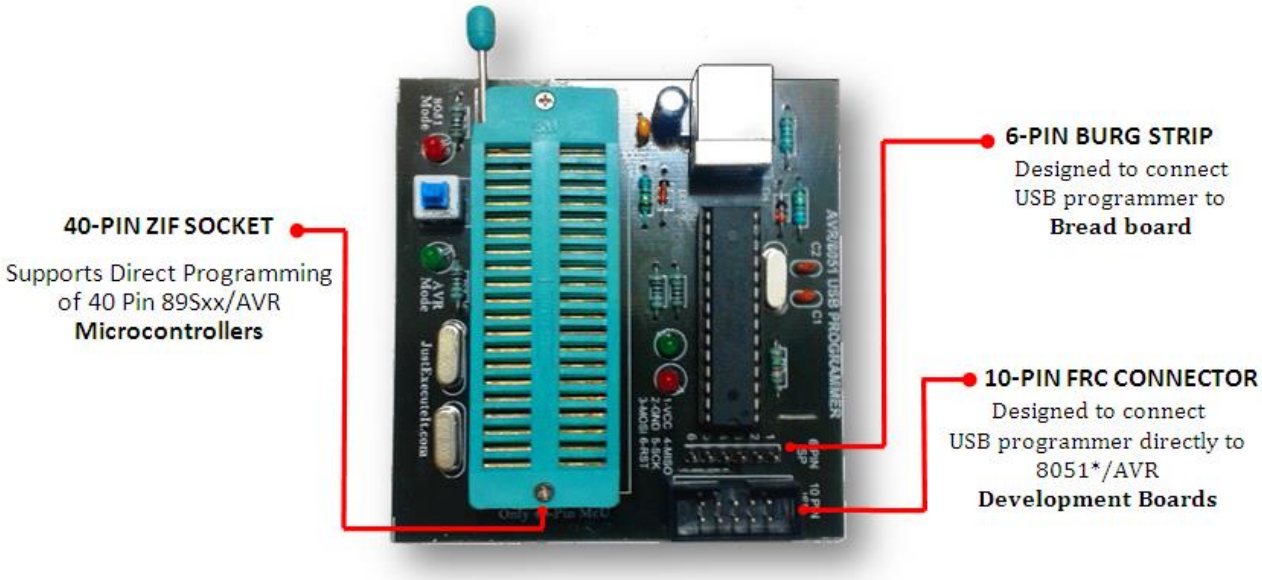
Step 10: Check the **programming state** enabled as,  with this you have finished the complete installation of AVR/8051 USB Programmer. (Next let's see how to dump a hex file into Microcontroller)



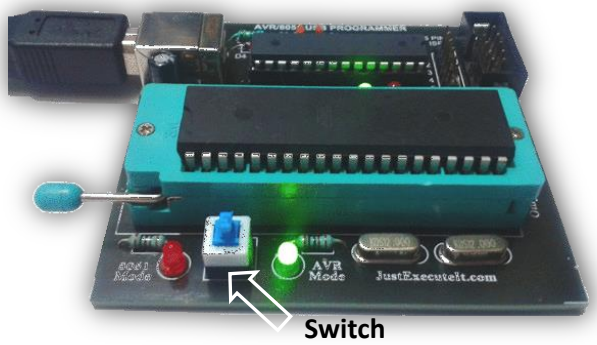
5. PROGRAMMING MICROCONTROLLER

Till now we have successfully completed the driver's installation for Windows XP Operating system .Next we will see how to **dump a '.HEX'** file **into Microcontrollers**. As shown in the picture below there are 3 ways by which a .HEX file can be dumped into microcontroller depending upon the project you are working on.

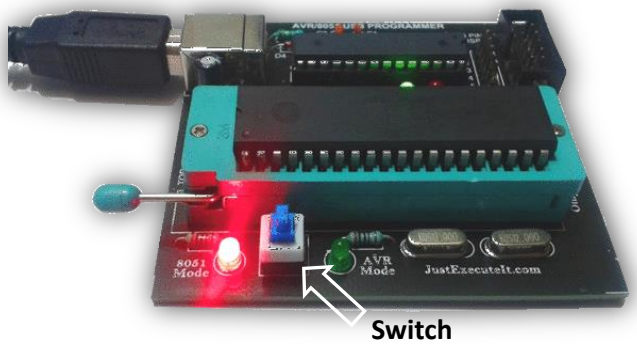
a. By Using 40-Pin ZIF Socket
b. By using 6-Pin Burg strip
c. By using 10-pin FRC Connector



a. By using 40-Pin ZIF Socket: It supports only **40 Pin 89Sxx/AVR Microcontrollers.** The desired mode of programming can selected using a switch provided. As a default the ZIF connector stays at 8051(89SXX) Mode (Glowing **RED** LED ON),On pressing switch ZIF connector shifts to AVR Mode(Glowing **GREEN** LED ON)

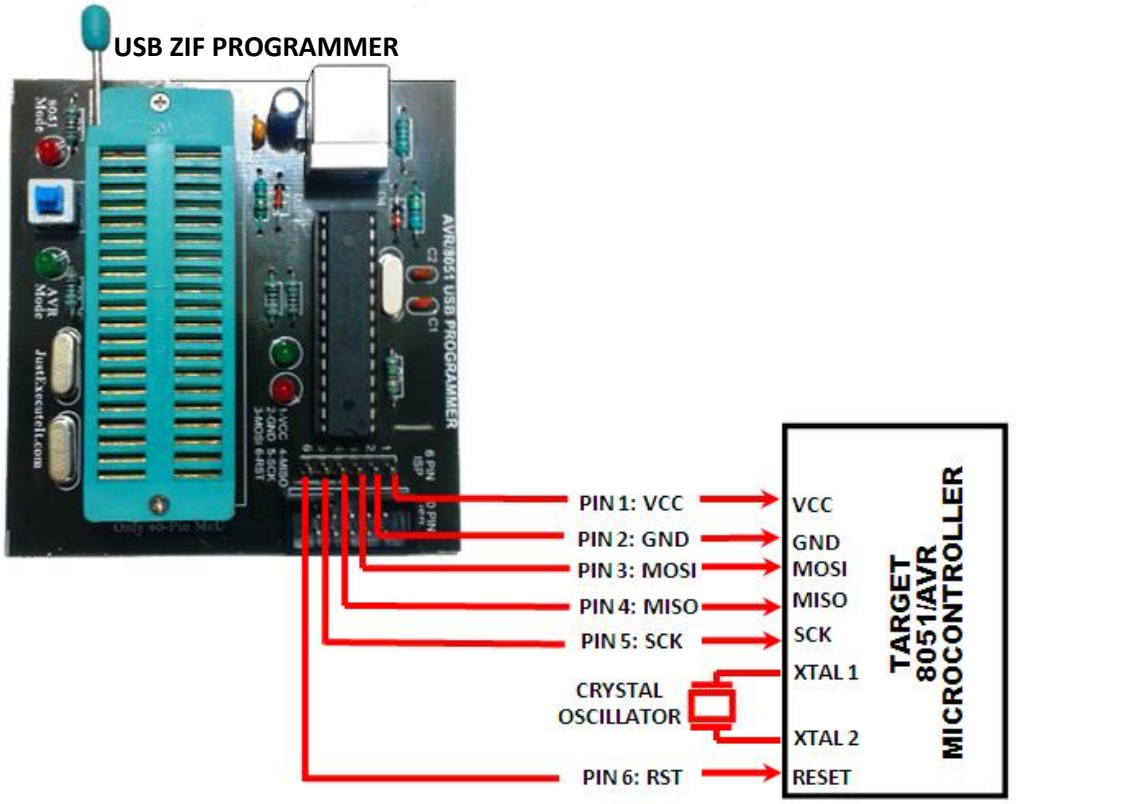


ZIF Connector is in AVR Mode



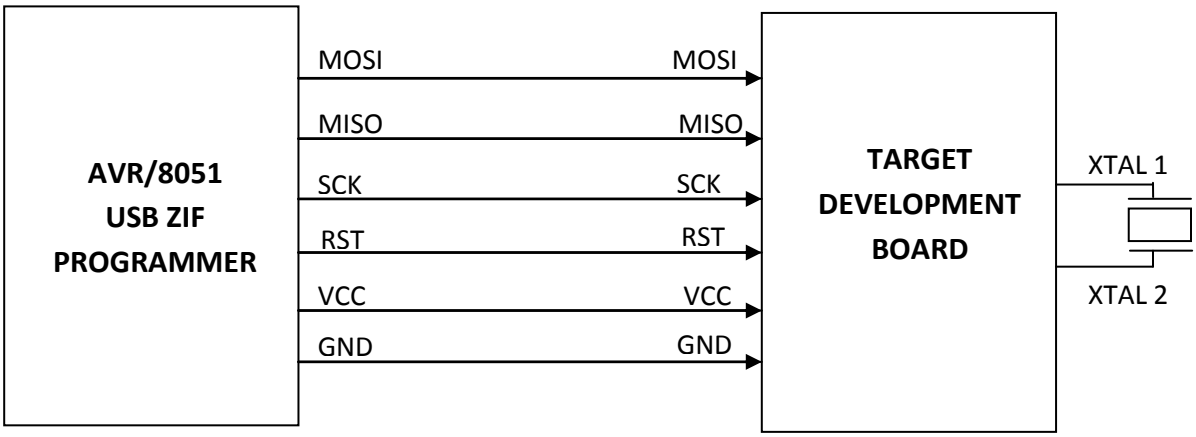
ZIF Connector is in 8051 Mode

b. USING 6-PIN BURG STRIP: This can be used while working at **Bread Board .**By using a simple 6 Pin Female **Relimate** connector cable, programmer can be interfaced to Bread Board **.**Make sure that following pin interfacing is made before installation .Such as MOSI, MISO, SCK, RST, VCC, GND Pins of **AVR/8051USB PROGRAMMER** intersects exactly with MOSI, MISO, SCK, RST, VCC, GND Pins of **TARGET DEVELOPMENT BOARD.** Crystal Oscillator =12Mhz(Mostly)

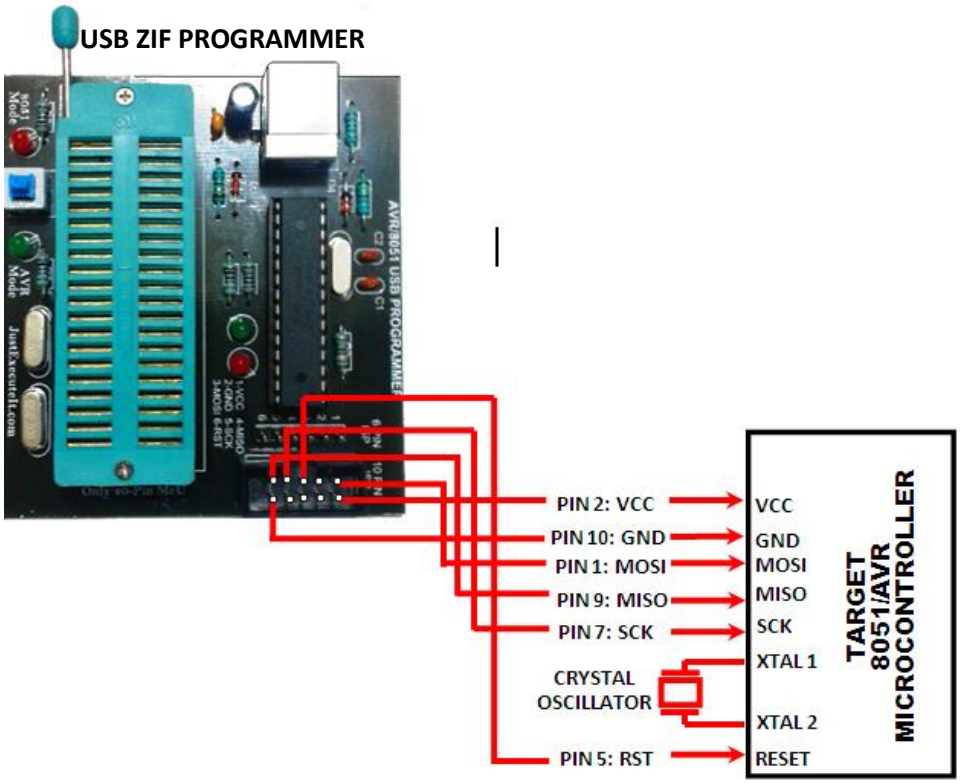


TARGET MICROCONTROLLER AT BREAD BOARD

c. USING 10-PIN FRC CONNECTOR



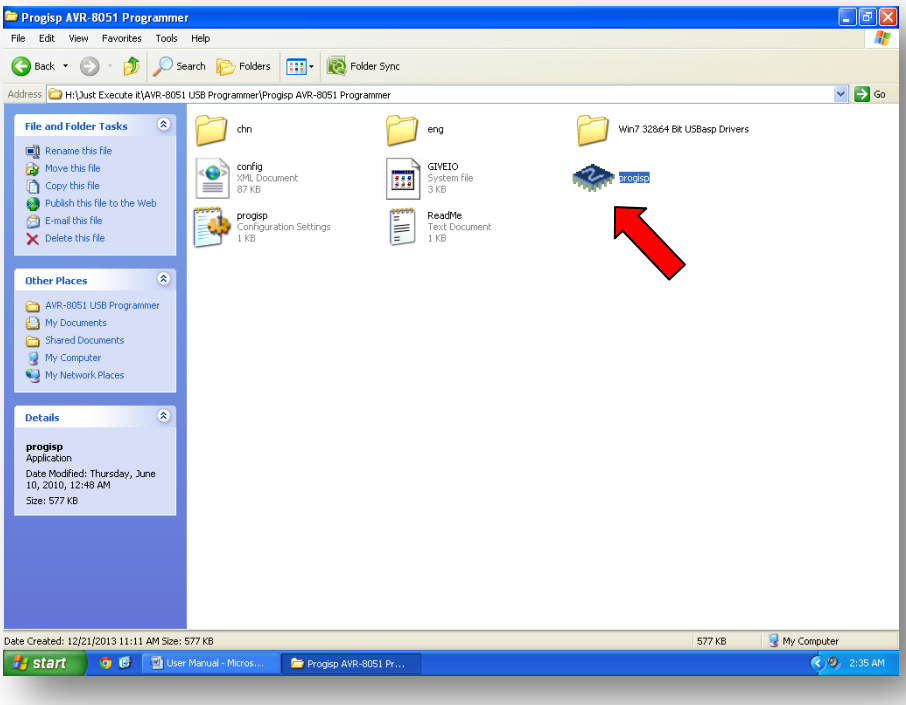
Detailed pin configuration for **AVR/8051 USB PROGRAMMER** is as follows



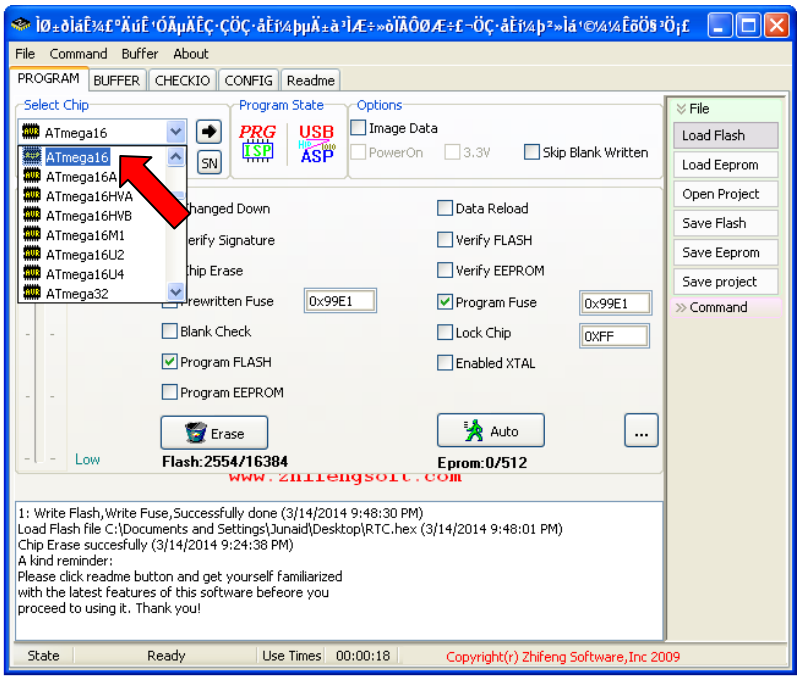
TARGET MICROCONTROLLER AT DEVELOPMENT BOARD

NOTE: While Using 8051 Development board, Please remove capacitor 10uf from reset circuit as reset Pin is used for programming.

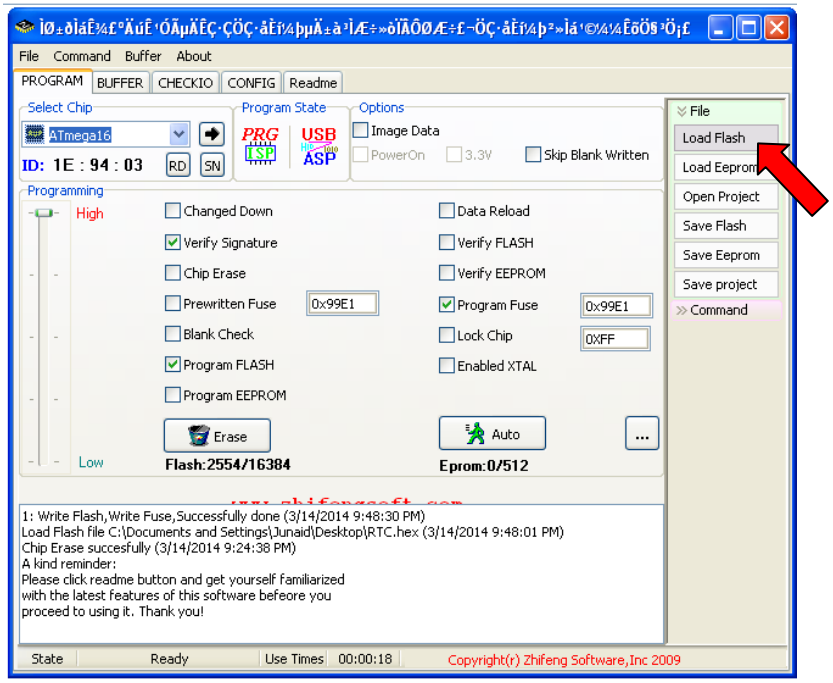
Step 1: Go to **Progisp AVR/8051 Programmer** Folder Present in CD and open **Progisp**



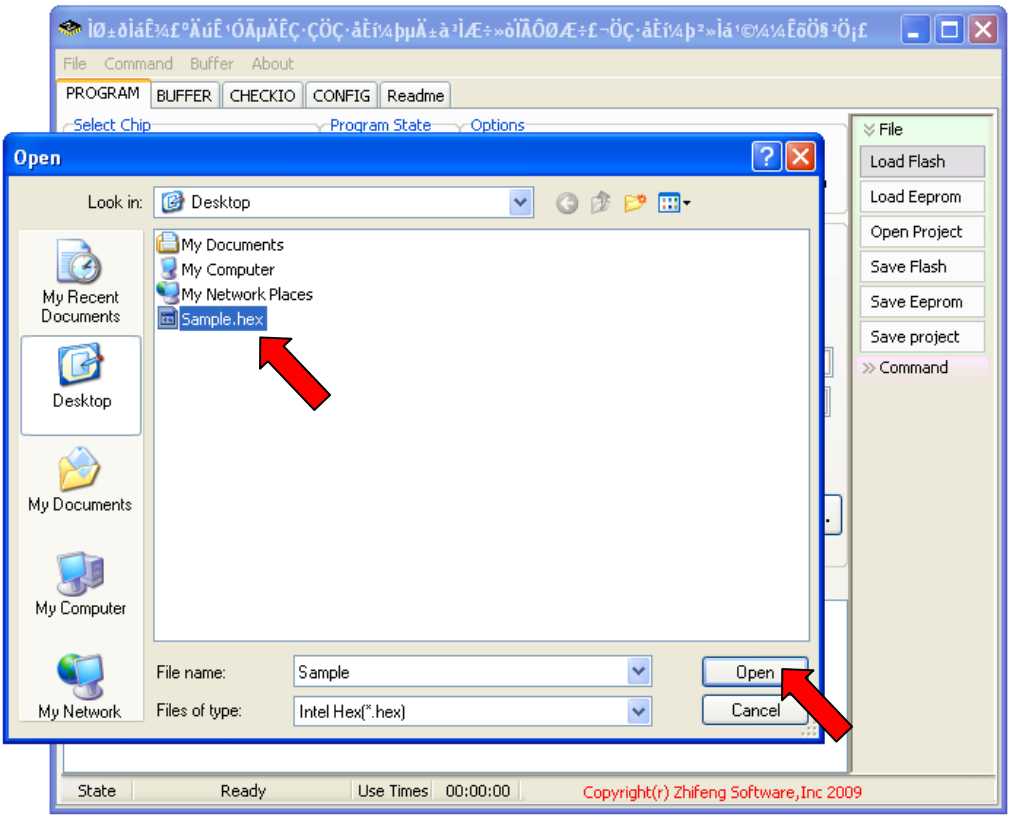
Step 2: Select the Micro controller



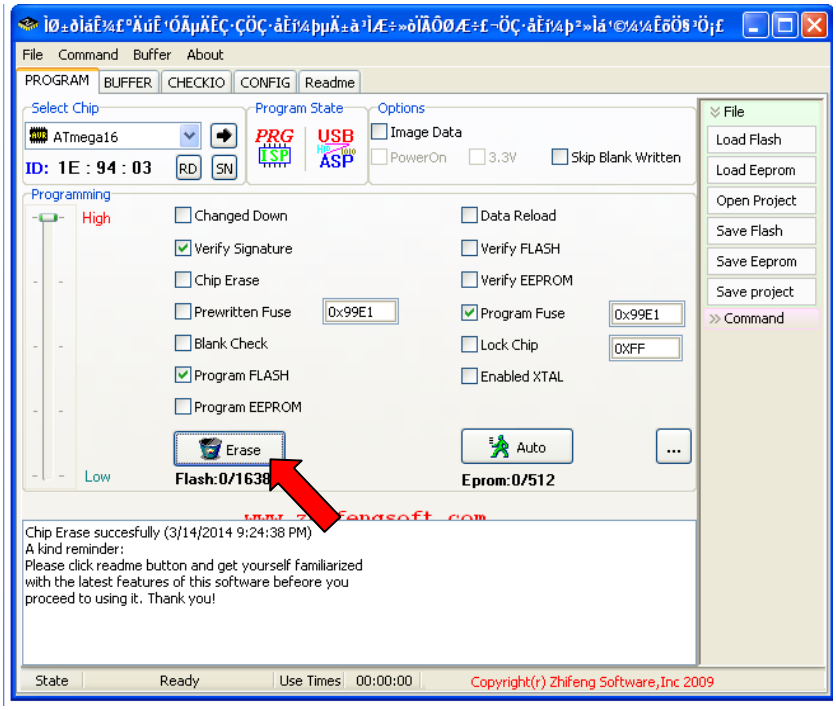
Step 3: Click on **Load Flash** to locate the **.HEX File**



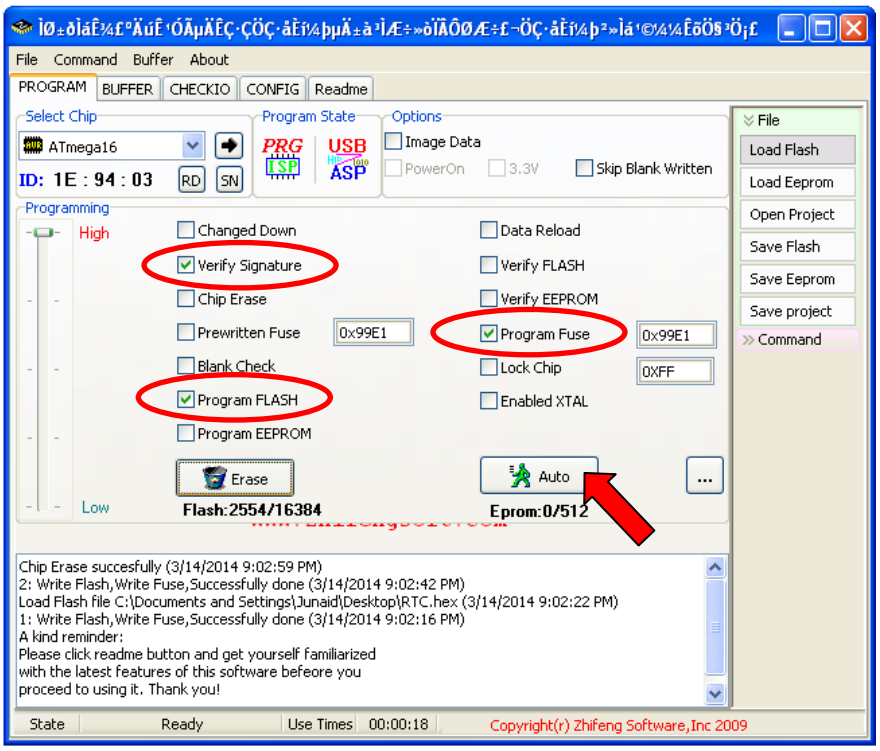
Step 4: Locating **Sample.HEX** file then click **Open**



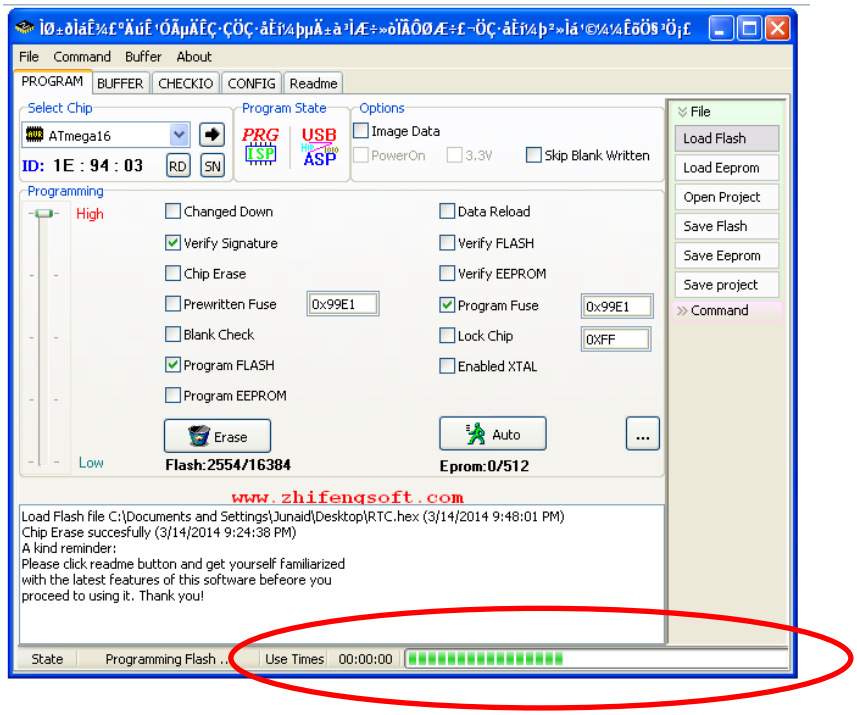
Step 5: Click **Erase**



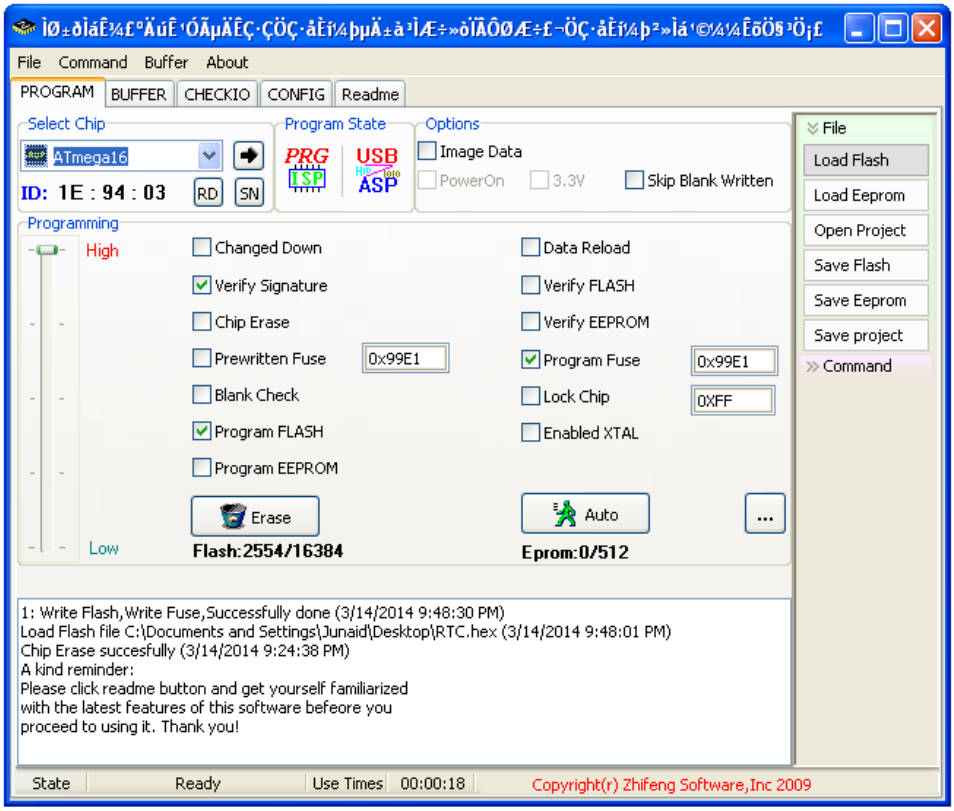
Step 6: Mark **1.** Verify Signature **2.** Program FLASH **3.** Program Fuse for **QUICK PROGRAMMING** and then Click **Auto**



Step 7: Wait few seconds while it's processing.



Step8: Now you can proceed to use your Microcontroller for your Application .**Thank you**



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