

# Madman EMS-3

## Firmware Upgrading Procedure

Operating Manual – English 1.00

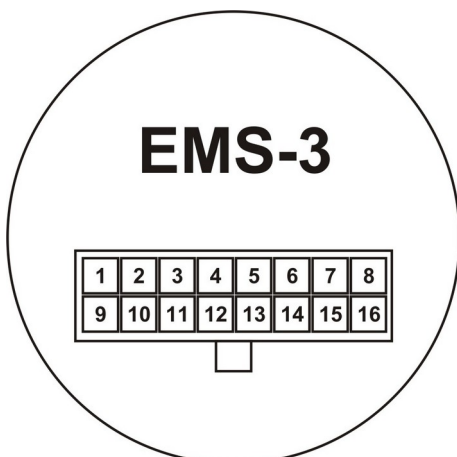


## Introduction

This document will describe the steps involved to successfully upgrade the Madman EMS-3 with the latest firmware. The Madman EMS-3 has a RS232 communications port as standard which will allow the connection of the instrument to a computer. If your computer does not have a RS232 communication port then an external RS232 to USB converter cable will have to be used.

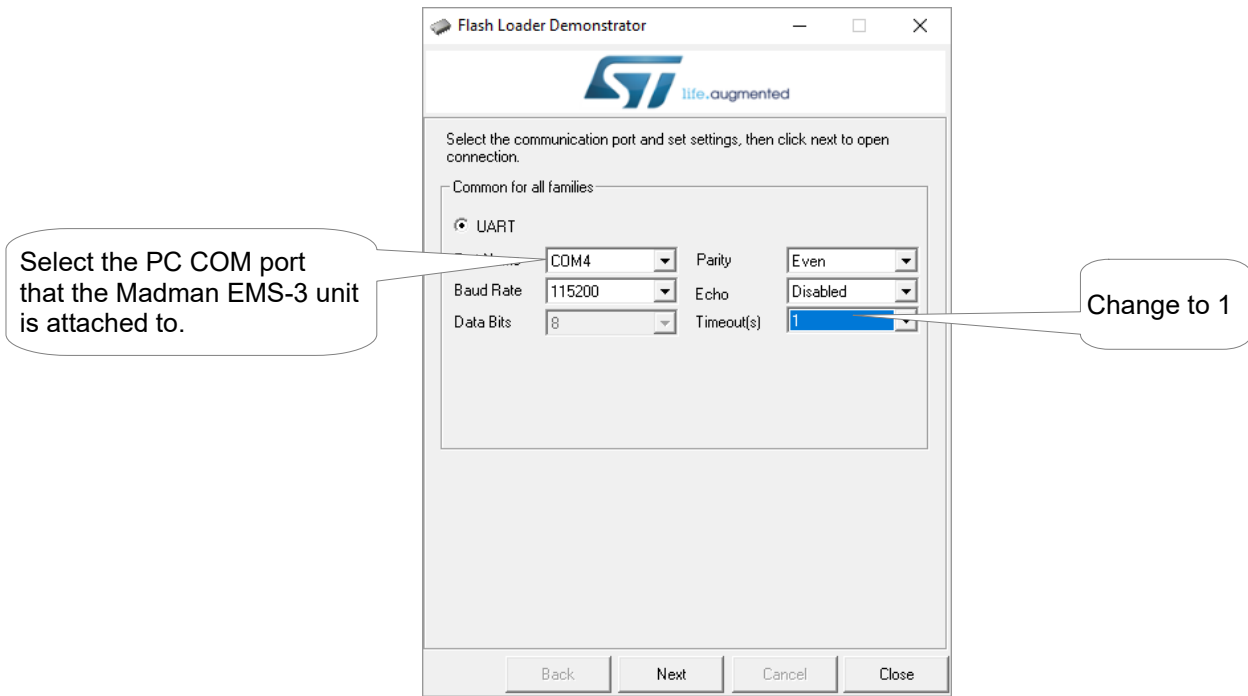
**Please follow the steps below in order to successfully upgrade your instrument.**

- 1) Connect the RS232 port on the Madman EMS-3 instrument to the PC RS232 port as described in the table below. If the computer does not have a RS232 port then an external RS232 to USB converter will have to be used. Use the following pinouts.

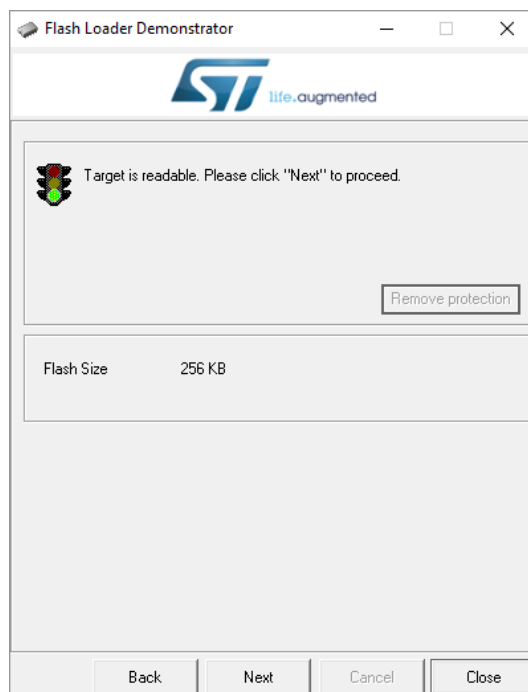


PC D9 Female Pin	Function
Pin 2	Pin 7 (RS232 TXD)
Pin 3	Pin 8 (RS232 RXD)
Pin 5	Pin 15 (Gnd)

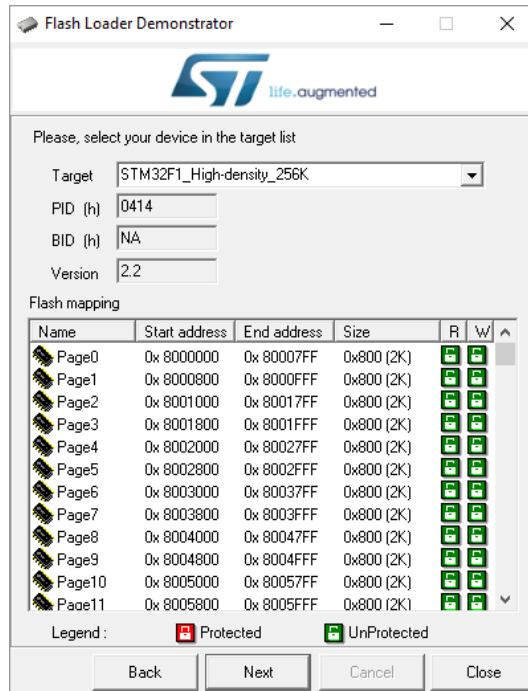
- 2) Download and install the STM Flash loader application. Also download and unzip the Madman EMS-3 firmware file to a known location on your hard drive. The unzipped file will have the EMS-3 name followed by the firmware version number and a .hex extension.
- 3) Run the application and select the PC COM port that is connected to the instrument. Also change the "Timeout" parameter to 1. Make sure your screen matches that of below.



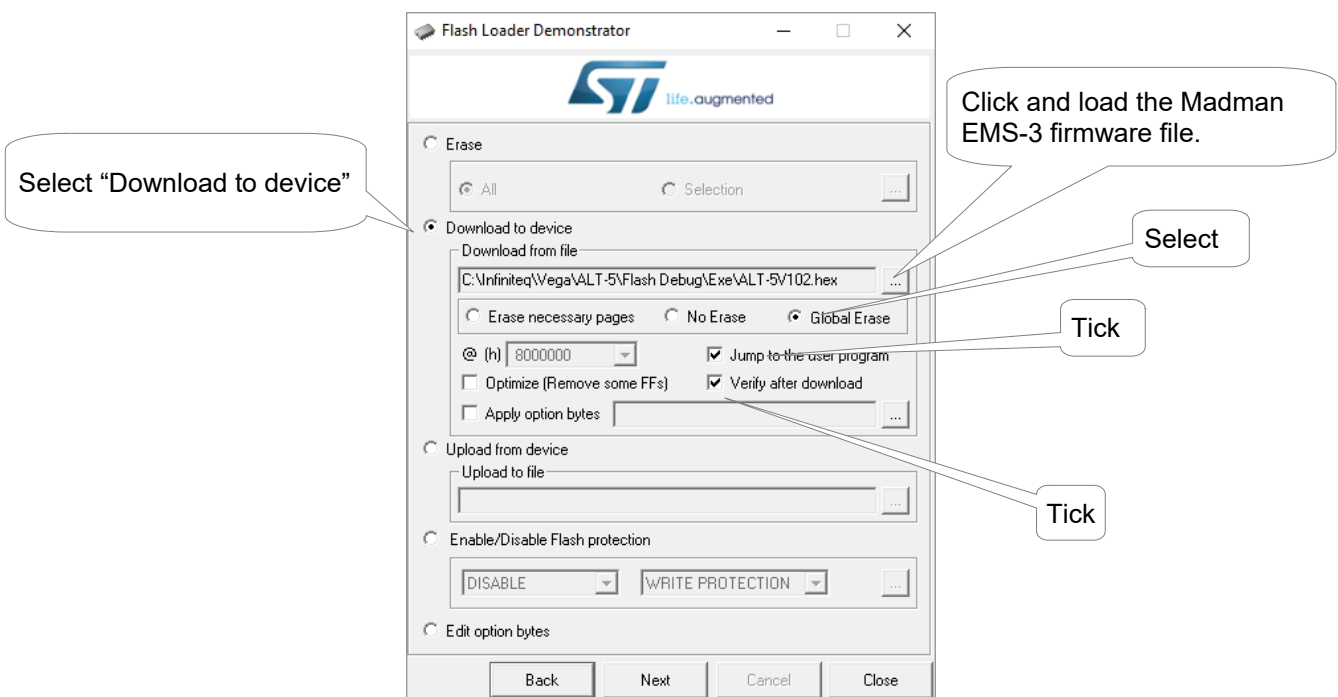
- 4) Apply power while pressing the down key on the Madman EMS-3 instrument. The Madman EMS-3 instrument display will be black and it will look like it is turned off.
- 5) Click the "NEXT" button on the STM Flash Loader application. If the below screen is not shown then repeat the above steps by turning the power off to the instrument and starting over.



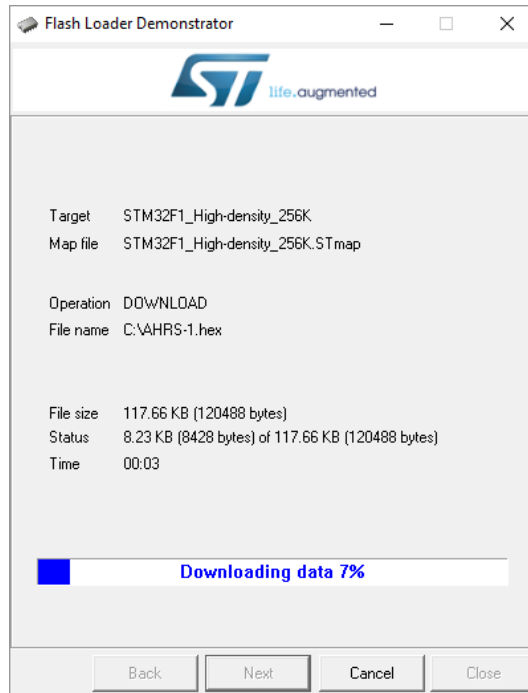
- 6) Click the “NEXT” button on the STM Flash Loader application. The below screen should be shown. Dont change anything on the screen.



- 7) Click the “NEXT” button on the STM Flash Loader application. The below screen should be shown. Select “Download to device”. Click the 3 full stops button and select the firmware file that you have downloaded and unzipped (You will have to select hex files (\*.hex)). Make sure the “Jump to the user program”, “Global Erase” and “Verify after download” boxes are checked.



8) Click the “NEXT” button on the STM Flash Loader application. The code will now be loaded into instrument.



9) Once the code has been loaded and verified then the below screen will be shown. Make sure that the progress bar is green and that it has successfully completed the operation. Click “Close” to exit the program.



10) Power the instrument off and back on again. Verify that the correct version of code has been loaded into the instrument by checking the version number on the start up screen. It may be necessary to load factory default settings on the Madman EMS-3 unit by pressing and holding both the Enter and Up key when the power is been applied.