Augment Automotive Technical Manual Title: Augment Automotive Firmware Updater Document Number: AUG/MAN/002 Version: 002 Author: Tom Barker Date: 04 August 2015	AUGMENT automotive

Introduction

This technical manual covers the usage of the Augment Automotive Firmware Updater V1.01. This tool is used to update the firmware, the software running on the device, on the following Augment Automotive products:

- AugTronic

This application runs from a Windows based laptop, currently tested on Windows 7 (may work on windows XP). It requires a serial connection, via USB or Bluetooth, to the device in question. The firmware to be installed should be provided by Augment Automotive Ltd. Do not update the firmware of your device unless advised to do so by Augment Automotive Ltd. Failure of the update process should not cause irreparable damage to the product if the tool is operated correctly. However faults such as loss of power to the device or problems with the serial connection can cause issues. As such care should be taken when performing an update.

For information on setting up serial connections please see the Augment Automotive Serial Connection Manual (AUG/MAN/004).

Pre-Requisites

In order to update the firmware on your device the following is required:

- Windows 7 laptop connected via serial to device
- Dot net framework installed (http://www.microsoft.com/en-gb/download/details.aspx?id=17851)
- Augment Automotive Firmware Update Tool
- Suitable firmware (.bin file) from Augment Automotive Ltd

The latest version of the Augment Automotive Firmware Update Tool can be downloaded from http://www.augmentautomotive.co.uk/files. Simply extract the executable to a suitable folder and

double click the file to run. You should be presented with the tool.

Connecting to the device

Figure 1: Augment Automotive Firmware Update Tool

Once the tool is running and the laptop is connected to the device the correct com port should be selected from the drop down list on the left and the 'Open Serial Port' button pressed.
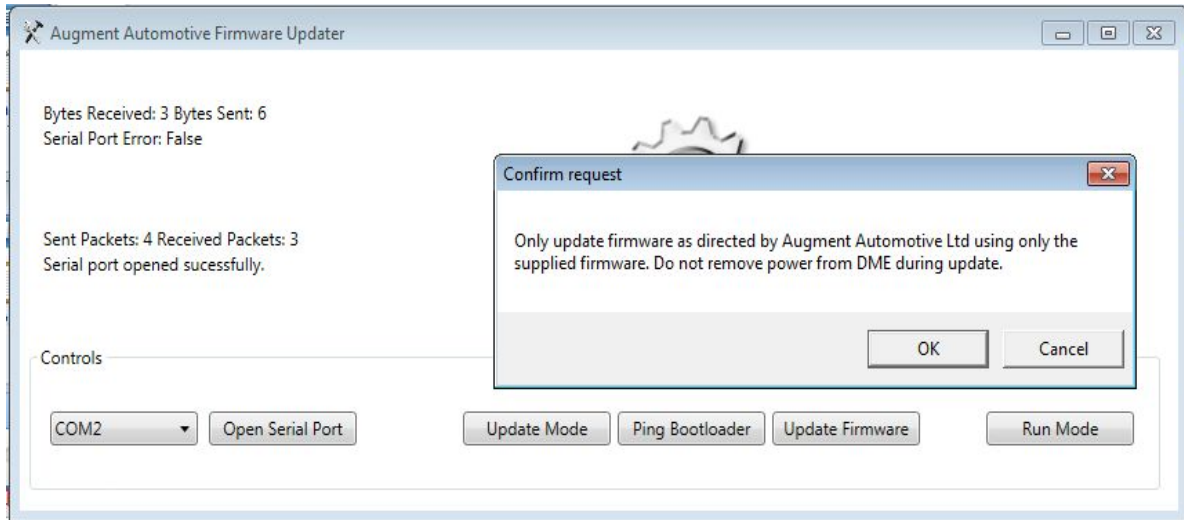
Firmware update mode

In normal operation the device will be in 'Run Mode' which allows normal operation. In order to update the firmware the device must be placed in 'Update Firmware' mode. In this mode the device will not perform its normal functions. Place the device in 'Update Firmware' mode once by pressing the 'Update Mode' button.

Once in firmware update mode the connection to the device can be tested using the 'Ping Bootloader' button which will request a response from the device to check that it is communicating correctly with the laptop. You should see the 'Sent Packets' count increment by 1 followed immediately by the 'Received Packets' increment by 1. This confirms the device is connected to the laptop. If communication is not successful see the Augment Automotive Serial Connection Manual (AUG/MAN/004).

The device will remain in firmware update mode until the 'Run Mode' button is pressed. Should the device loose power during a firmware update it will remain in 'Firmware Update' mode to allow another attempt at updating the firmware. If the update fails in any way do not place the device into run mode or the device will need to be sent back to manufacturer for repair. In the event of persistent failures contact Augment Automotive Ltd.

Once in firmware update mode the firmware can be updated by pressing the firmware update button, selecting the firmware .bin file and clicking OK. The firmware will then be updated.

Click 'OK' and select the .bin file provided by Augment Automotive followed by 'Open'. The 'Augtronic binary file write in progress' message should be displayed and the sent and received packets should increase.

Once the firmware update is completed the 'Upgrade completed successfully message should show. The 'Run Mode' button should then be clicked to place the device back into 'Run Mode'.

The firmware update is now complete and the device should function as normal. It may be necessary to check device settings are correct for the new firmware. This will be advised by Augment Automotive Ltd.

The firmware version should now be checked using the Augment Automotive 3D Tuner Application. This is done by connecting to the AugTronic ECU and clicking the about tab. The ECU version number will be displayed and should match the version of the firmware uploaded.