MD Racing

Updating your Lean Protection Module to the latest firmware.

Your Lean Protection Module can be flashed with the latest firmware to support new features, enhancements and general improvements in functionality.

First make sure you downloaded and installed WinAVR from the support page. This only needs to be done once and not every time you update the LPM.

Double click the file you downloaded called WinAVR-20100110-install.exe and follow the prompts. You should accept all defaults during the installation.

When you get to this prompt showing you installation location do not change it from the defaults or the update scripts for the LPM will fail.
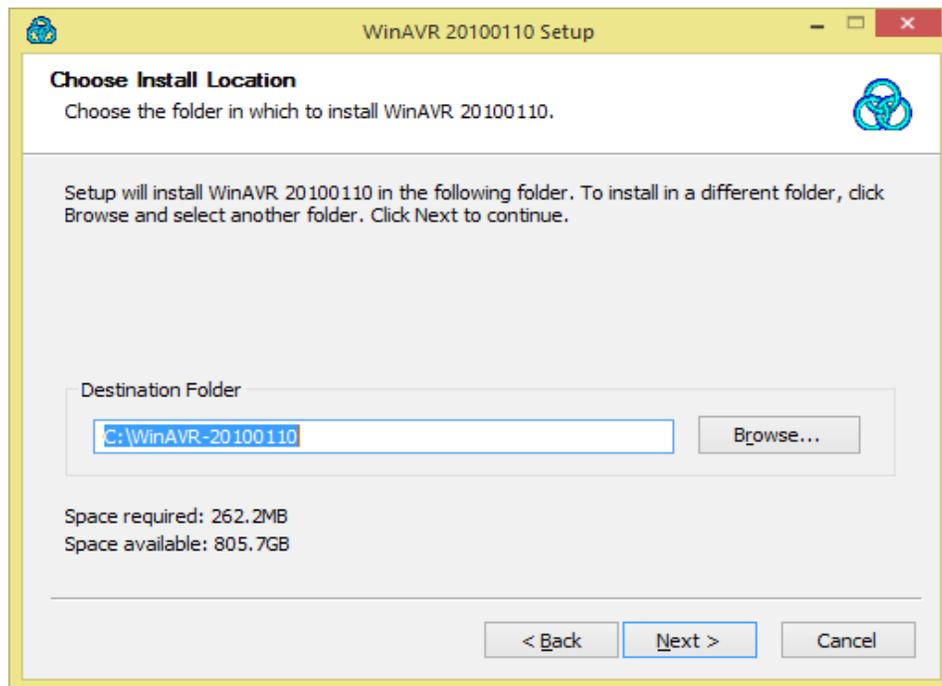
Now download the latest update for your LPM. For this example we are updating to version 1.5 and have downloaded update1.5.zip from the Support page on http://mdracingkc.com

How can you tell what version you're on now? Connect with Putty as shown in the "Computer Driver Installation" document on the Support page. In this example we are updating a module from software version 1.2

```
                        COM3 - PuTTY                        _ □ ×

MD Racing Lean Protection Module
Software Version 1.20  ←
Displaying Current Values
1) A/F: 12.3
2) Wideband start A/F: 10
3) Wideband end A/F: 18
4) Activate Delay: 650
5) TPS voltage at WOT: 4.65
6) Reset device to factory defaults

Select a number

█
```
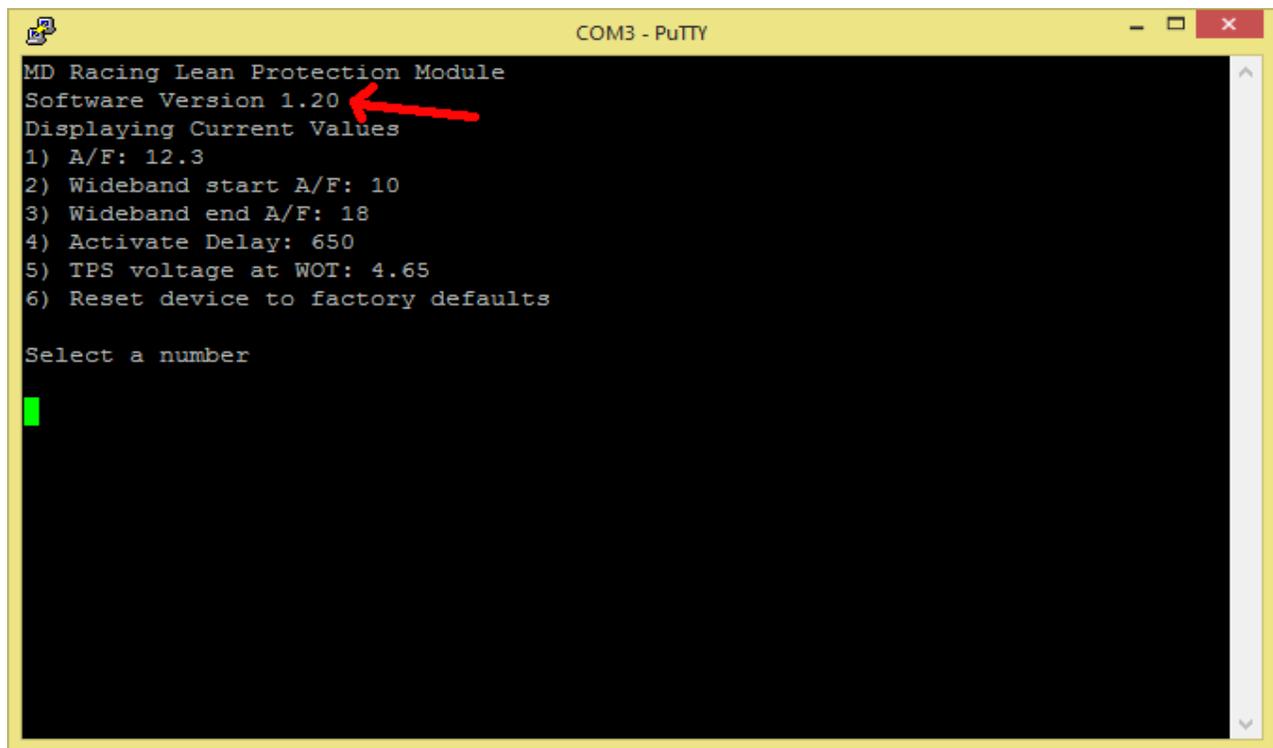
If you are computer savvy and choose to put files you download in your own locations and comfortable with working on the command line etc. you're welcome to adjust what you see below according to your needs. For others I will make this as simple as positive.

In your C: drive lets make a folder called "temp" and work from it. That way everything comes from c:\temp\ and is nice and simple.
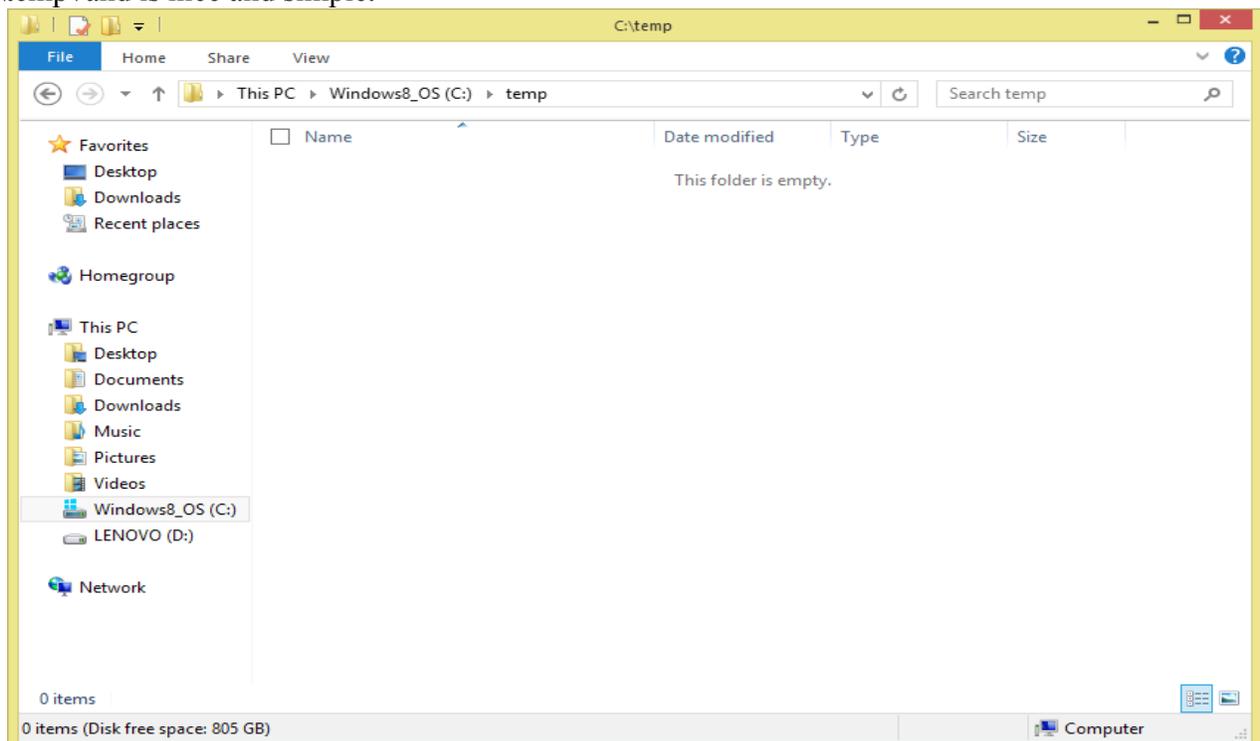
Next download the update from http://www.mdracingkc.com/Support.html and put it in your c:\temp directory
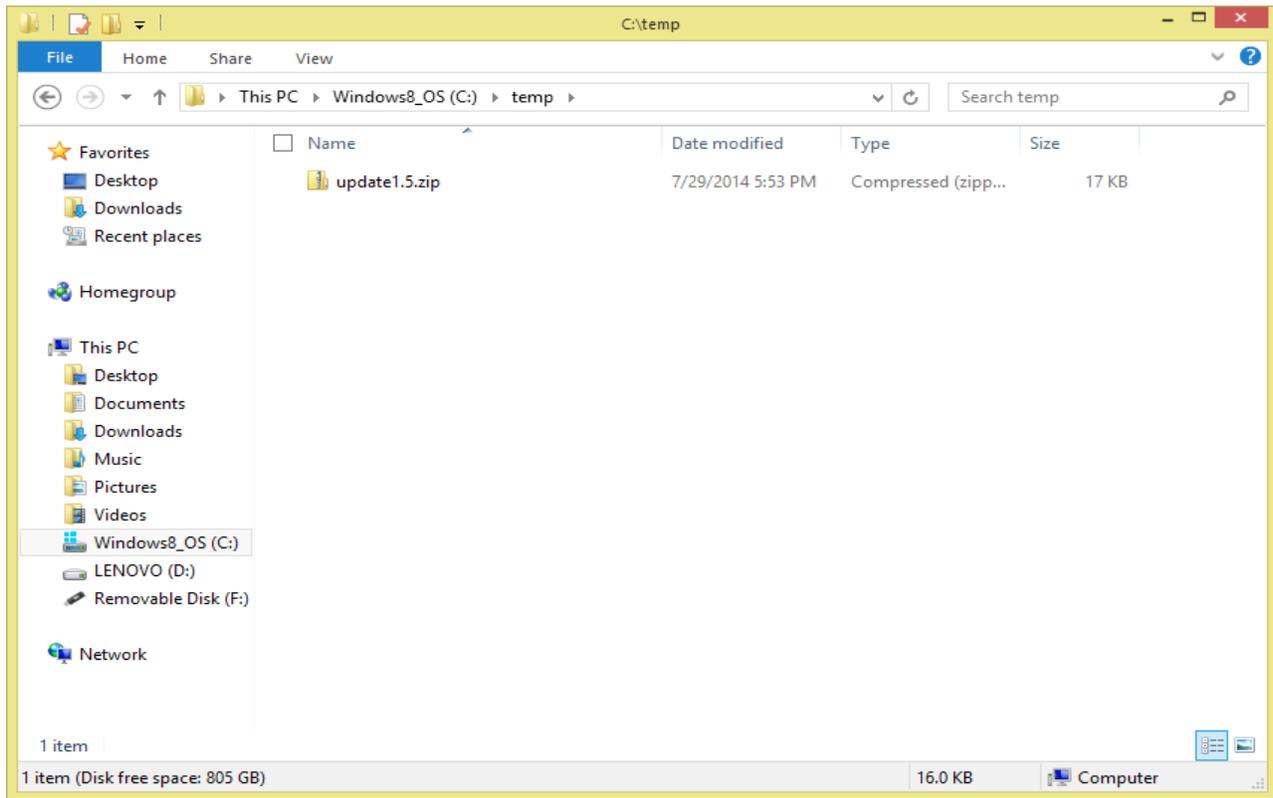
Next we need to expand that zip file. Most versions of windows it's as easy as right clicking it and selecting the "extract" or similar option. See pic below
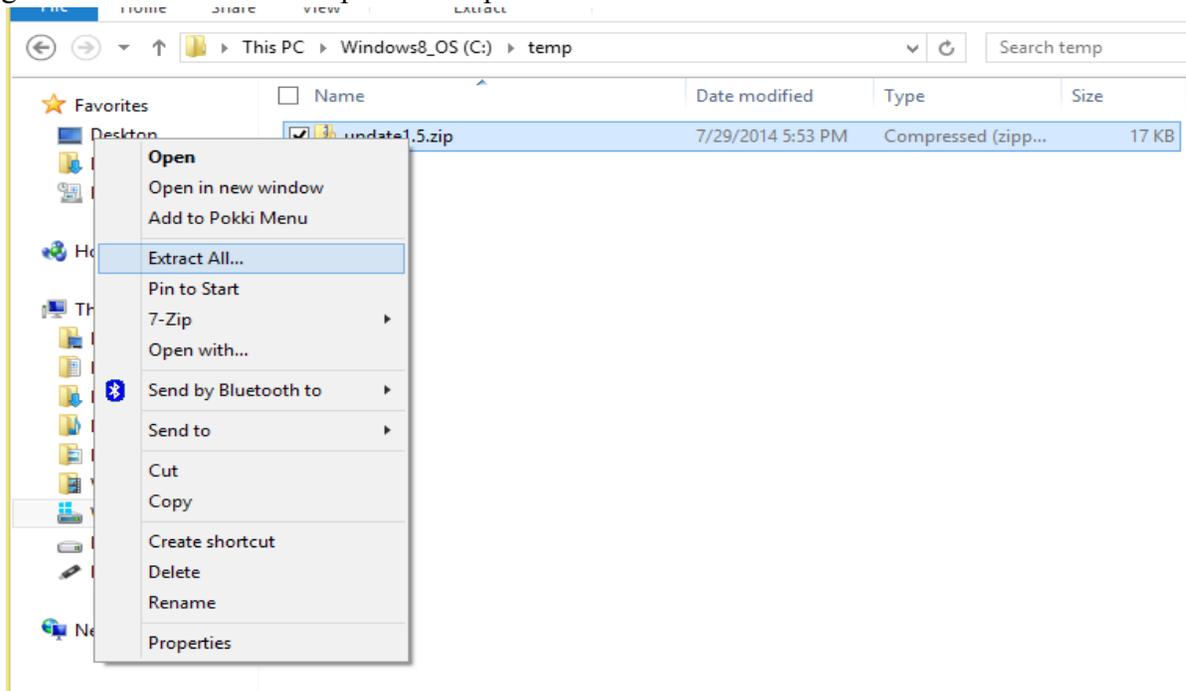
It'll prompt to exact into something like c:\temp\update1.5\ (see pic below)
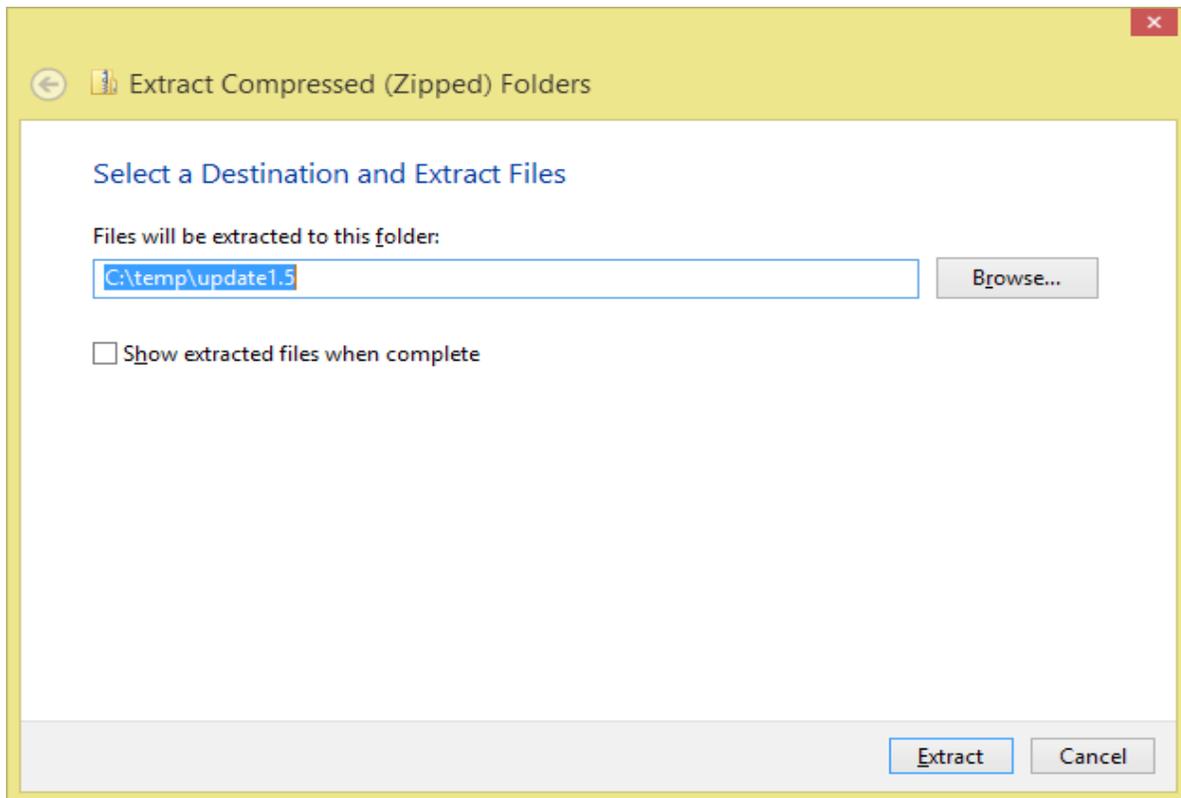
To keep things simple I'm going to suggest you remove the "update1.5" part so it just says c:\temp\ like this pic
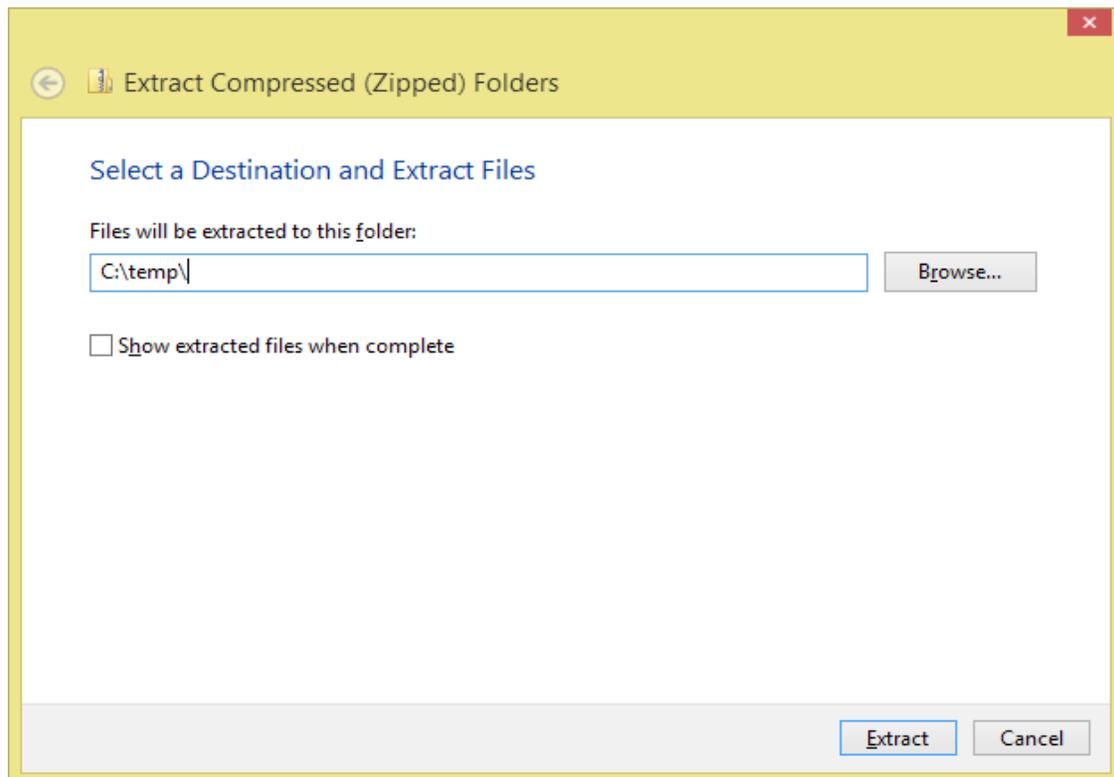
Now you'll see the extracted files from the zip file inside your c:\temp.
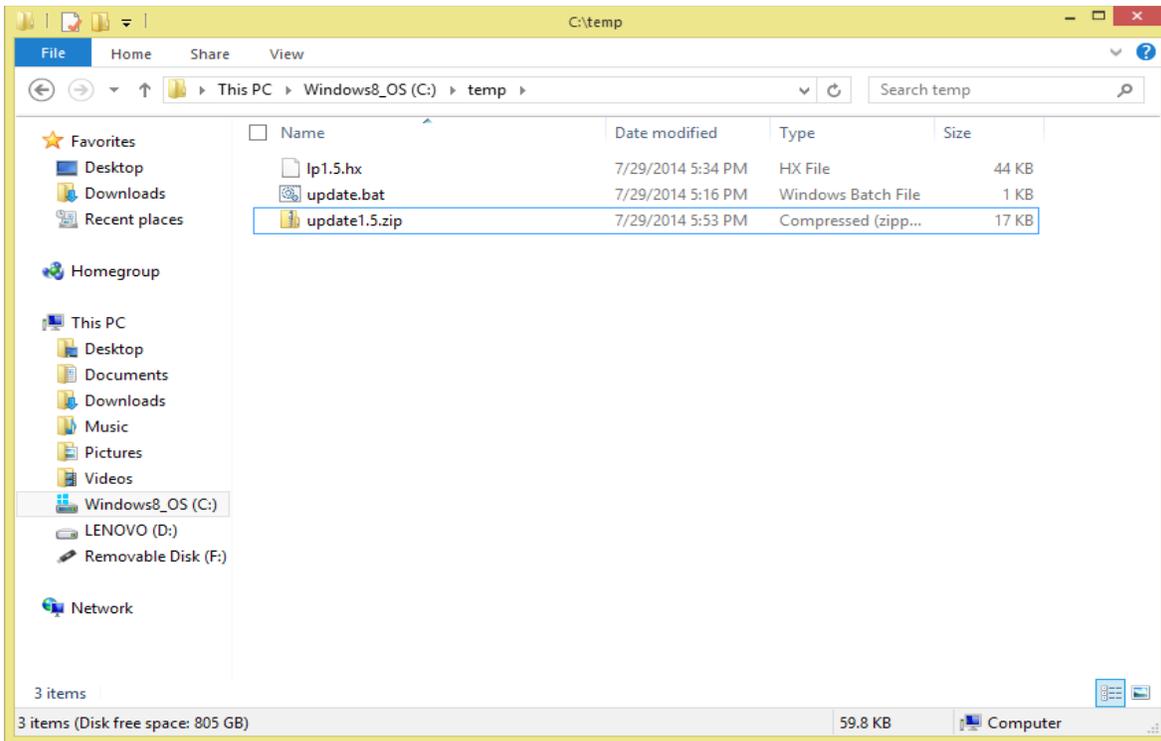
The two files are update.bat and then the actual update file which in this case is lp1.5.hx

To kick off the update you need to open up a command line window. If you're not familiar with how to do that you can usually click on the Start Menu in windows and type in "cmd" like this
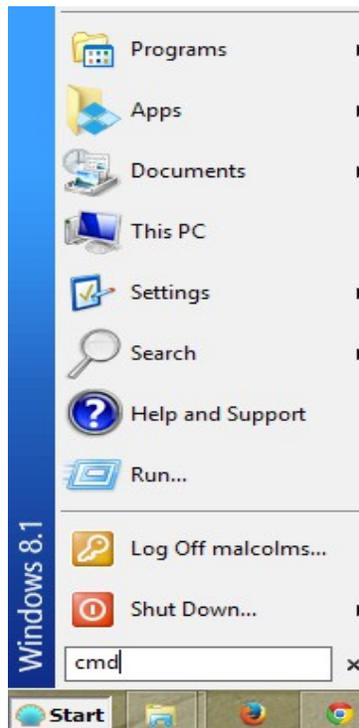
Or another option is to press the "windows" key on your keyboard and while continuing to hold it down press the letter "r". Now release both keys. You get a prompt like this where you can type in "cmd"
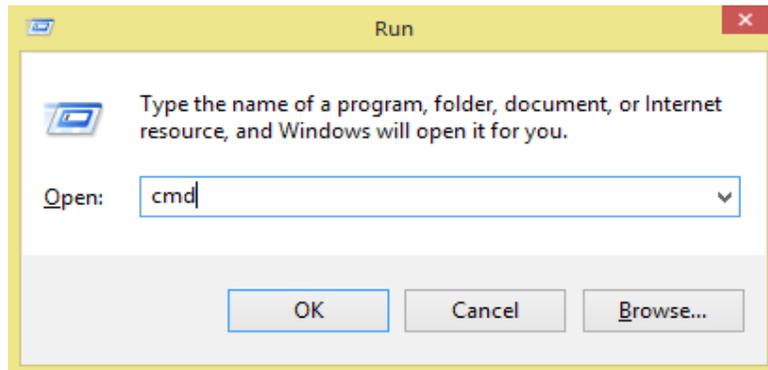
The command window opens up to your home location which is typically something like c:\users\<username> but varies by version of windows. That's why we are keeping things simple with our c:\temp directory.

So you'll likely see something like this to start (which for me is in c:\users\malcolms)
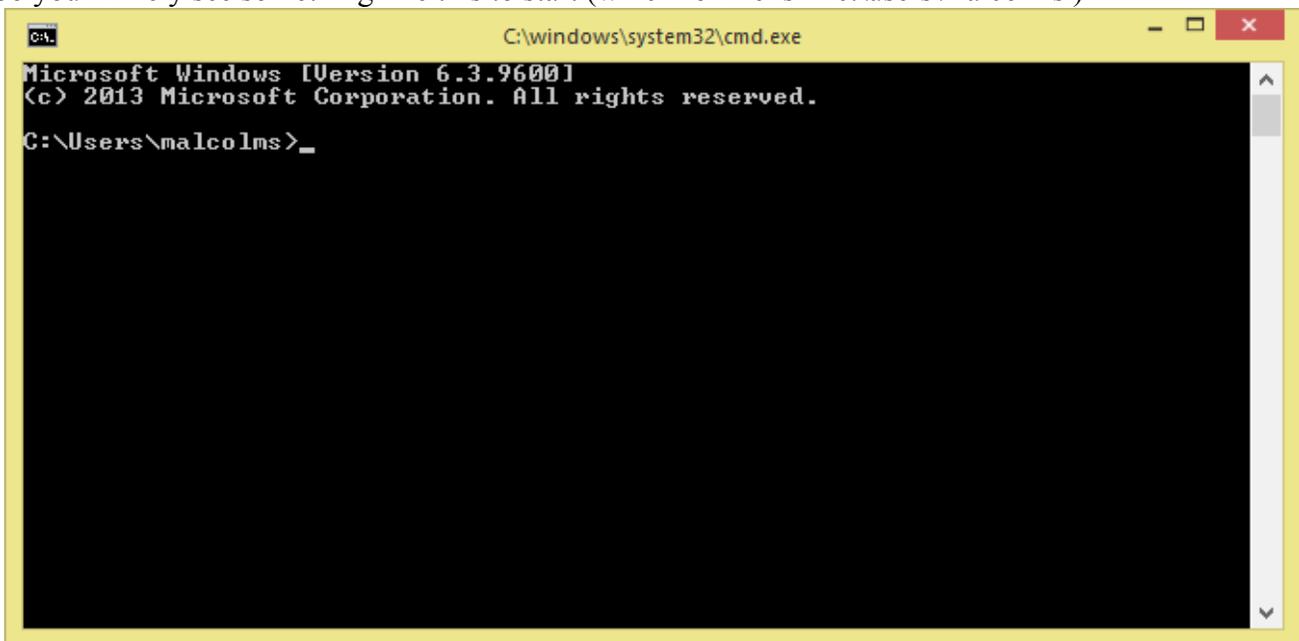
Now simply change to your "temp" directory by typing "cd \temp" and pressing enter
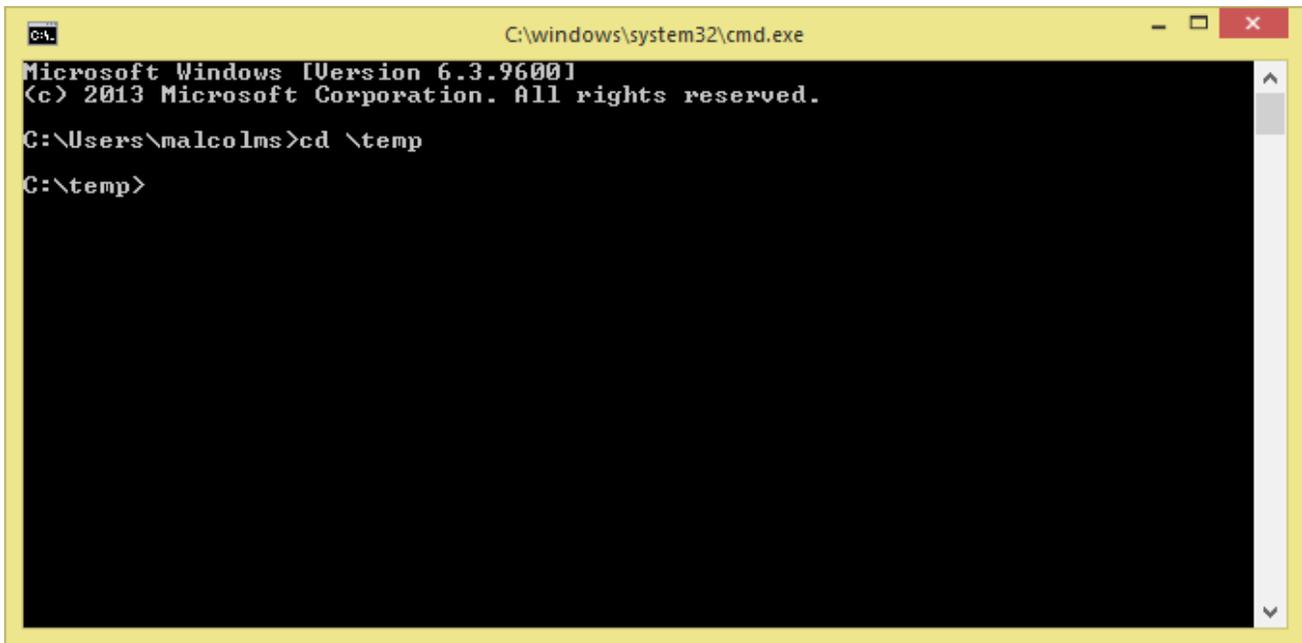
```
                    C:\windows\system32\cmd.exe            -  □  ×
Microsoft Windows [Version 6.3.9600]
(c) 2013 Microsoft Corporation. All rights reserved.

C:\Users\malcolms>cd \temp

C:\temp>
```

Now type the command to start the update which goes like this

update.bat lp1.5.hx com3

Where "lp1.5.hx" is the version you are updating to. So if you were updating to say version 1.4 you'd have a file lp1.4.hx

com3 is the com port your LPM connects to the laptop as. This is something you figured out in the "Computer Driver Installation" document.
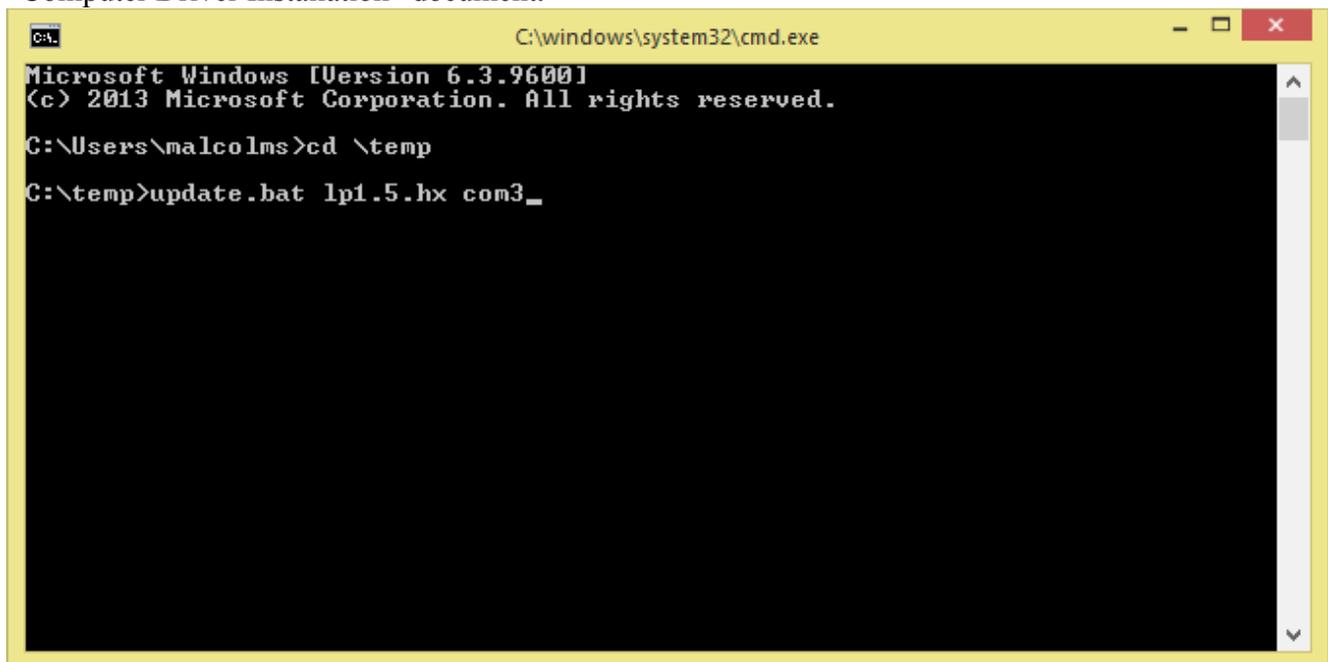

```
                    C:\windows\system32\cmd.exe            -  □  ×
Microsoft Windows [Version 6.3.9600]
(c) 2013 Microsoft Corporation. All rights reserved.

C:\Users\malcolms>cd \temp

C:\temp>update.bat lp1.5.hx com3_
```

Now simply press enter and you'll see it start updating and a progress bar will move up like this

```
■■■        C:\windows\system32\cmd.exe - update.bat lp1.5.hx com3      –  □  ×
Microsoft Windows [Version 6.3.9600]
(c) 2013 Microsoft Corporation. All rights reserved.

C:\Users\malcolms>cd \temp

C:\temp>update.bat lp1.5.hx com3

C:\temp>C:\WinAVR-20100110\bin\avrdude.exe -patmega328p -carduino -b57600 -D -Uf
lash:w:lp1.5.hx -Pcom3

avrdude.exe: AVR device initialized and ready to accept instructions

Reading | ################################################## | 100% 0.02s

avrdude.exe: Device signature = 0x1e950f
avrdude.exe: reading input file "lp1.5.hx"
avrdude.exe: input file lp1.5.hx auto detected as Intel Hex
avrdude.exe: writing flash (15926 bytes):

Writing | ############                                      | 24% 1.94s
```

Once it's all complete (only takes about 20 seconds) you'll see a screen similar to this


```
■■■              C:\windows\system32\cmd.exe                           –  □  ×
C:\temp>update.bat lp1.5.hx com3

C:\temp>C:\WinAVR-20100110\bin\avrdude.exe -patmega328p -carduino -b57600 -D -Uf
lash:w:lp1.5.hx -Pcom3

avrdude.exe: AVR device initialized and ready to accept instructions

Reading | ################################################## | 100% 0.02s

avrdude.exe: Device signature = 0x1e950f
avrdude.exe: reading input file "lp1.5.hx"
avrdude.exe: input file lp1.5.hx auto detected as Intel Hex
avrdude.exe: writing flash (15926 bytes):

Writing | ################################################## | 100% 8.08s

avrdude.exe: 15926 bytes of flash written
avrdude.exe: verifying flash memory against lp1.5.hx:
avrdude.exe: load data flash data from input file lp1.5.hx:
avrdude.exe: input file lp1.5.hx auto detected as Intel Hex
avrdude.exe: input file lp1.5.hx contains 15926 bytes
avrdude.exe: reading on-chip flash data:

Reading | ################################################## | 100% 6.85s

avrdude.exe: verifying ...
avrdude.exe: 15926 bytes of flash verified

avrdude.exe: safemode: Fuses OK

avrdude.exe done.  Thank you.


C:\temp>
```

Now if you go back to Putty and reconnect to the LPM you can confirm the update and see the new version of the software you're on
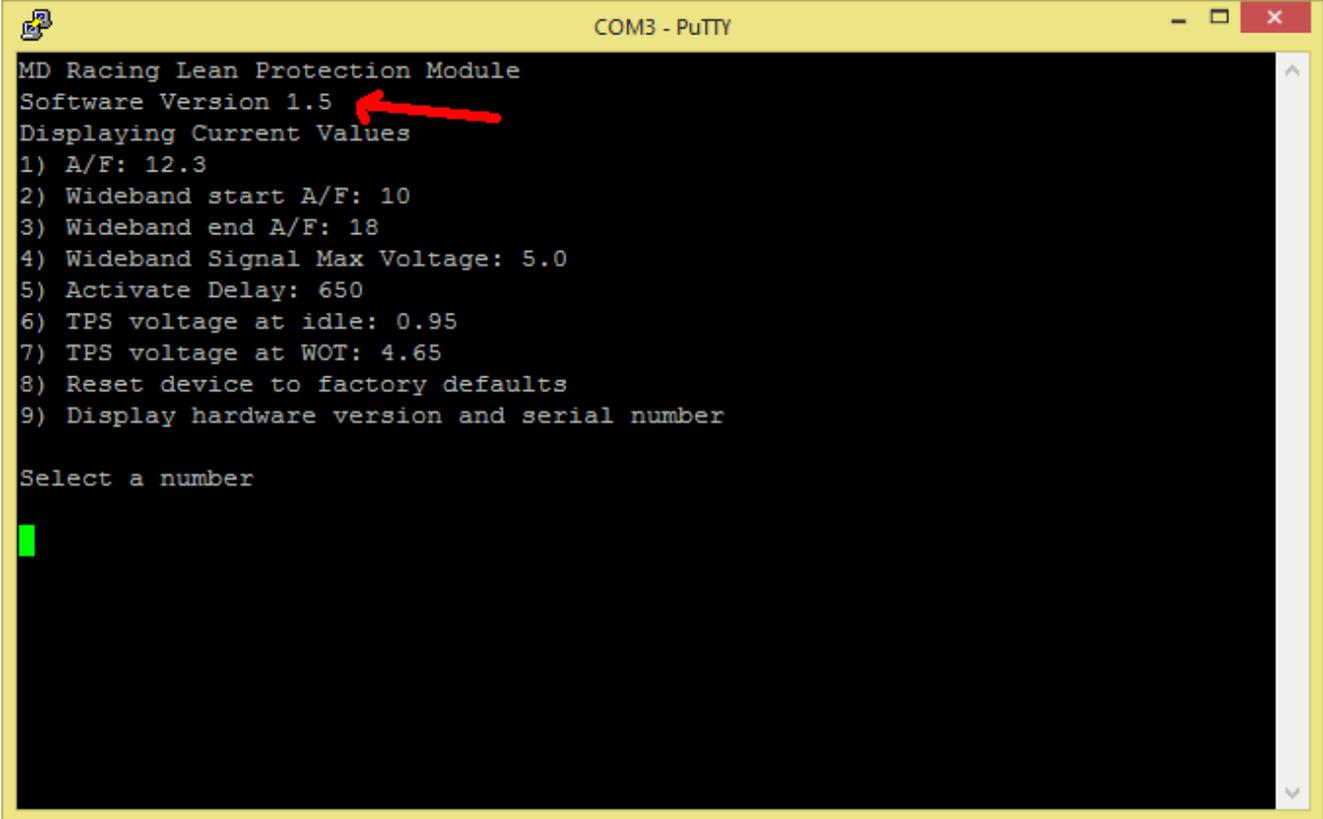
Congratulations your LPM is updated and on the latest version of software.

If you have any questions or issues please don't hesitate to contact me malcolm@mdracingkc.com