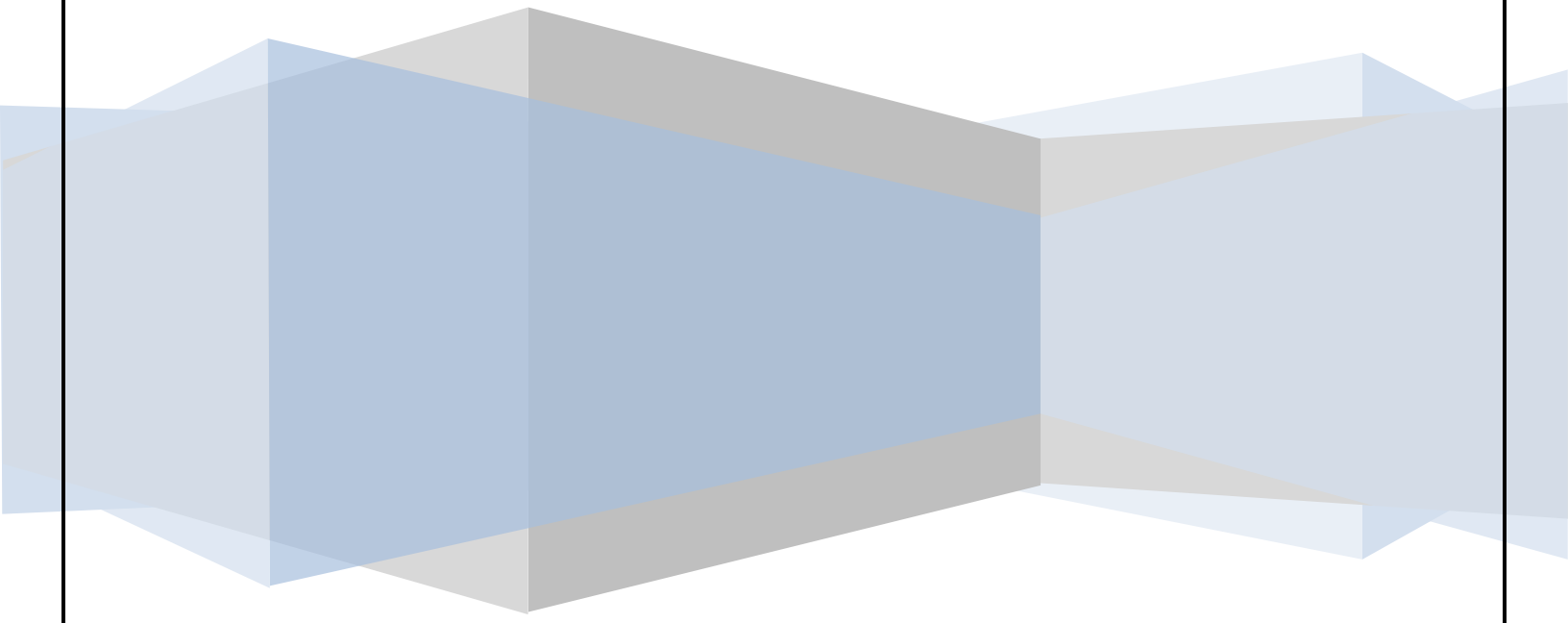
CoSTAR Technologies

www.costartech.com

CoSTAR Programming Utility

Installation and Operation manual

Revision 1.0



Introduction

The CoSTAR Programming Utility (hereafter referred to as the CPU) is a Windows application that is used to update and check the status of the BlueSTAR 2010 module.

This manual discusses the installation and usage of the program.

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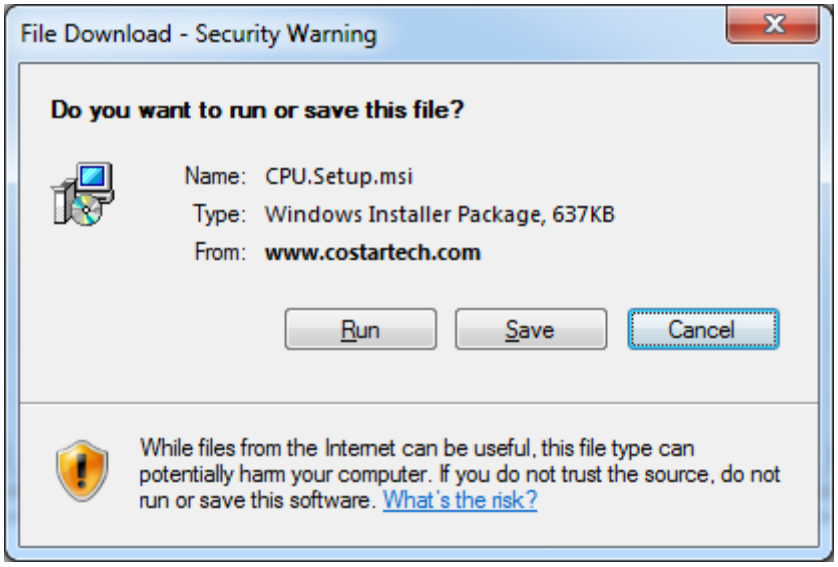
Installation

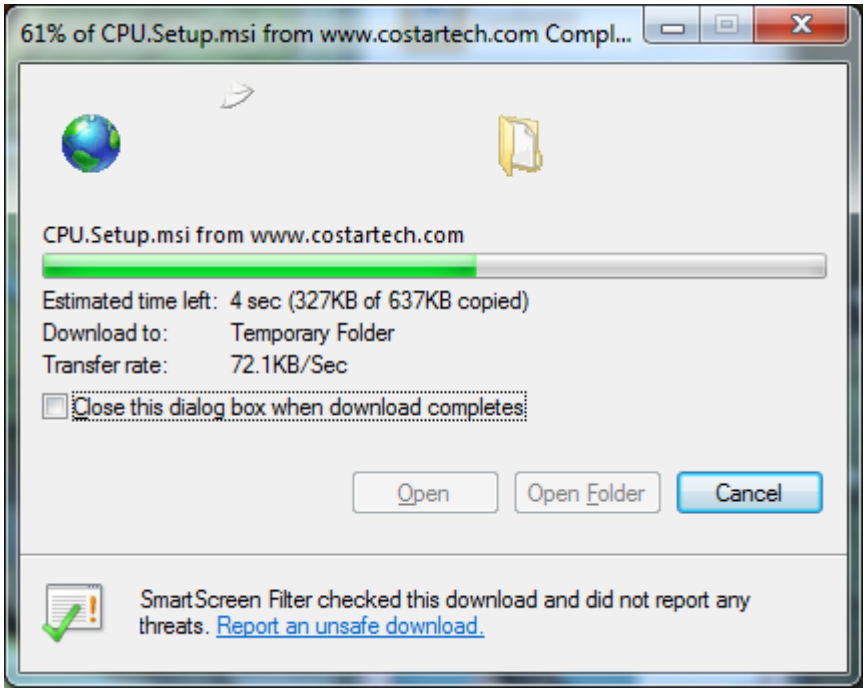
The CPU program can be downloaded from the CoSTAR website by using the following link.

CoSTAR Programming Utility

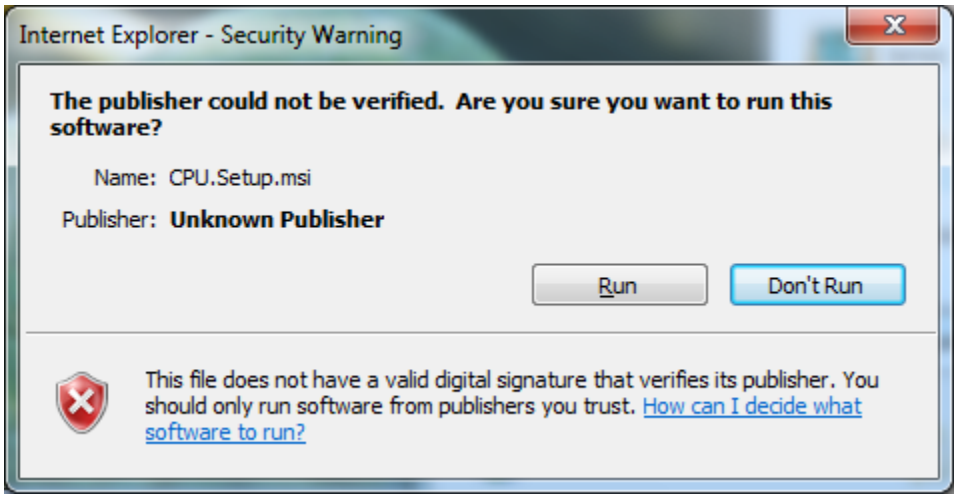
The following dialog box should pop up asking you to run or save the file.



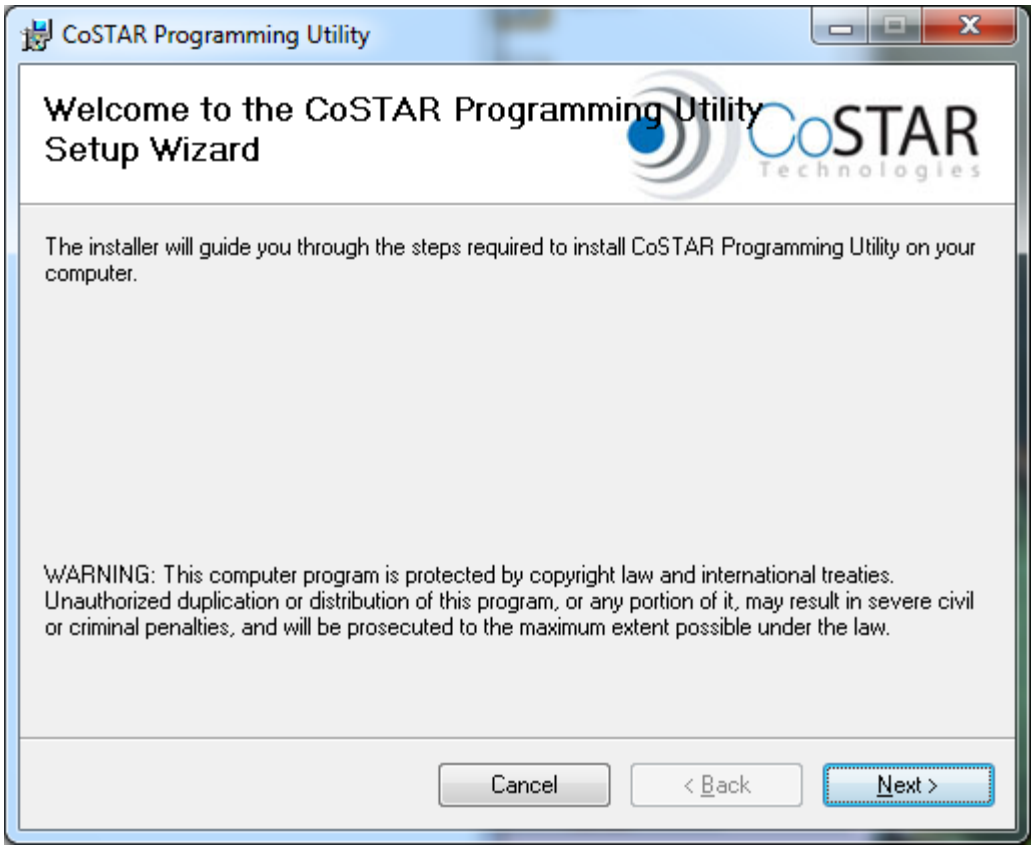
Click Run to install the program.



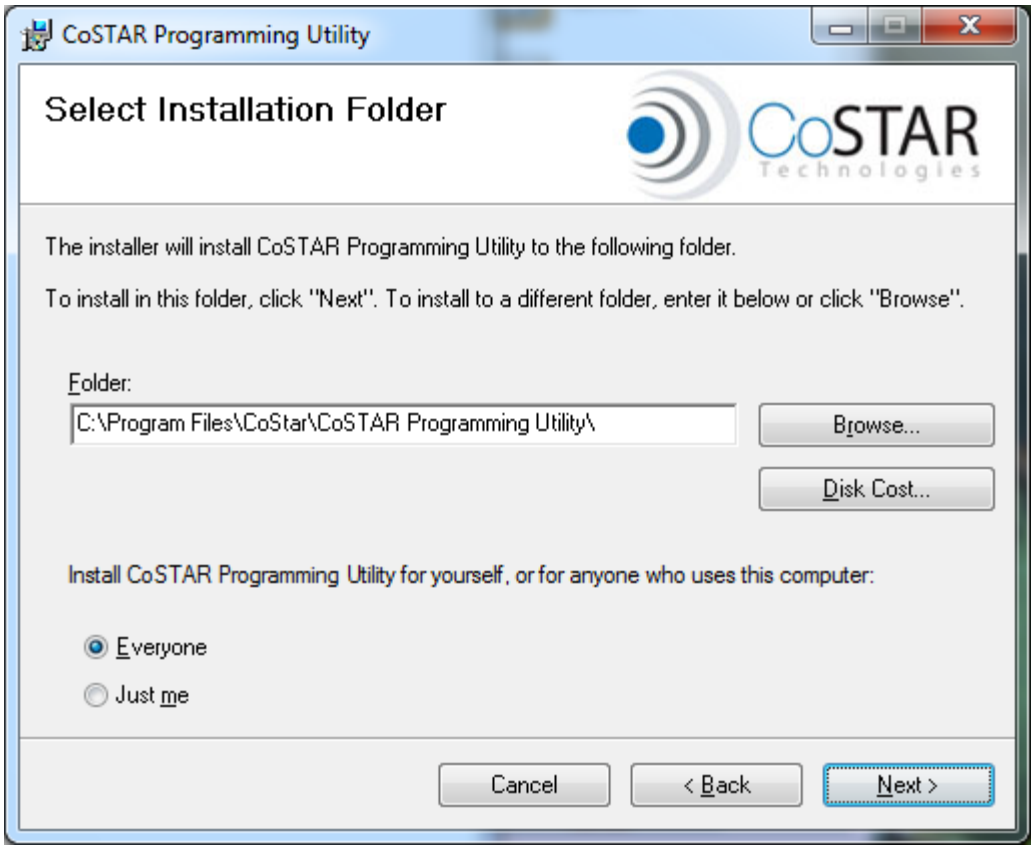
If you get a Security Warning from Internet Explorer, click RUN.



Next, the setup wizard will launch to guide you through the rest of the install.

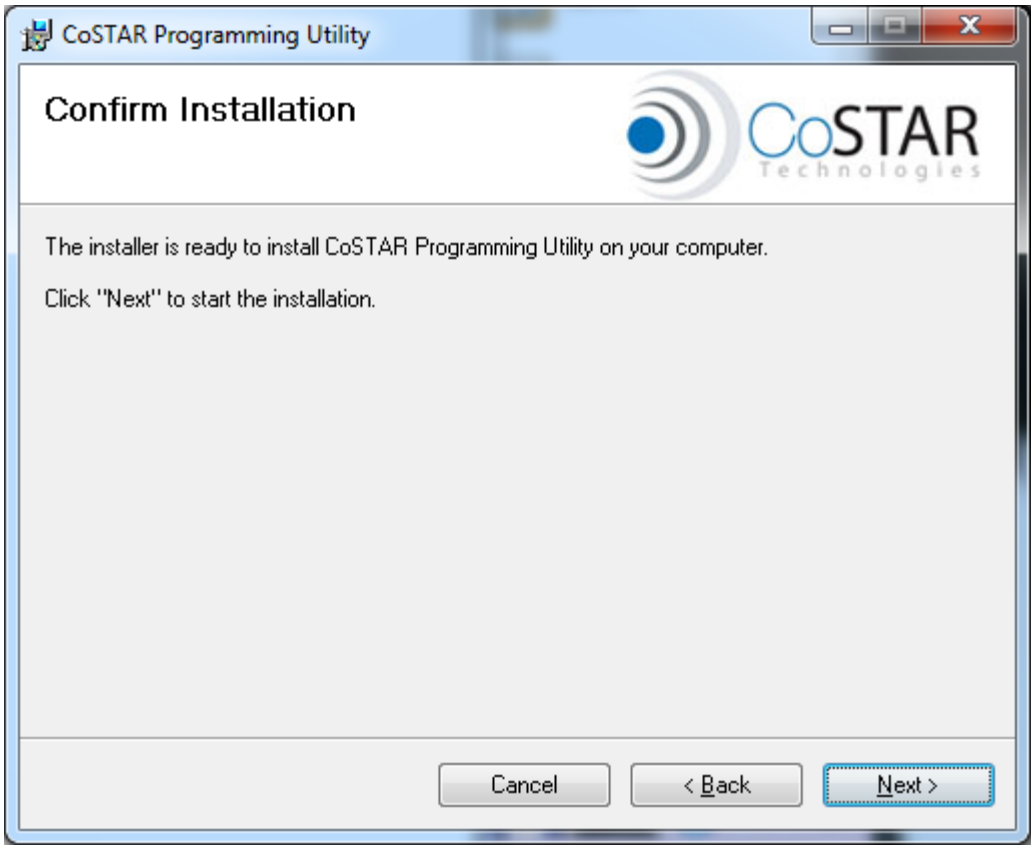


Click Next to continue.



Select the installation folder, than select who you want to have access the program, and then click next.

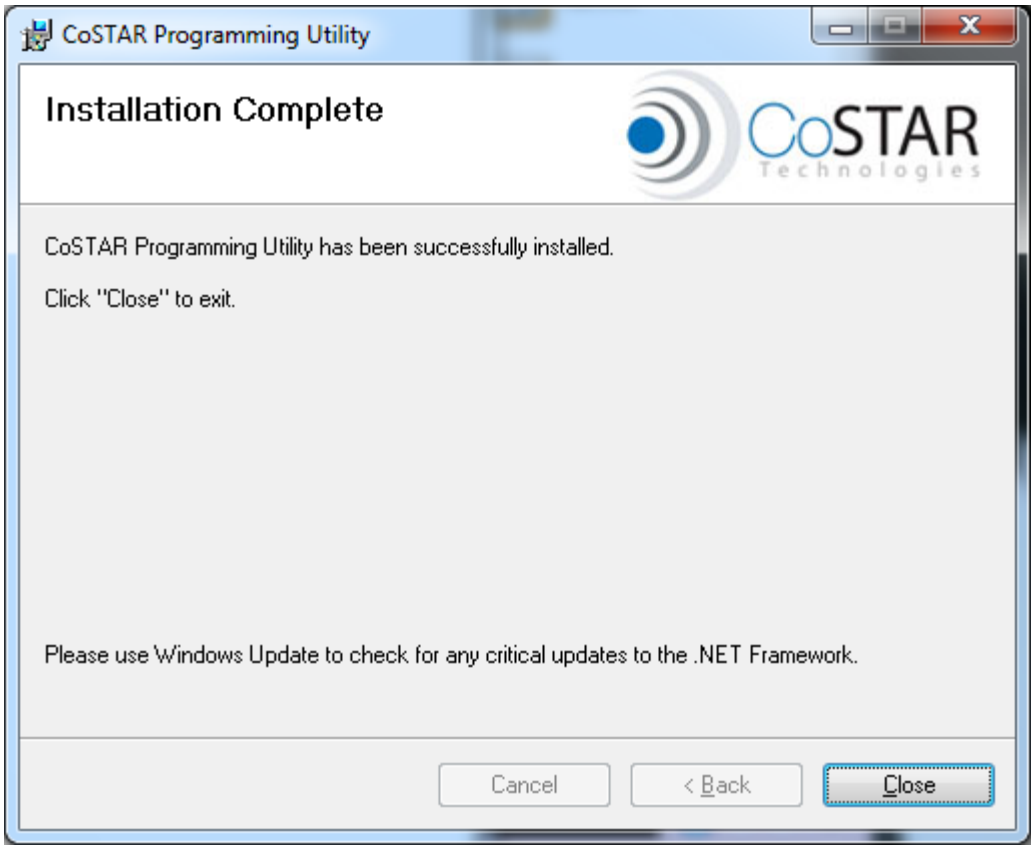
At this point, the Wizard has gathered all necessary information and is ready to begin installation.



Click Next again to begin installing the CPU program.

You might be prompted for permission to install the program if you are not an administrator, you might have to log in as one to install the program.

Once all the files are copied over, the installation will complete and you will be prompted to check for any critical updates to the .NET framework.

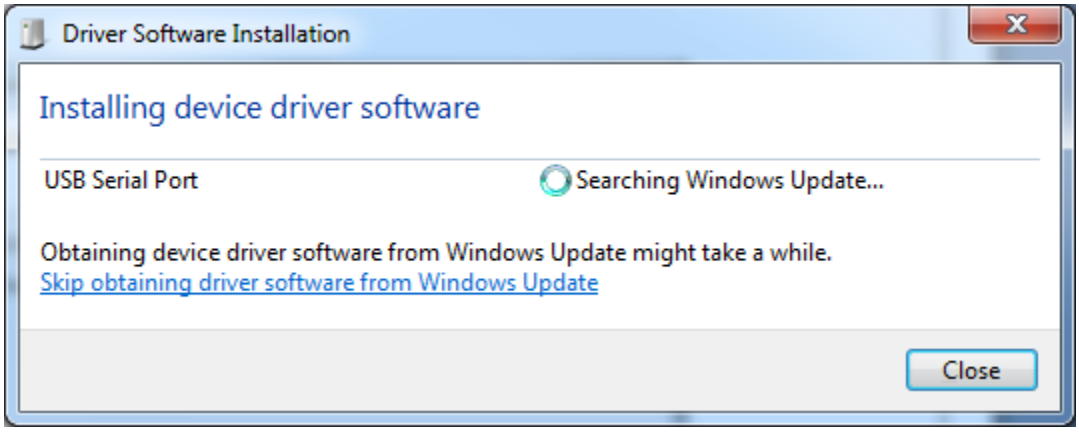


Click Close to exit the installation wizard.

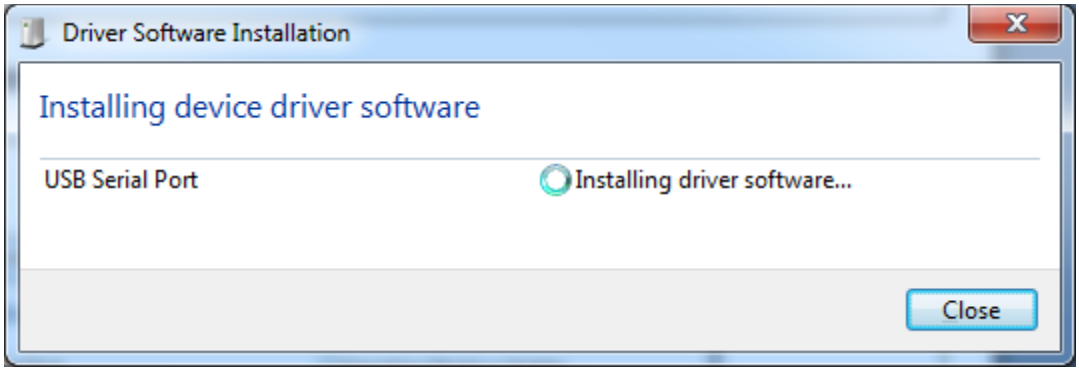
Next, connect the BlueSTAR 2010 to the PC using a mini USB cable.

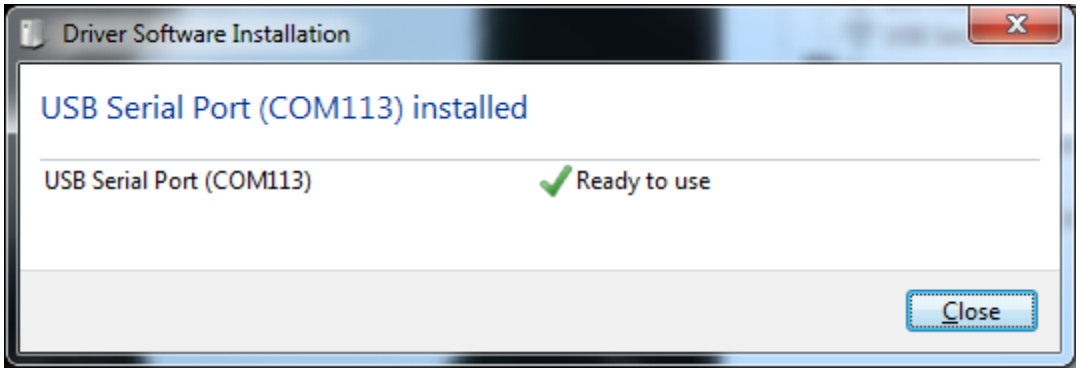
If you do not already have the driver installed,

Windows will begin to search for it.

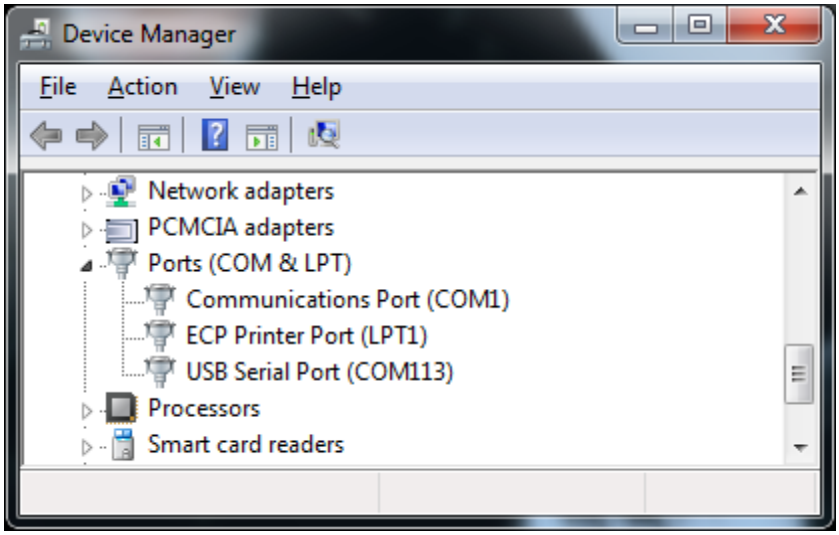


If you have an internet connection, you should be able to locate the drivers automatically from Windows Update.





The drivers convert your USB port into a serial port. So when they are installed properly, you will find the new COM port in the device manager under ports.



In this case, the port added was COM113, this will be different for each installation.

If Windows cannot find the drivers, or if you do not have an internet connection available, you can download the drivers for your particular operating system from the CoSTAR website using the following link:

http://www.ftdichip.com/Drivers/VCP.htm

With the installation complete and the device connected, we are now ready to launch the CPU.

CPU Usage

Overview

The CPU program will allow you to access the BlueSTAR 2010 to do several features including:

- Programming – Allows updating the BlueSTAR 2010 to add new features as they are released. All software upgrades are free of charge and posted on the website as they become available. Check back often to see if there have been any changes, or you can follow us on Facebook or Twitter.

- Configure – Allows initial adjustment of the Microphone Gain, Output Gain and Ring Tone Selections.

- Status – Allows monitoring the status of the BlueSTAR to see BlueSTAR, vehicle, and cell status

- Data Logging – Future location for capturing vehicle data to remotely diagnose vehicle specific issues.

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Configure
Status
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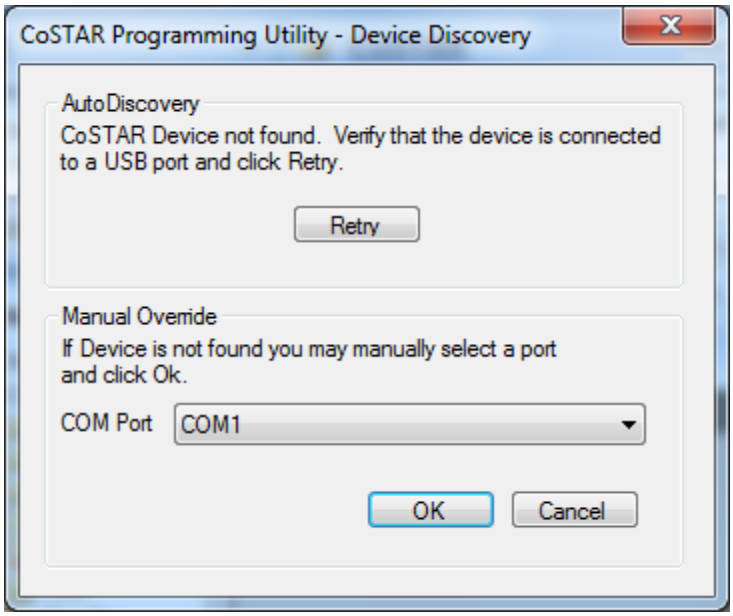
Exit

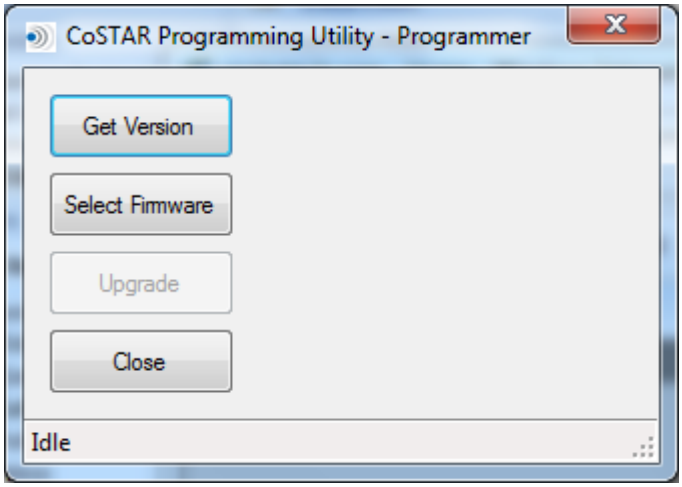
Program

Pressing the Program button does a scan for the device and opens the programmer. If a device is not found, the following screen will appear.

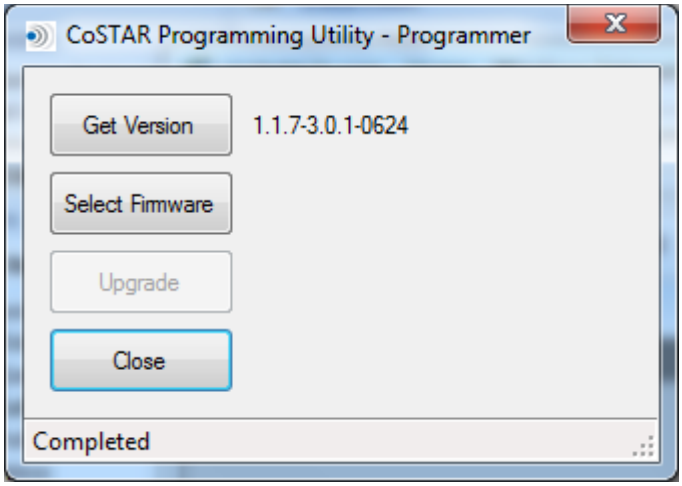


When properly connected, the BlueSTAR will transmit a beacon symbol to the CPU which tells it which port the unit is located on. The CPU looks for this beacon and if found, will automatically connect to the BlueSTAR. If not found, you can check connections and hit Retry. Alternatively, if you know what COM port your device is on, you can select it manually from the drop down list.

Once found, the Programming screen will pop up.

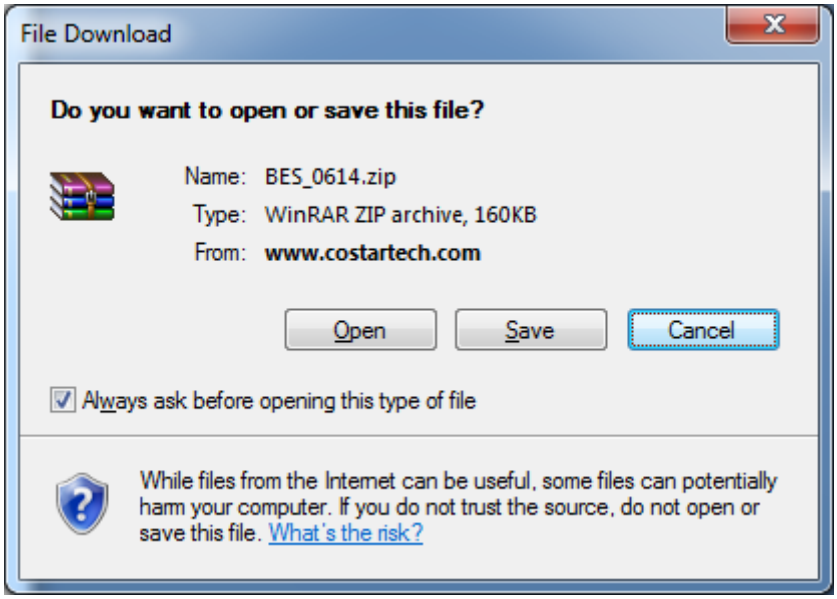


From here, we can verify the version of the software installed in the unit, by hitting the Get Version button.

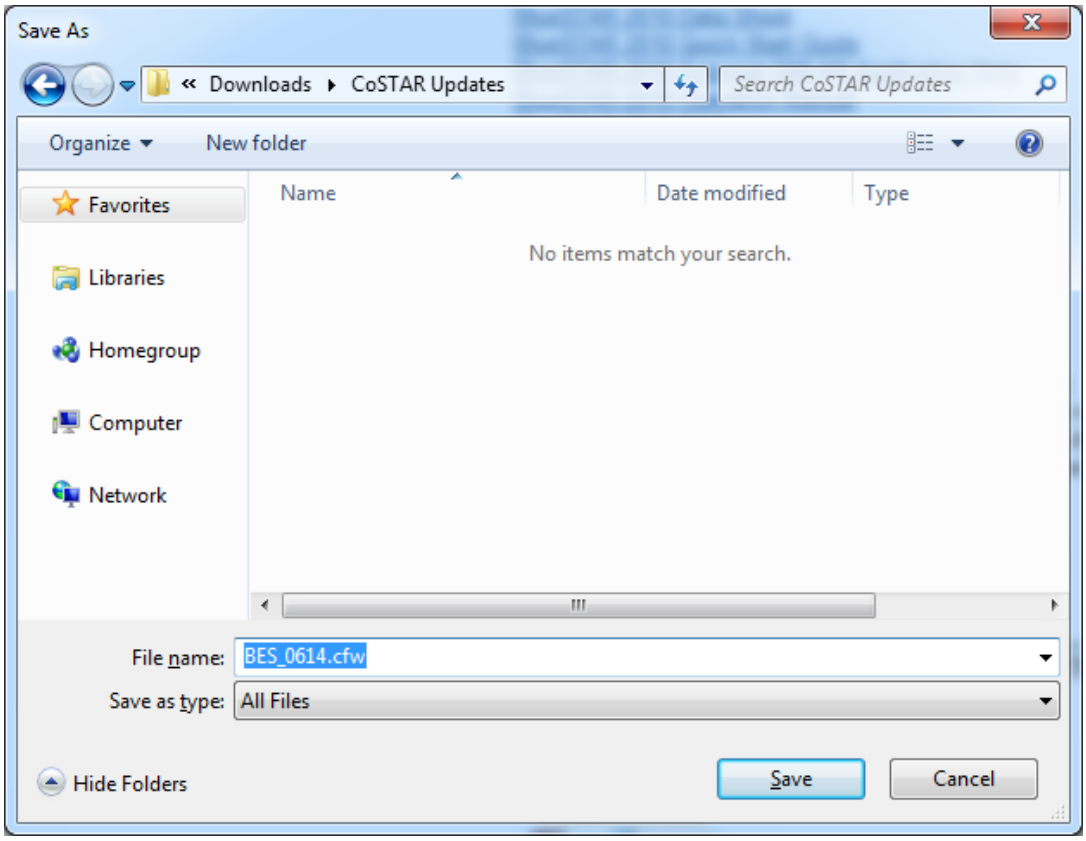


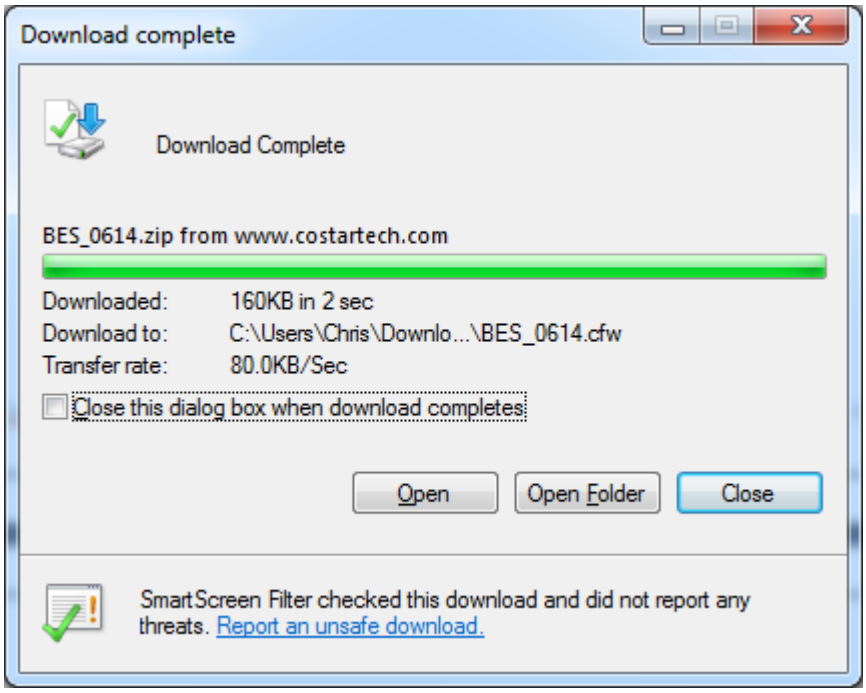
In this case, we are running BES 1.1.7, BG 3.0.1, date code 0624. BES stands for BlueSTAR Embedded Software, and BG is the BlueGiga code that runs the Bluetooth stack in the Kalimba DSP.

When a new software version is released, it is posted as a .cfw (CoSTAR FirmWare file). When downloading this form the website, internet explorer may change the extension from .cfw to .zip.



To prevent this, it is recommended to save file to a location of your choice, and rename by clicking on the Save as Type: drop down menu and selecting All Files, and then changing the extension of the file from .zip to .cfw as shown below.

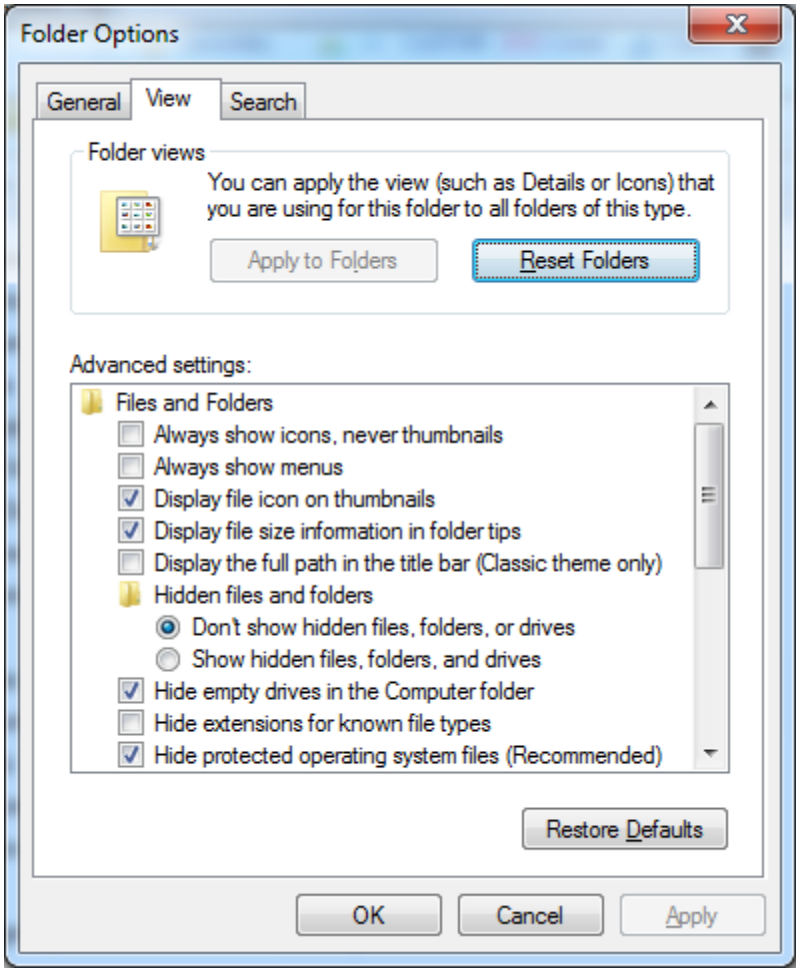




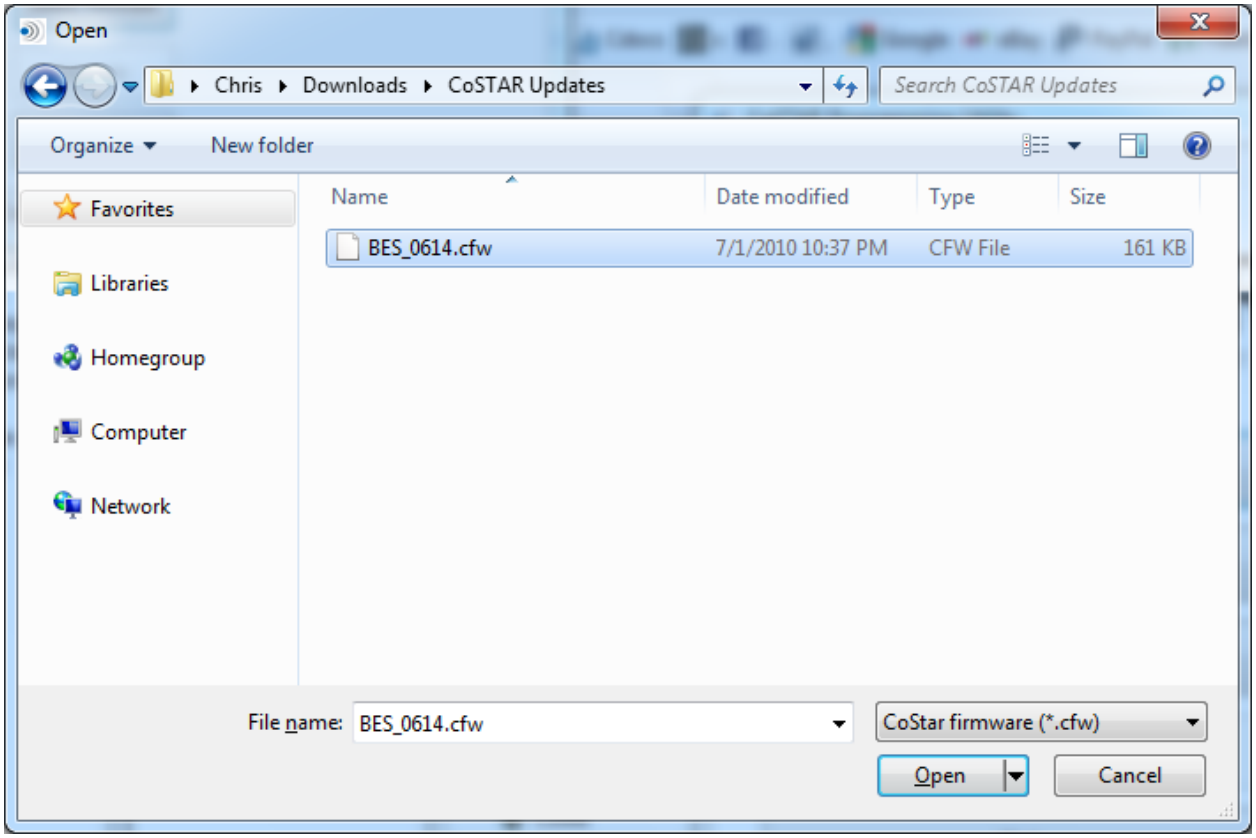
And even though it stills says that it is downloading a .zip, it will save it as a .cfw file. Users of browsers other than IE (i.e. firefox or Chrome) do not have to do this step, as the files are saved properly.

The .cfw is actually a .zip file, but it is important NOT to unzip it, as the files are not usable by themselves, the CPU requires that they remain zipped together.

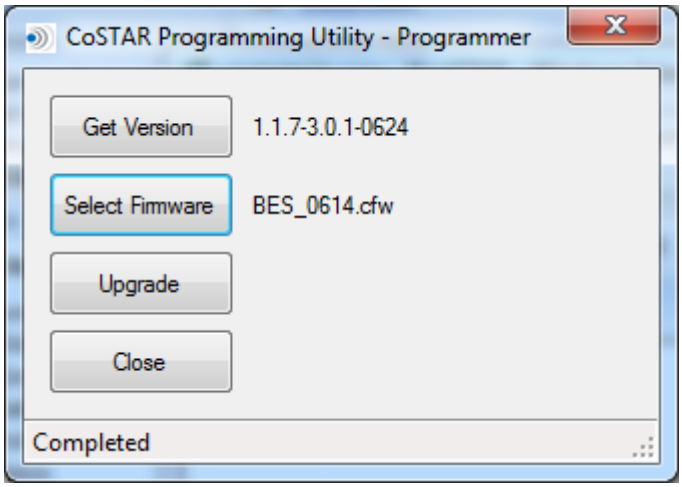
If you prefer to download it as a .zip and rename it after, make sure that you have access to the extensions of known file types by unchecking the appropriate box in the View tab of the Folder Options menu from the Control Panel.



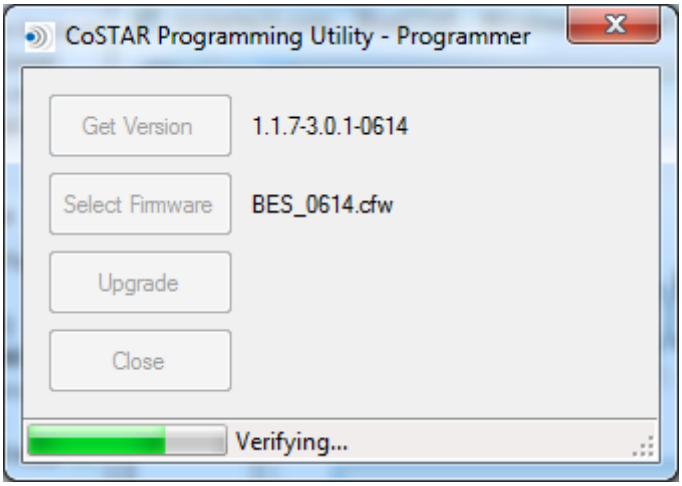
With the file downloaded and saved properly, we can now click on the Select Firmware button to locate the file.



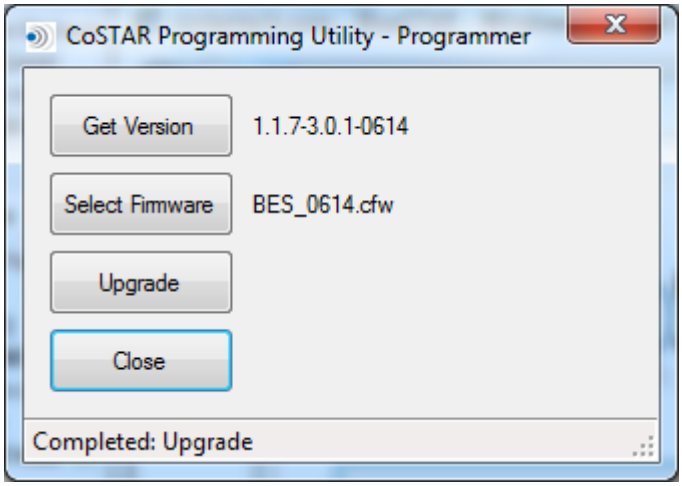
Notice how the default file type is *.cfw. Once selected, hit Open, and the firmware will show in the Programmer screen.



Hitting Upgrade, will cause the device to switch to programming mode, Erase the device, write the new software, and then verify it.



If all goes well, you'll see the status bar show Completed: Upgrade.

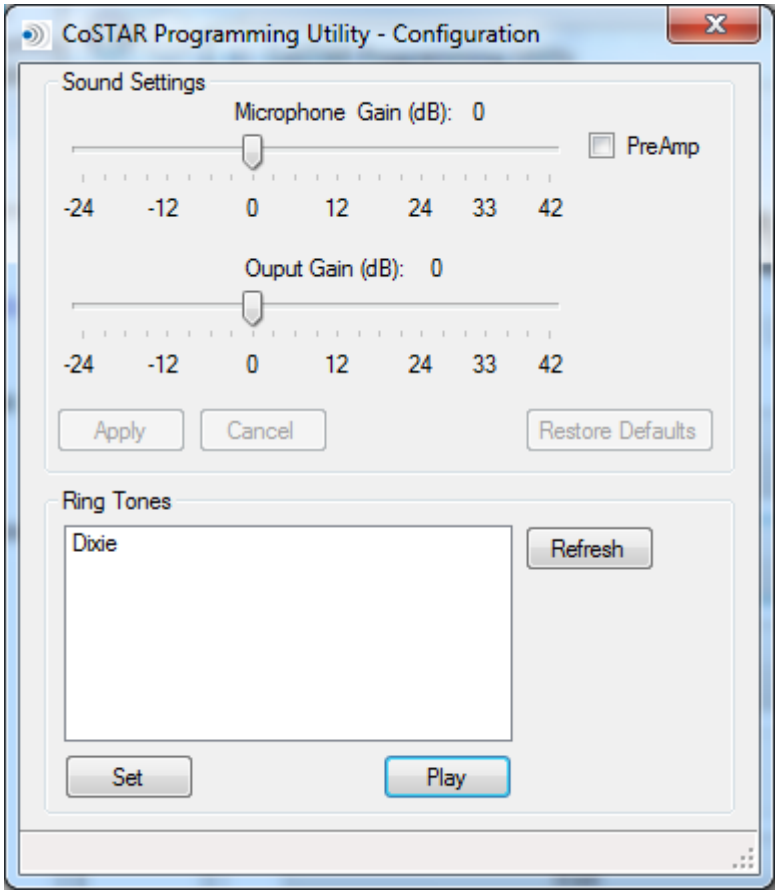


Click the Get Version button, to make sure the new version is detected.

Hi Close to close the Programmer and go back to the main CPU screen.

Configure

The configure tab, allows you to adjust the Microphone Gain, set the Microphone Pre-Amplifier, set the Output Gain, and set the Ring Tones.



Microphone Gain

The microphone gain adjusts the amount of amplification that the microphone sees. If the people on the other end of the call are experiencing an echo (they here themselves talking delayed a short time), or if there is excessive background noise, the

microphone gain can be lowered by moving the slider to the left. Each step is 3dB or about half level, so usually one or two steps is all that is required. If your callers are saying that they can't hear you , you should move the microphone slider to the right to increase the microphone gain. In rare cases, or when using an alternative microphone to the built in onstar mic, you can select the PreAmp check box to add 24 dB of gain. It is not recommended to select this when using the onstar mic as it will overload the audio circuits yielding distorted voice quality.

Output Gain

The output gain allows you to adjust the output from the BlueSTAR 2010 that feeds the radio amplifier. It is strongly recommended that this be left at its default position of 0dB. The output level can easily be adjusted using the VOLUME control in the STATUS screen. Should this slider be moved from 0dB, changing the Volume gain by the STATUS screen or alternatively by using the Mirror buttons (and in some cases the steering wheel controls on early CLASS2 vehicles) the output level will be undefined and not act as expected.

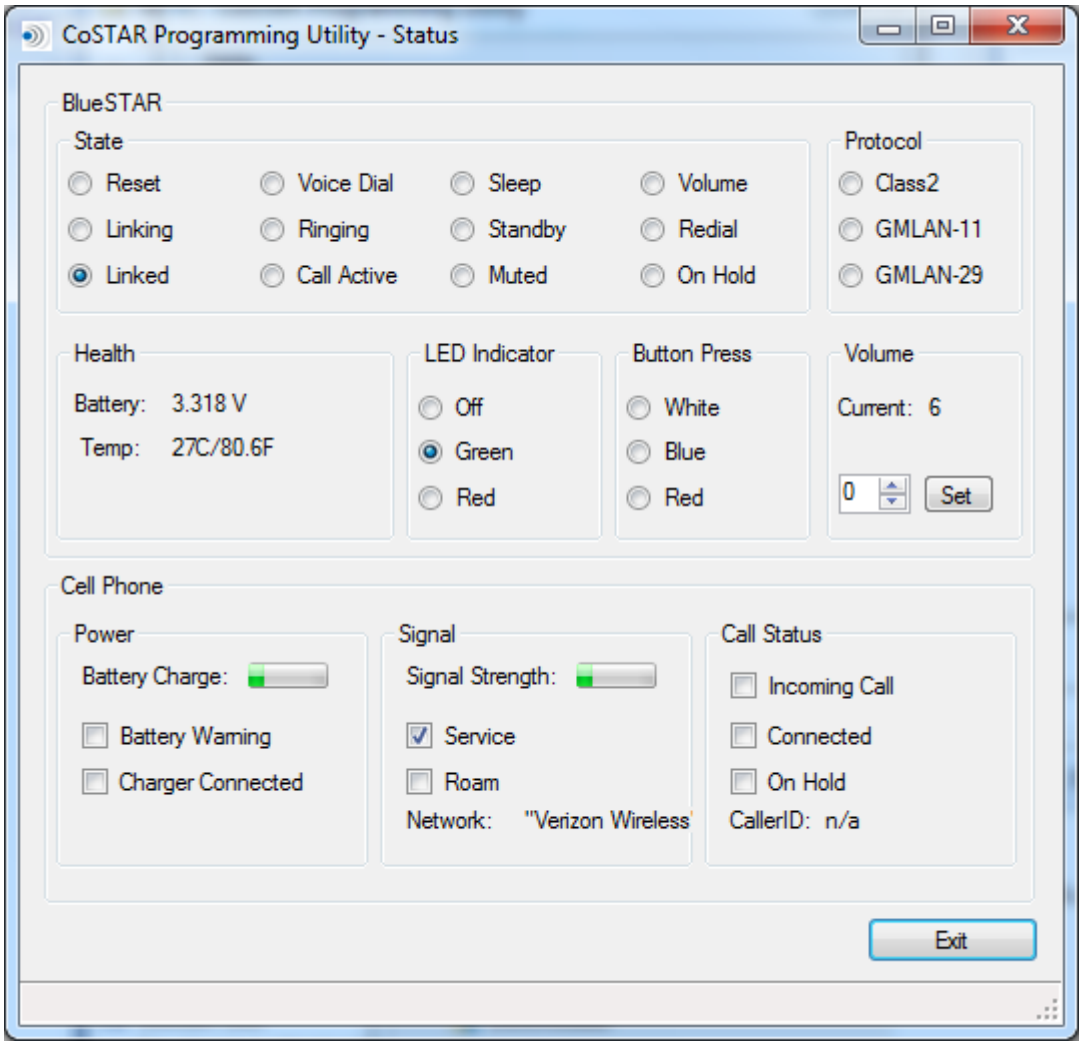
Ring Tones:

Ring tones can be selected here. There is a separate application note on how to create your own ring tone if desired.

Ringtone App Note

Status

The Status tab, allows you to monitor the State of the BlueSTAR 2010, check the detected vehicle protocol, check the BlueSTAR 2010 health status, Mirror LED indications, Button Press Status, Set the Current Volume, and if linked to a Cell phone, it will also display the cell phone status.



The State can be used to verify connection status, and should be primarily in Standby or Linked.

Most of the data on this screen is informational, and can be used as a diagnostic tool to aid in trouble shooting connection issues.

Volume is shown and can be adjusted here in the range of 1 to 15. Default volume is 9. If set very low, the audio can usually not be heard, so be careful when setting this below 6. This can also be modified by using the Volume adjust procedure with the mirror buttons, as defined in the BlueSTAR 2010 users guide.

Data Logging

This tab is not yet implemented but will be used to capture data to aid in vehicle specific trouble shooting.