

## Overview

The COSTAR Programming Utility (CPU) is a windows based program that allows you to update your COSTAR device. It can also be used to program certain parameters, check device status, and even capture vehicle specific data bus information.

Current device support includes members of the BlueSTAR product family (BlueSTAR 2010, BlueSTAR II) as well as the X-Stream (coming soon).

New devices are always pre-programmed with the latest released software so there is no need to program or update new devices.

Firmware is always available for download free of charge from the COSTAR website.

Features are continuously being added, so check back often to make sure you get the most out of your COSTAR device.

IF you have any questions with this utility after reading this documentation, please contact us via email at [techsupport@costartech.com](mailto:techsupport@costartech.com)

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## Hardware Requirements

- Windows based PC. Running XP, Vista, Win7. 32 and 64 bit OS are supported.
- Available USB port
- USB adapter cable – Type A to type mini B (not provided with kit)
- Internet connection for downloading software might also be needed.

## Software Installation

There are several elements to installing the software required to program and communicate with the CoSTAR devices. These include:

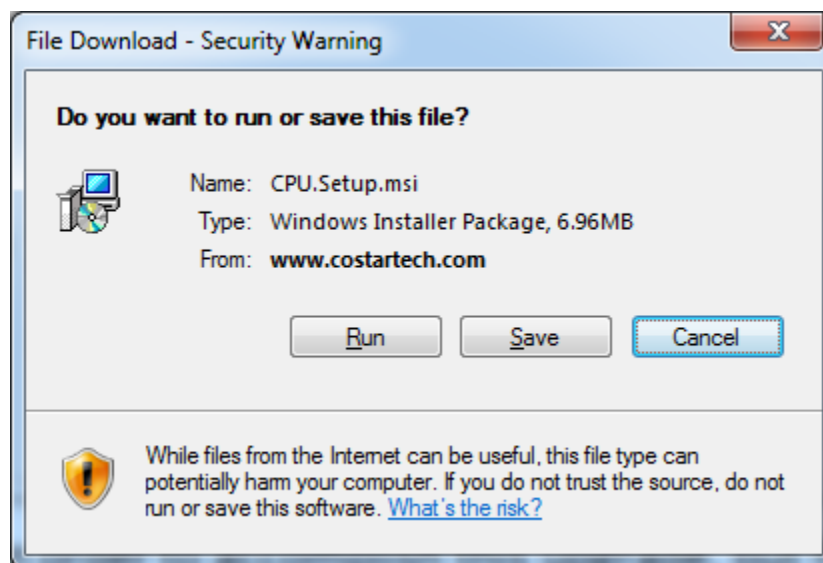
- .NET 4.0 (Microsoft Windows Framework)
- COSTAR Programming Utility (Main application)
- USB Serial Controller (FTDI driver)
- USB Serial Port Driver (FTDI driver)

.NET is most likely already installed on your machine, as it is required to run a large number of popular windows based programs. If not, it can be downloaded and installed from the [Microsoft website](#). If you try to install the CPU, and do not have .NET installed, a warning message will pop up and not allow you to proceed.

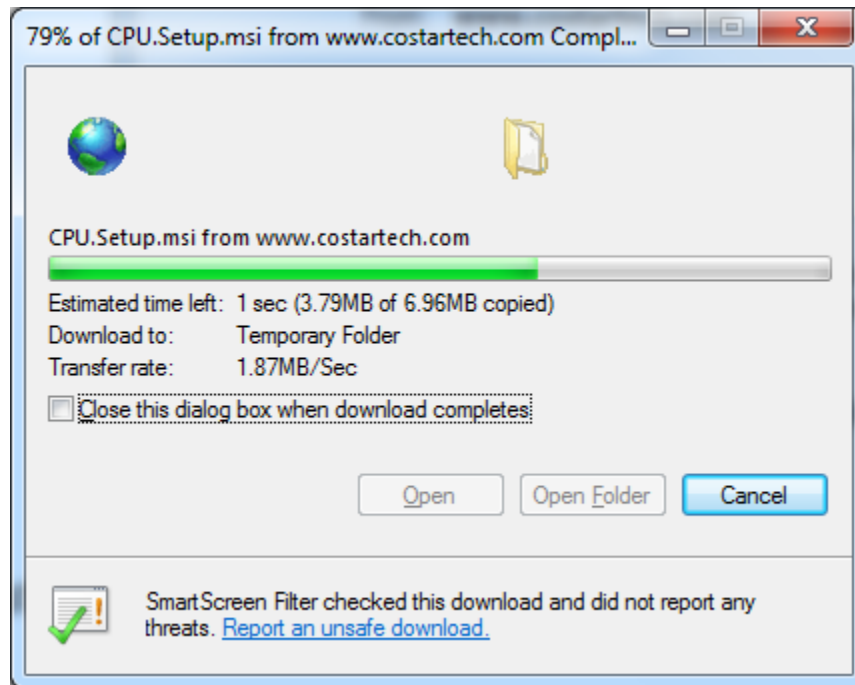
Once you have .NET installed, you can download the CPU application from the COSTAR website by using the following link.

### [CoSTAR Programming Utility](#)

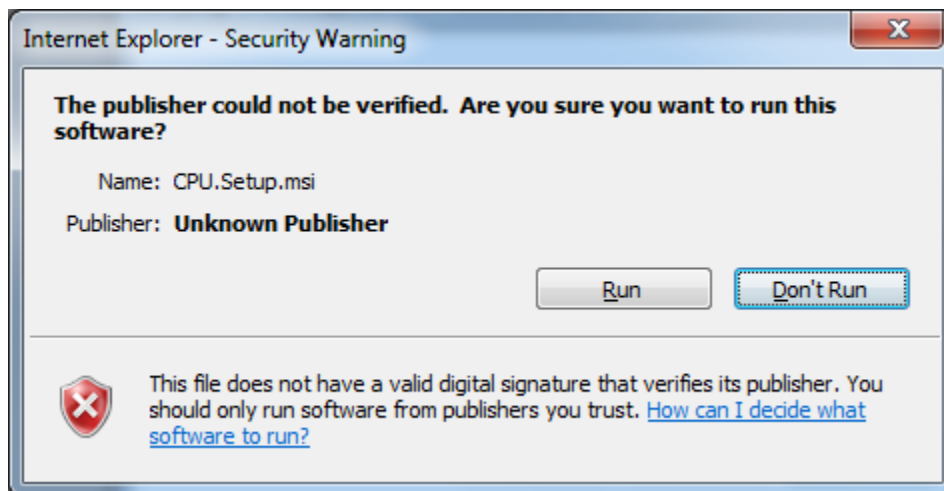
The following dialog box should pop up asking you to run or save the file.



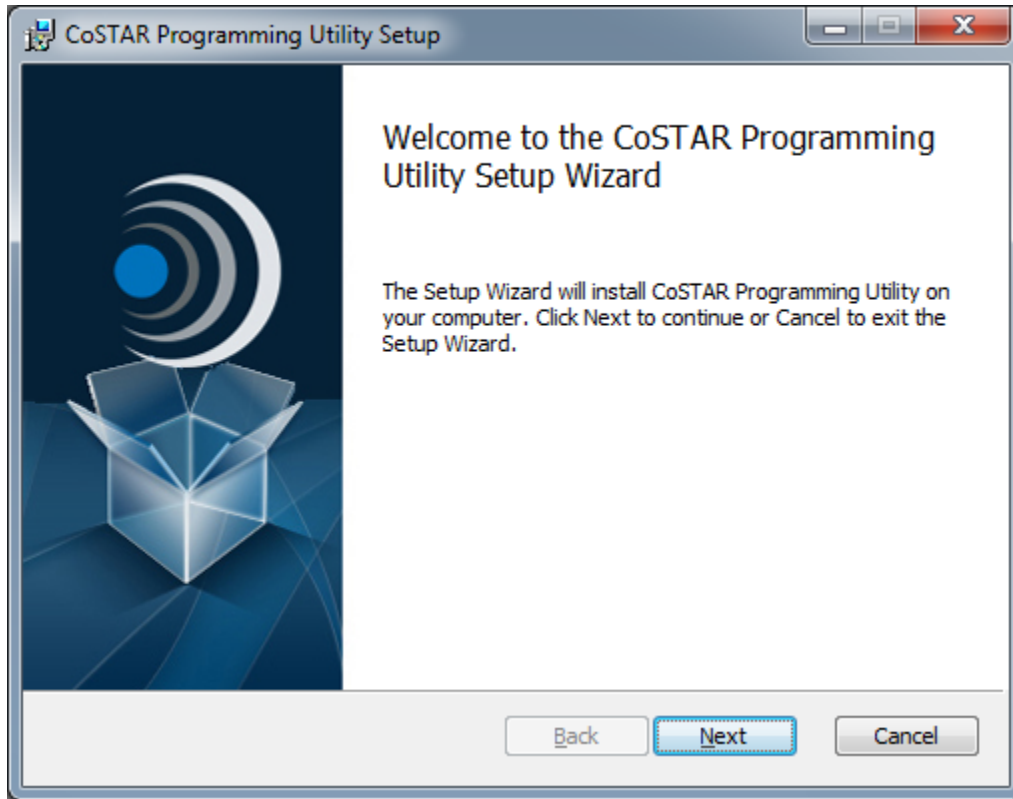
Click Run to install the program and the program will then begin to download.



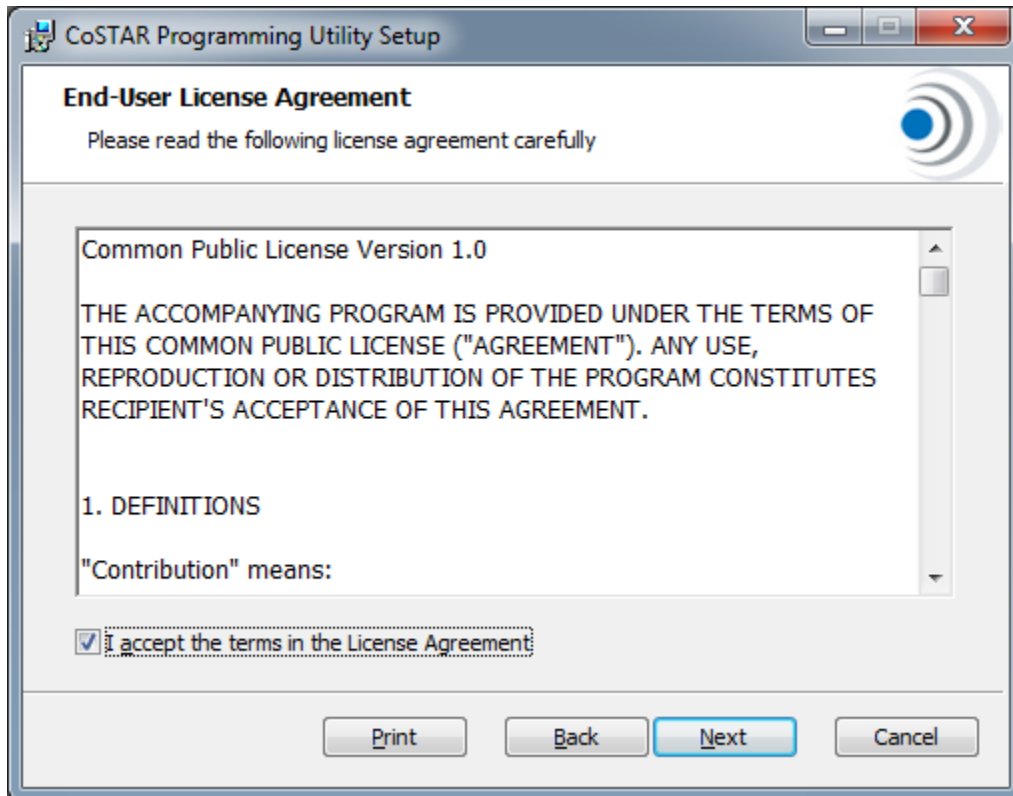
You might see a Security Warning from your browser. If so ignore it and click Run.



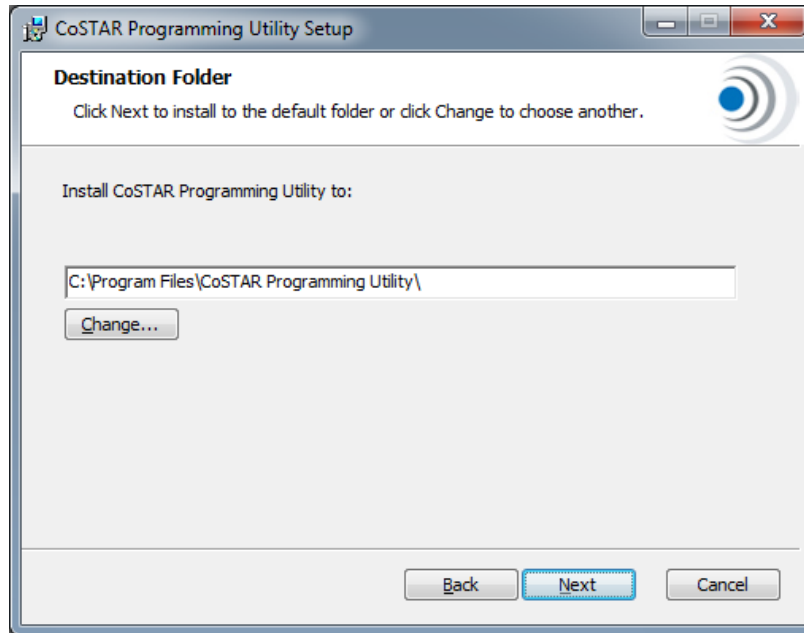
The Setup Wizard will guide you through the rest of the install.



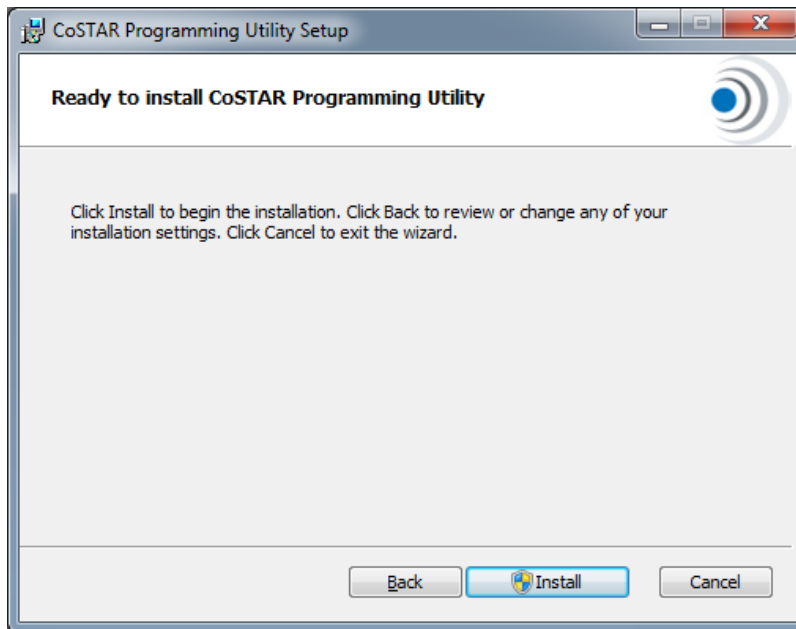
The EULA is next, you must accept the terms in the License Agreement to continue.



You will then be asked to select the Destination Folder, which you can change if you don't like the default.

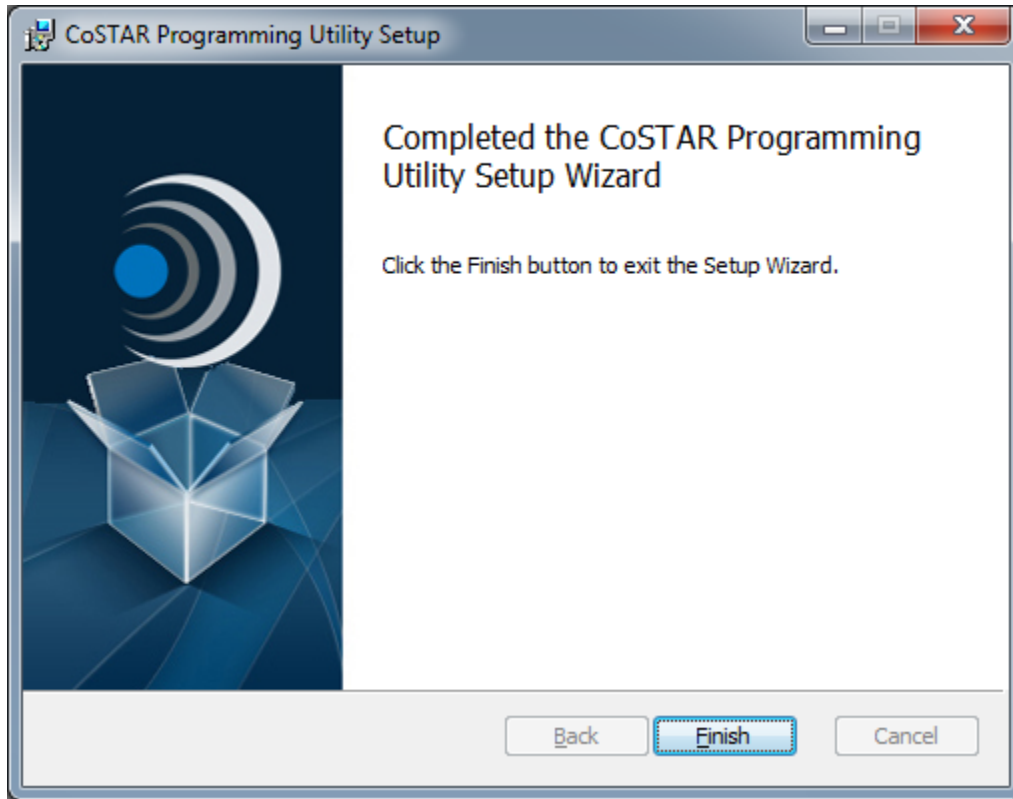


Hit Next, and you are ready to install the Utility.



You might also need administrative rights depending on your machine settings.

After the installer finishes copying over the program files, you are finished.

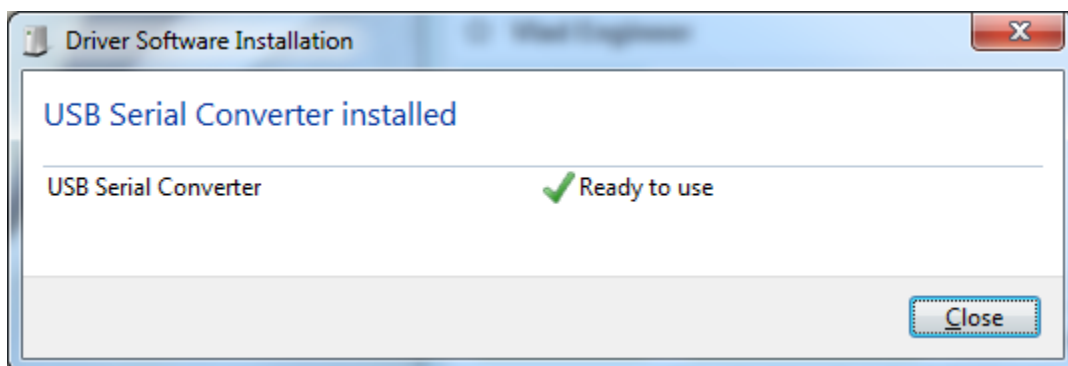
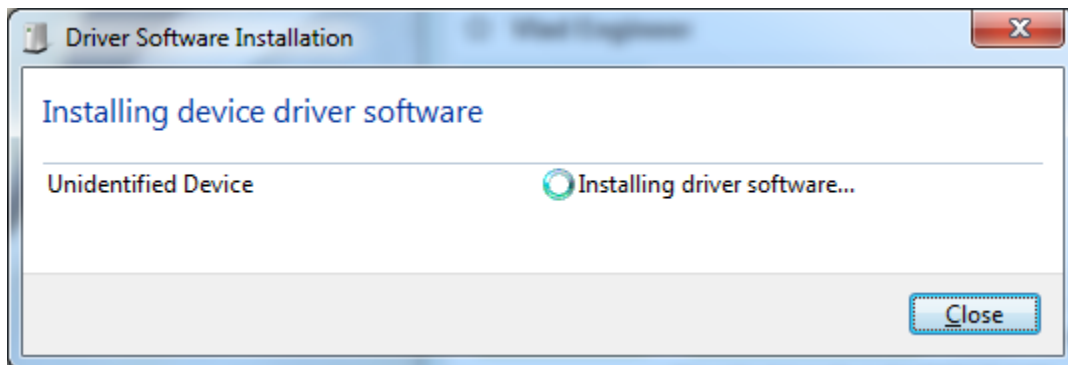
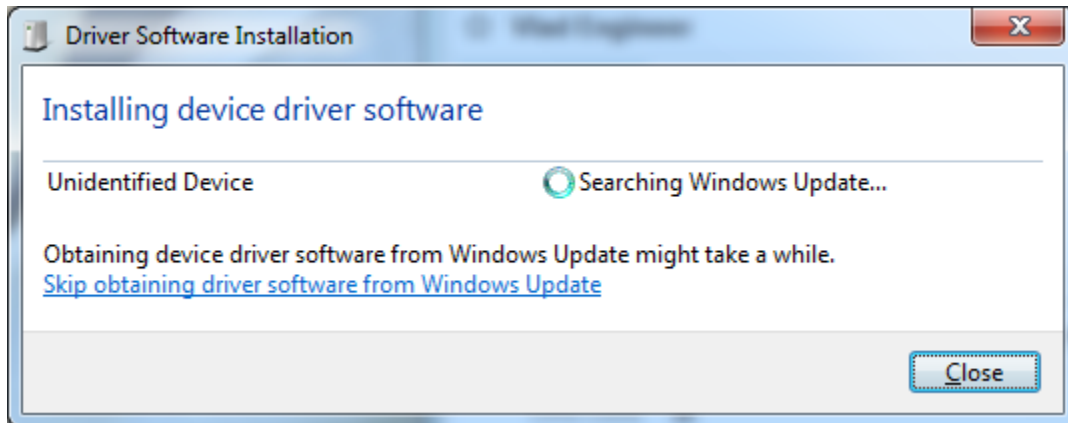




## Connecting the Device and Loading Drivers

### USB Serial Converter

After first connecting the device to an available USB port on your PC with the USB adapter cable, the USB Serial Converter will be installed. Windows will automatically search for the drivers in Windows Update or online.

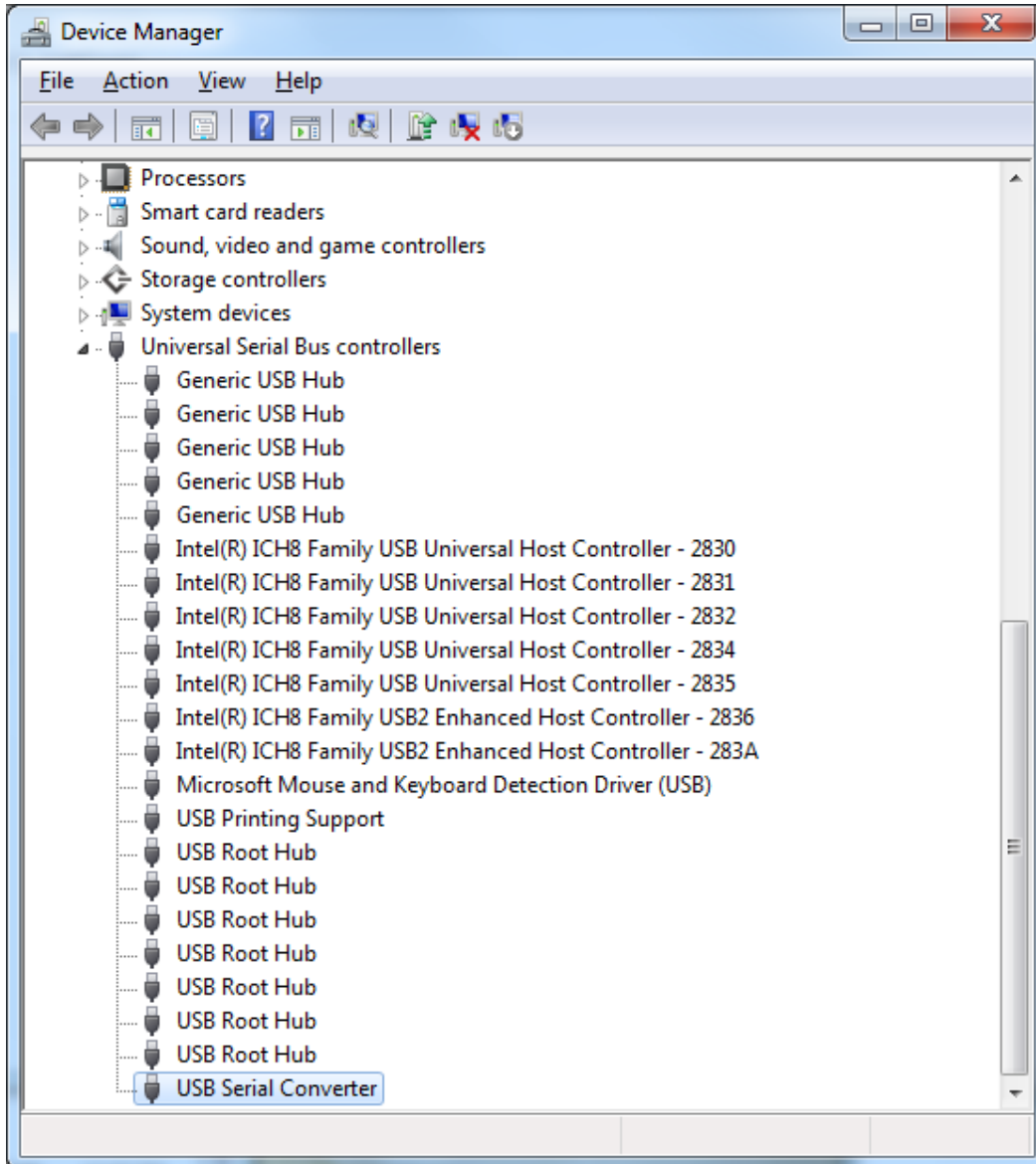


IF your machine cannot locate the USB serial converter driver, it can be downloaded from the [FTDI website](#). Follow instructions there to install.

## Virtual COM PORT Driver

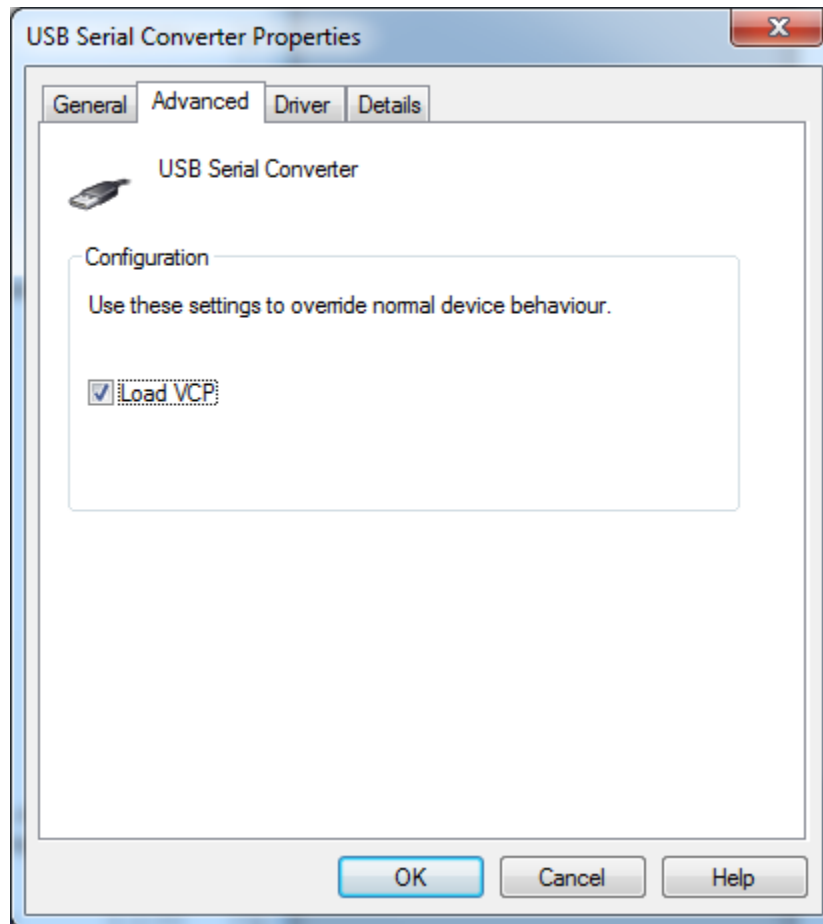
Now, depending on the connected device hardware, you might need to enable the Virtual Com Port driver before you can continue.

To do this, open up the device manager from the control panel, and scroll down to USB Serial Converter as shown below.

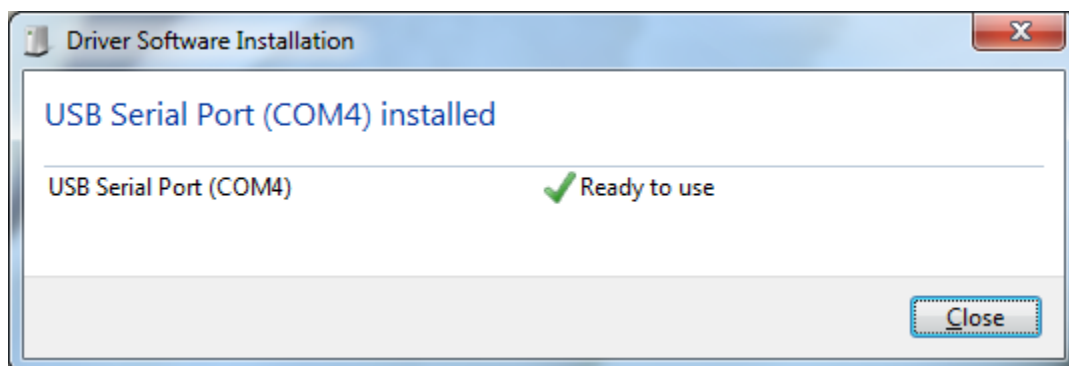
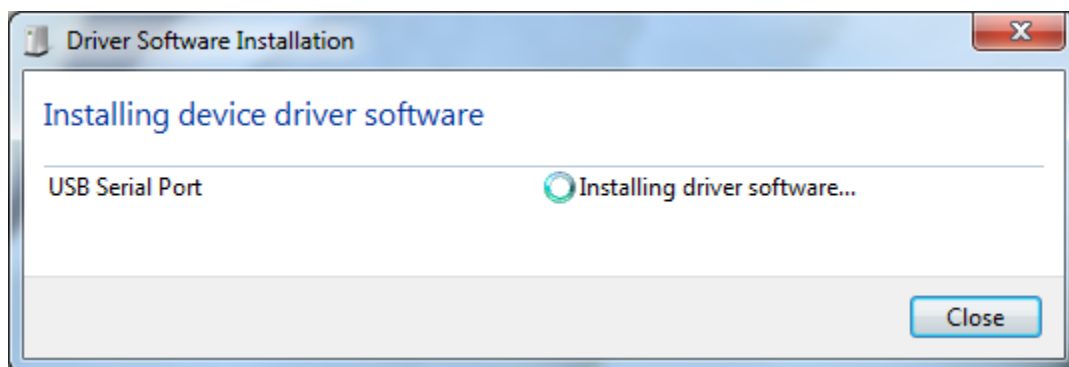
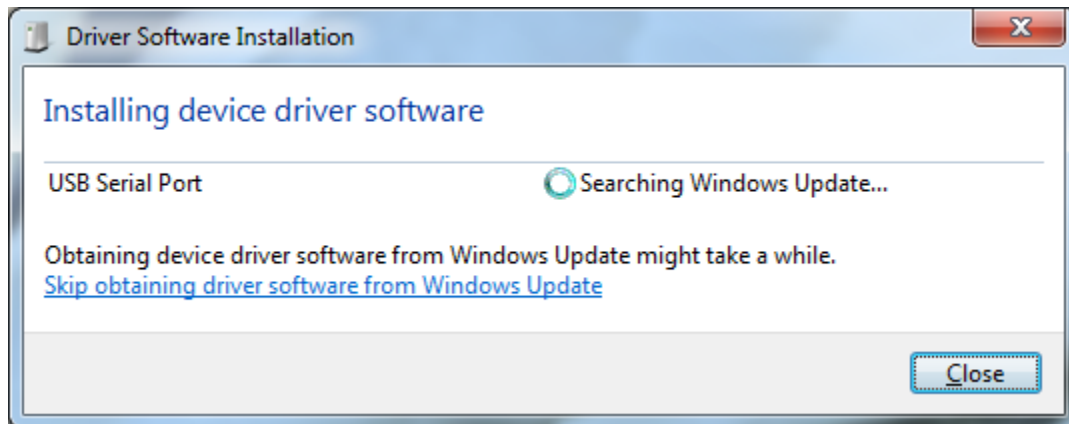


Double click on the USB Serial Converter, and go to the Advanced tab. Click on Load VCP so that the Virtual COM port is loaded by default when you plug in the COSTAR device.

Click OK to save settings.

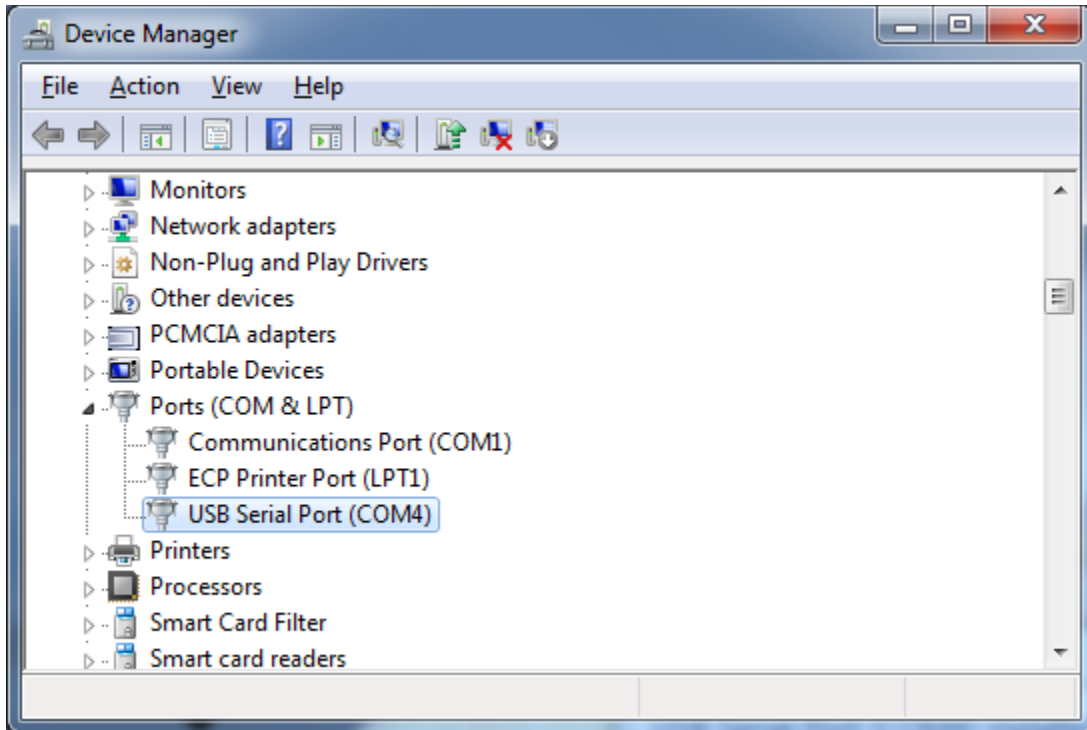


To load the driver, unplug the COSTAR device, and plug it back in. Again, windows will automatically search for the USB Serial Port Driver.



Now the USB Serial Port driver is ready to use. Your COM port number may be different depending on how many COM ports your system has already recognized. In this case it is COM4, but the number is not important as the CPU should automatically detect the proper port to use.

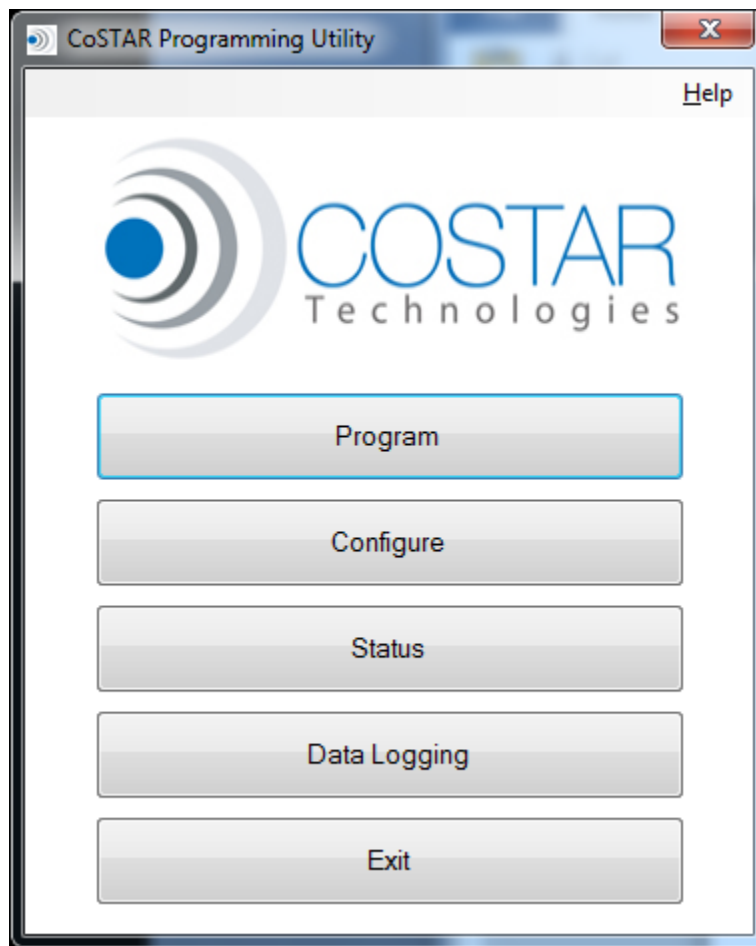
You can verify the installation, by looking again in the device manager under the Ports (COM & LPT) section. This will automatically come and go as you plug the COSTAR device in and out of your computer.



If you see the USB Serial Port (ComX) then your drivers are installed properly.

## Running the Application

You are now ready to run the CPU.



Launching the application brings up the main window.

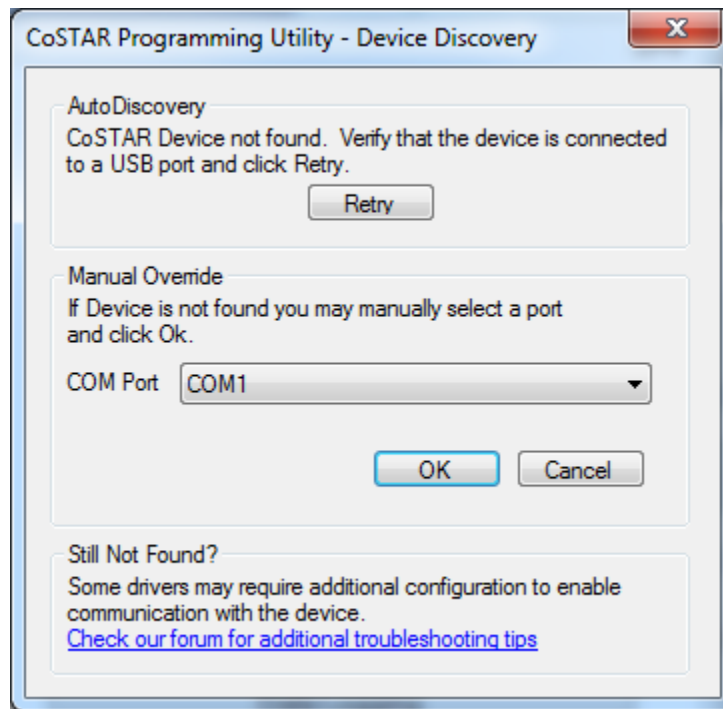
From here, you can

- Program
- Configure
- Get Status
- Log Data
- Exit

A help menu is also available to check for updates and note the current CPU application version.

## Device Discovery

Selecting any feature, automatically scans for connected devices, if a device is **NOT** found, you will see this screen.



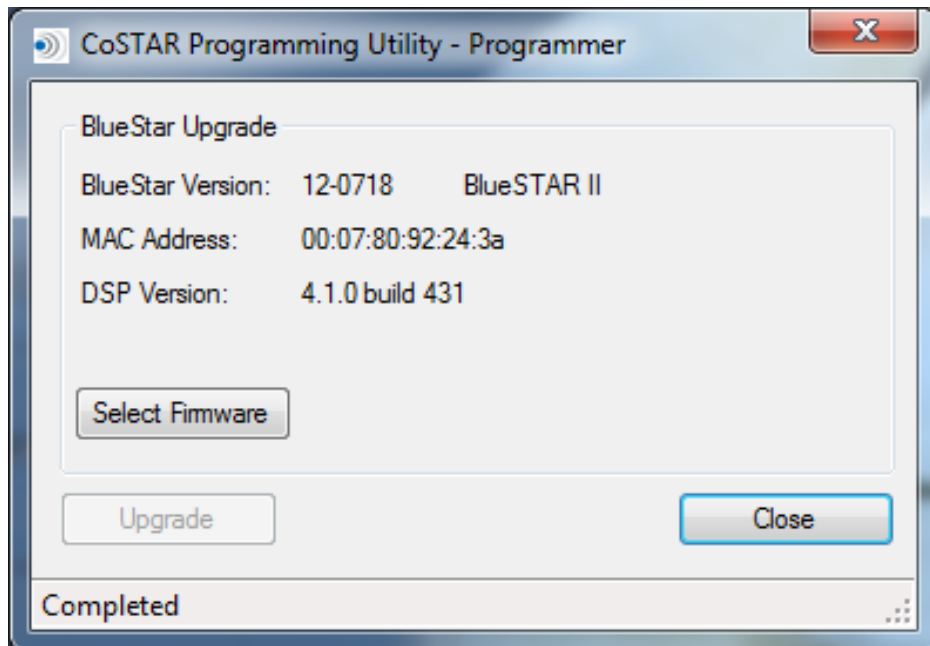
You can retry the scan (if the device was not plugged in originally, or was booting up at the time) or if the device is corrupted, and not responding, you might be able to manually select the proper COM port as noted in the Device manager.

If the drivers are not installed, it could be that they are not installed properly or that the VCP driver has not been enabled. Follow the instructions above under Driver Installation listed above, or check the link to our forum for latest information.

If all is well, you will not see this screen.

## Program:

When connecting to a BlueSTAR device, the Program window will pop up as shown below.



This screen will show the BlueSTAR embedded firmware version (in this case 12-0718), the BlueSTAR name (BlueSTAR II) the BlueSTAR MAC address (00:70:80:92:24:3a) and the DSP version (4.1.0 build 431)

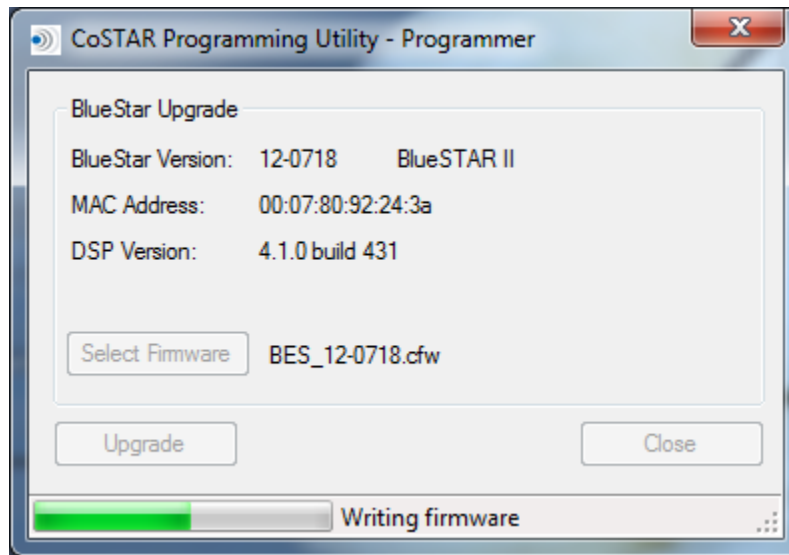
You can select 4 different type of files to program the unit. They are described as follows:

- .CFW – Main application code (COSTAR Firmware file)
- .TXT – Custom init strings (Consult factory for this)
- .DFW – Digital Signal Processor code (DSP Firmware file)
- .PSR – License file (Persistent Store Register file)

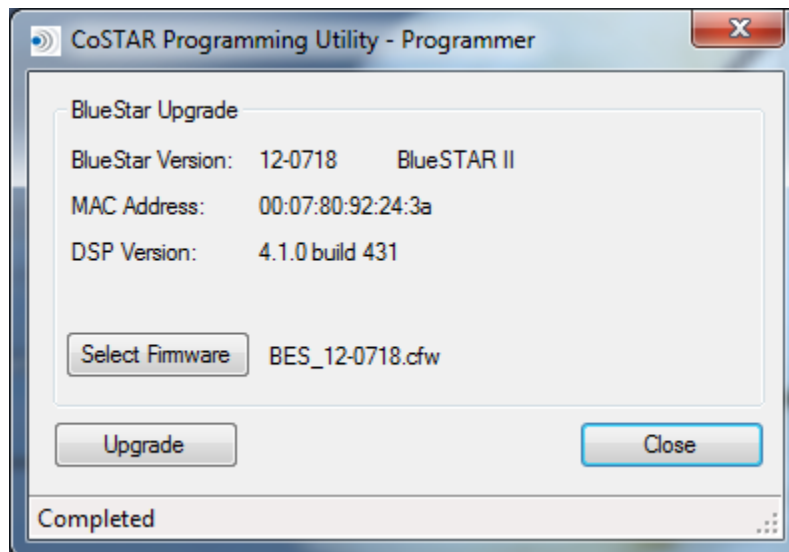
Most upgrades consist of programming in a .CFW file. Occasionally, a DSP change is required to add new features to the Bluetooth stack. These are accommodated in the DFW files. If a new license is required to install a DFW file, a warning will pop up, and you will be required to send your MAC address into the factory so that a PSR file can be generated for you.



To program a device, select the appropriate Firmware file, and hit Upgrade.



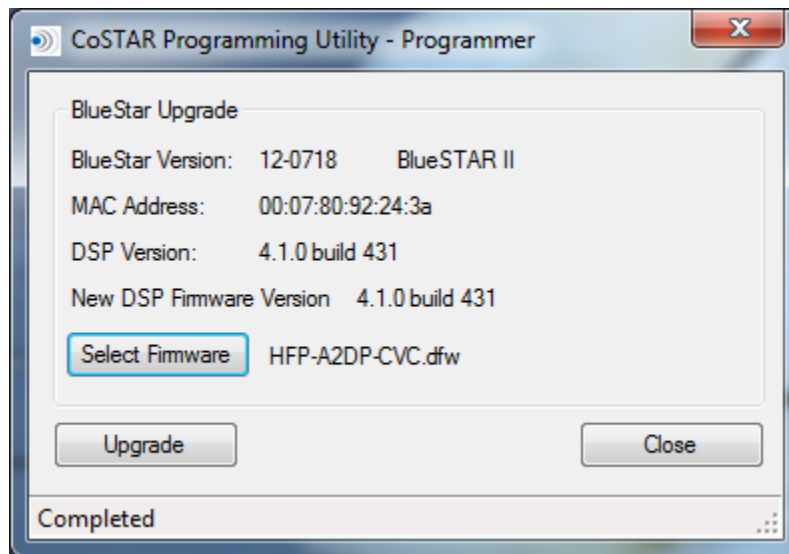
The unit will program the part depending on the firmware that was selected.



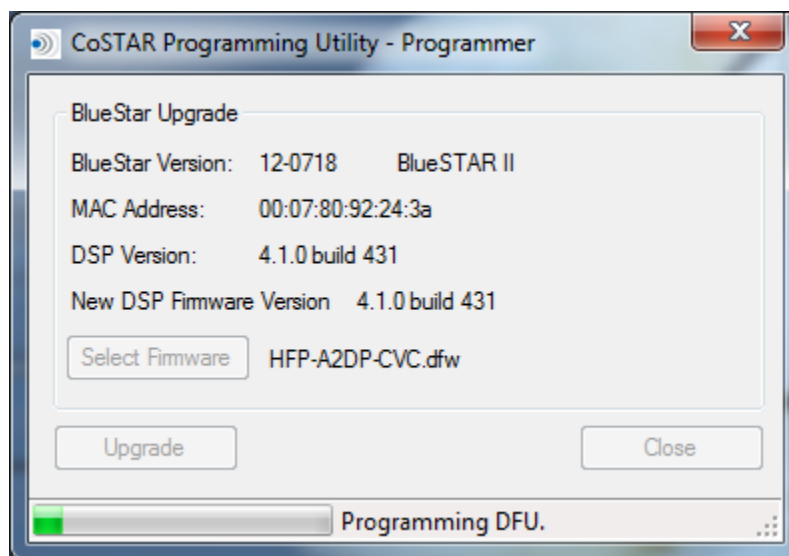
CFW updates are pretty quick, taking less than a minute to complete.

PSR and TXT programming is VERY fast, taking less than a few seconds to complete.

If you select a DFW file, the version of the new file will be determined from the selected firmware file, so you can see what you will be programming.



In this case, the current DSP version matches that in the DFW file. Upgrading the DSP can take about three minutes to complete.



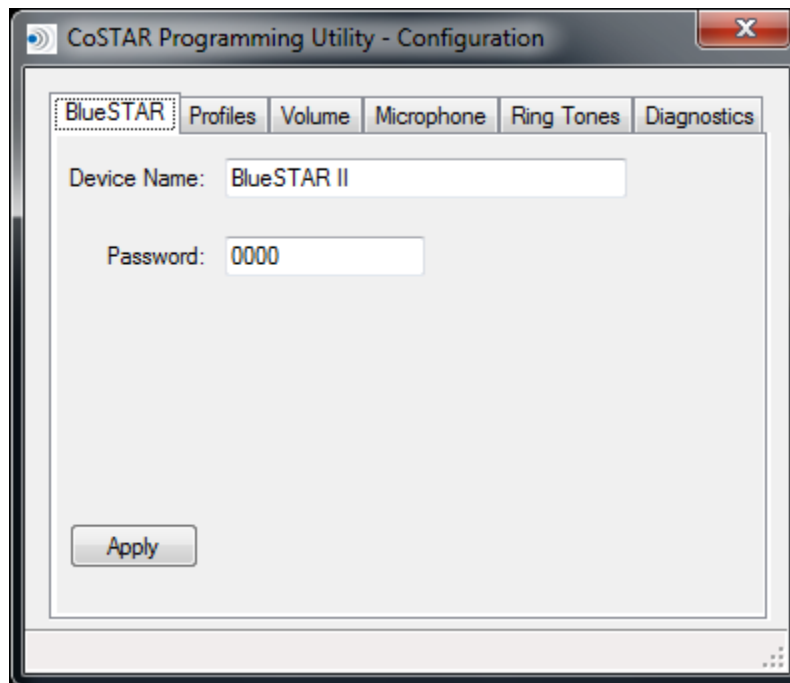
If you have a very old version, you might need a new license file to continue. The CPU will prompt you for this, and you will be required to send your MAC address into tech support to get a license file. Units purchased after October 2010, already come with a license file installed. Not all DFW upgrades require a license key.

Typically, if your MAC address begins with 00:07:80:92:xx:yy you will have a license already installed.

When the DFW installation is completed, the unit will restart automatically.

## Configure:

### Name and Password

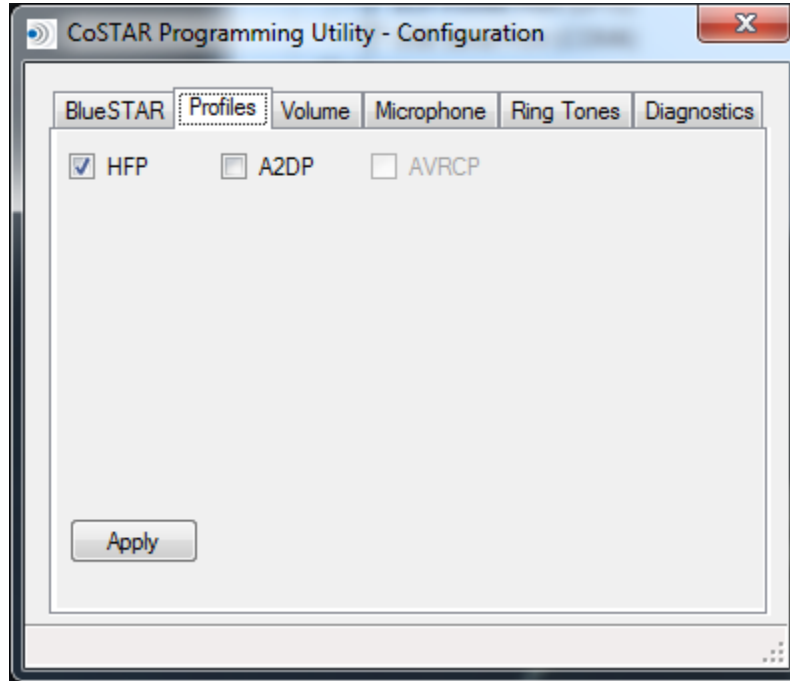


Opening the Configure screen reveals a tabbed menu.

In this case, the BlueSTAR tab, will allow you to change the Device Name (which will show up on your phone when you do a device discovery) and the password. 0000 is the default and is often tried automatically by many phones. You can change this here for added security to prevent unauthorized device pairing. If you should forget the password, you will need to access the bluestar with the CPU utility to get it.

Hitting Apply loads the changes into the device.

## Profiles



The BlueSTAR device supports three different Bluetooth profiles currently. (More may be added in the future).

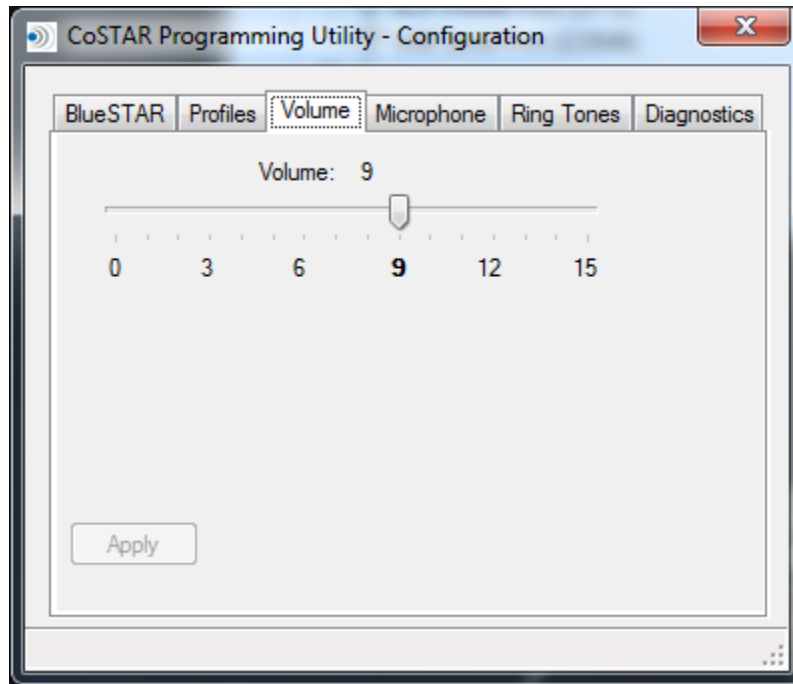
HFP is the Hands Free Profile, and is required for making calls.

A2DP is Advanced Audio Distribution Profile, and is required for streaming music out of the headphone jack on the BlueSTAR.

AVRCP is Audio Video Remote Control Profile and is used to control the streaming functions (play, pause, skip, etc.) when streaming music. This is currently not implemented in the BlueSTAR device, and is only offered in some of the newer smart phones.

To change profiles, check the appropriate box and click Apply.

## Volume

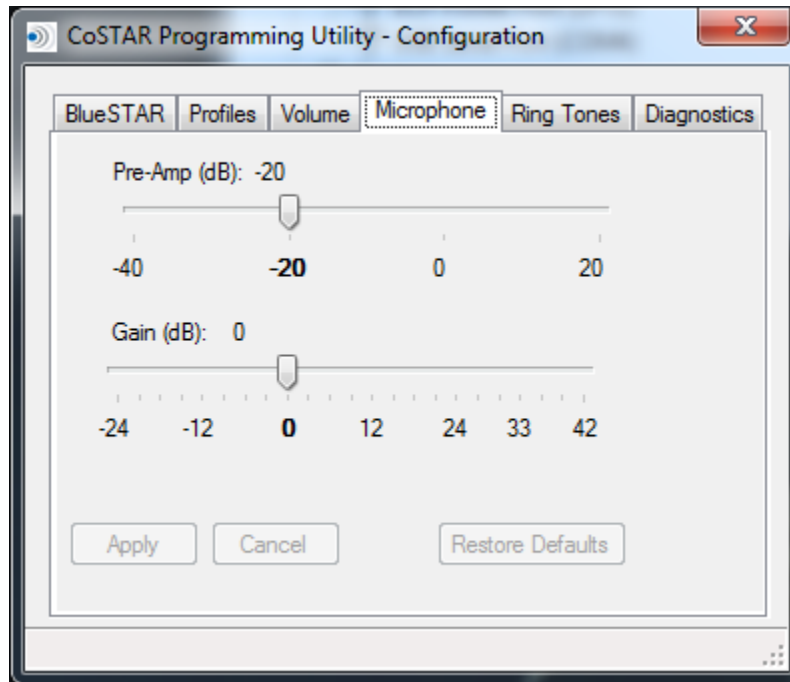


This sets the default output level of the bluestar. (Independent of the radio volume)

The default (9) is bold. Moving the slider down will lower the volume, up will raise it.

Hit apply to save settings. This adjustment can also be done without the CPU, using the mirror button controls as outlined in the quick start guide.

## Microphone



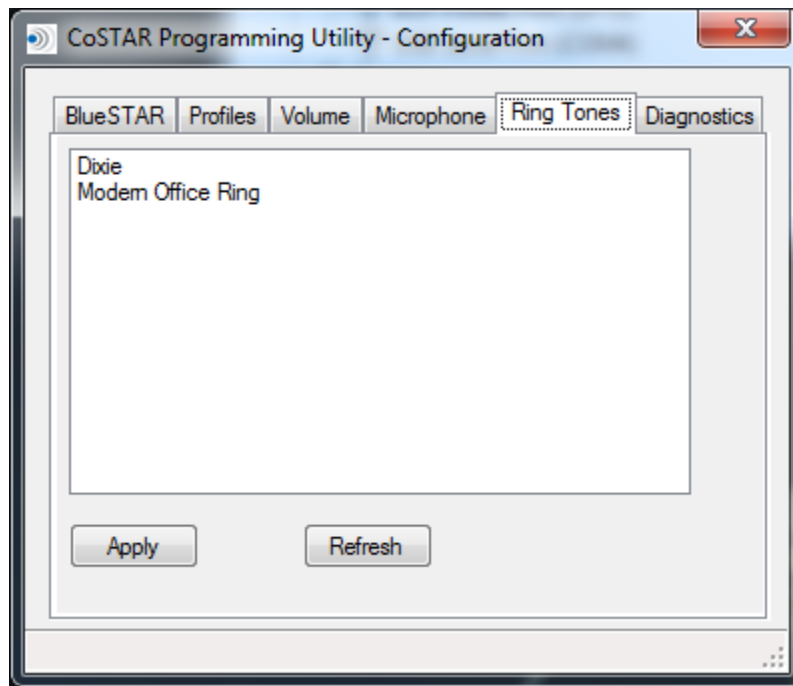
This screen will vary a little depending on the Hardware version of your BlueSTAR.

Older device have only 0 and +20 as choices for the Pre-Amp. Typically, this should be left at the default case of -20 (BlueSTAR II) and 0 (BlueSTAR 2010)

The Gain can fine tune the mic level. It is typical to lower this (even down to -24) in BlueSTAR 2010 applications. Adjustment is not normally required for the BlueSTAR II.

This adjustment (Gain only) can be done from the mirror controls while on a call as outlined in the quick start guide.

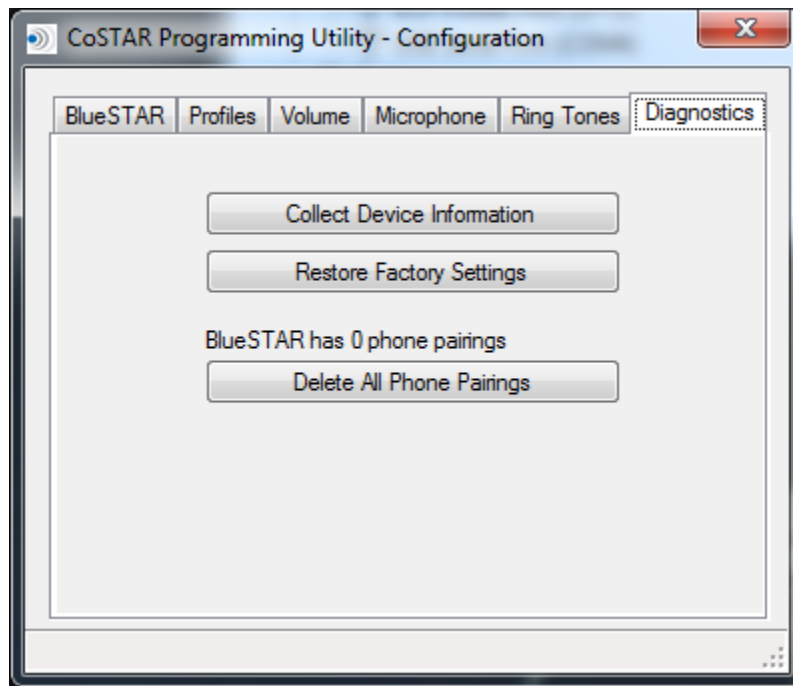
## Ring Tones



The default Dixie ring tone can now be easily modified using the Ring Tones Tab. Select the Ring tone you wish to use and hit apply. Other ring tones can be created following the Ring Tone Application note.

Note: some newer phones support "Ring-Through" mode, which means your cell phones ring tone, will come over the speakers. In this case, these ring tones will not be heard.

## Diagnostics



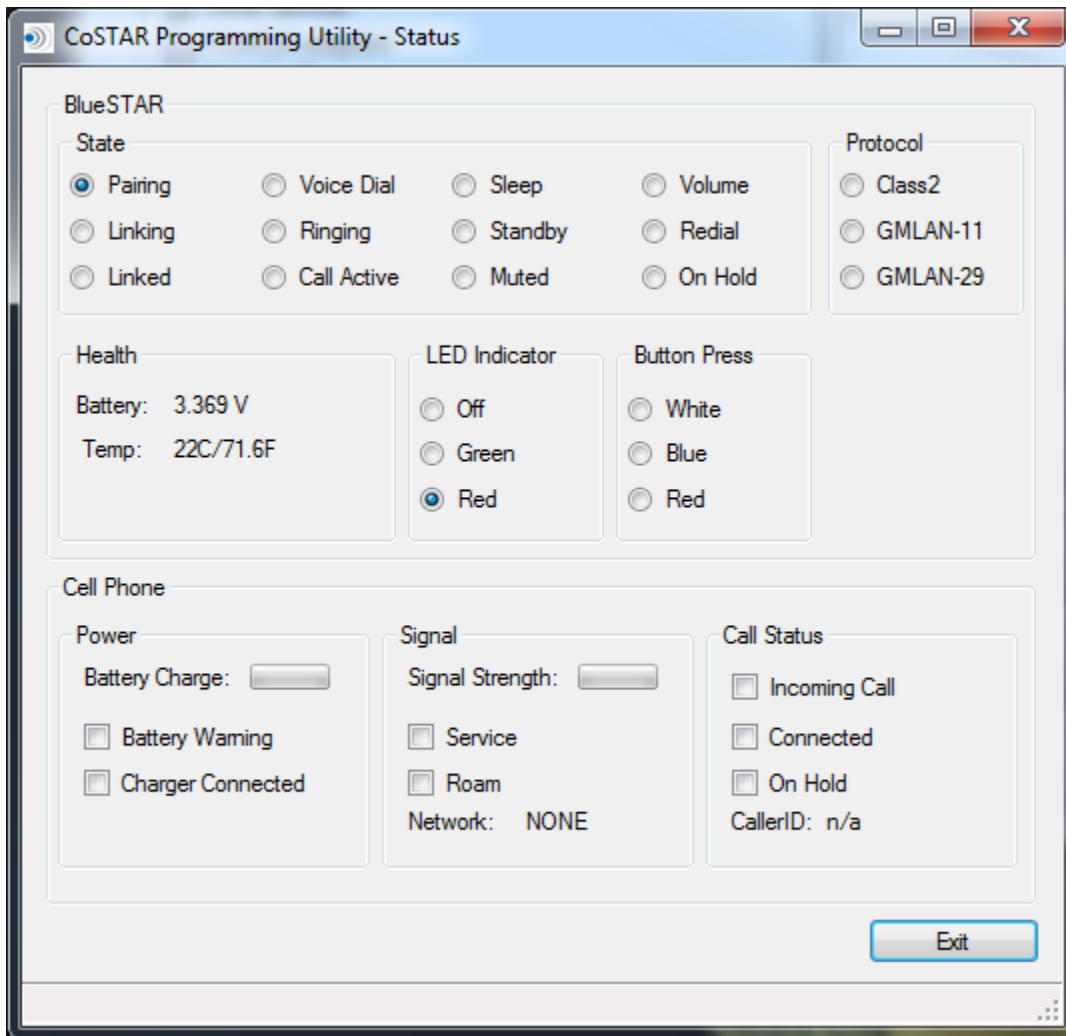
The Diagnostic tab allows you to collect device information (for advanced tech support purposes only), restore factory settings, and Delete all Pairings.

It can also show you how many phones are currently paired to the device. Deleting all pairings can also be done from the mirror controls by holding RED mirror button for 10 seconds.

The Collect Device information button will create a file (bluestar\_cfg.txt) that you can send to tech support if needed to provide complete device information.



## Status



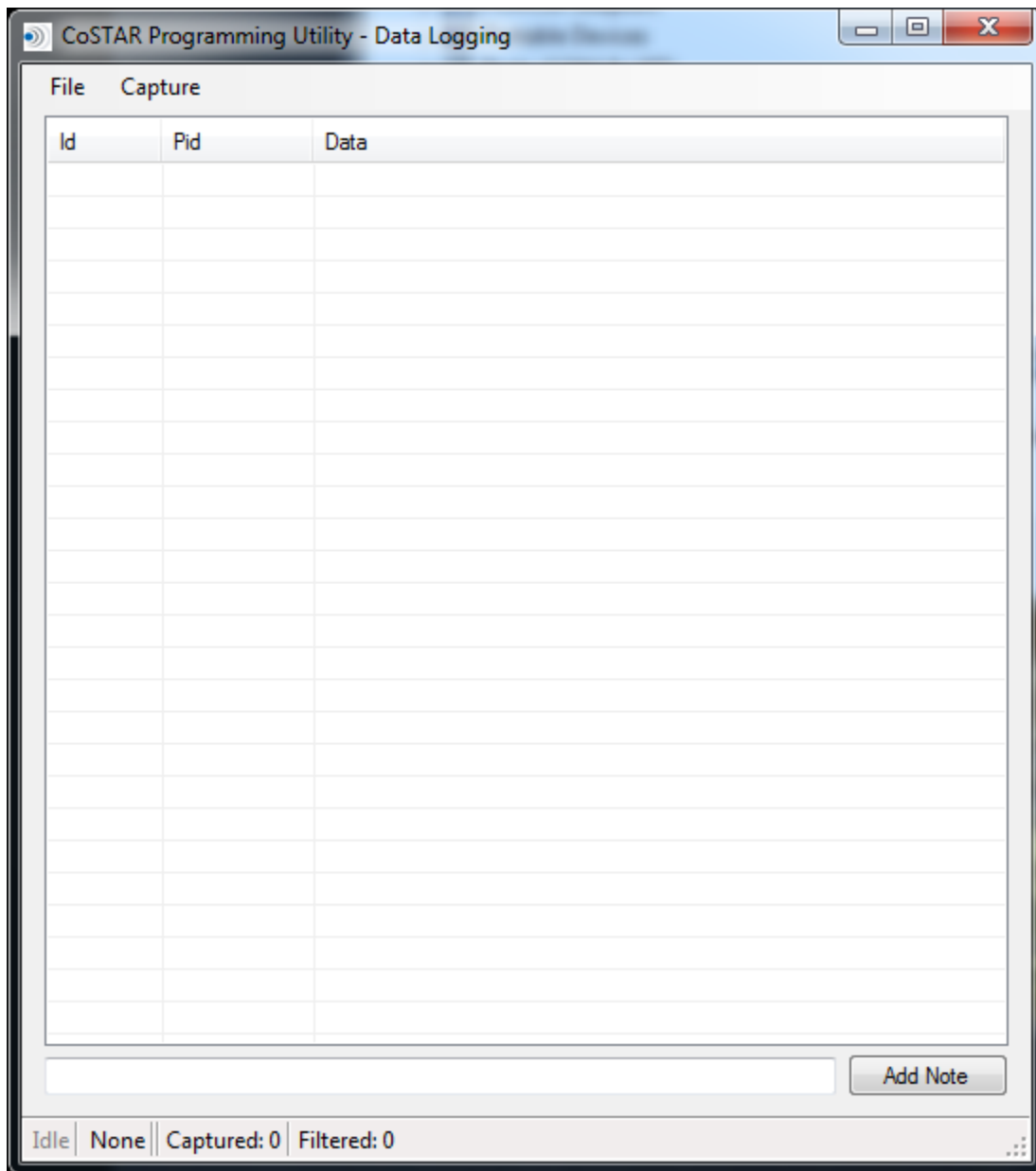
The Status screen is a snapshot of the State of the connected device. It shows current device State, detected protocol, Health, LED indications, Button press indications, as well as Linked Cell Phone status.

Normal Health Battery voltage is 3.3V. This is an internal voltage, not car Battery voltage.

There is no internal battery in the bluestar, this represents the voltage at the Bluetooth DSP.

IF you have a cell phone linked, you will see information on the connected cell phone, including battery information, signal strength, and any current call status.

## Data Logging:



Data Logging is used for advanced trouble shooting with the technical support team at COSTAR tech department. It is used to capture vehicle data bus activity to help diagnose any abnormal activity with the device in your particular vehicle. Captures can be saved and emailed to tech support as directed.

Feel free to contact us at [techsupport@costartech.com](mailto:techsupport@costartech.com) should you have any questions.