

NR2003/2005/2007 Graphic Tweaks

A balance between FPS (Frames Per Second) performance and picture quality is necessary for maximum enjoyment of any game. Unfortunately, the better the quality, the larger the sacrifice is in FPS. Too much balance on the quality side, and your FPS diminishes, making the game more “choppy” and run less smooth. Too much emphasis on FPS, and quality is diminished. The trick is to find a happy medium, where they are balanced the best they can be, and you have the best of both worlds.

The human eye senses little change above 35 Frames per second. Of course, some are more sensitive than others, but in general, the human eye can see little difference, if any, between 35 FPS, and 75 FPS. However, a difference between 20 FPS and 35 FPS can be dramatic.

The purpose of this guide, is to help you achieve an even balance of performance and quality. Though some things may give you a hit in FPS, there may be other options that will balance them out.

First things first, lets get some basic information that you need before starting. The information you are about to get here will be very important in making the changes you need to make. So, take the 5 minutes of your time to fill out the following.

<p>A. GET YOUR STARTING POINT Start Up your NR2003/05/07 game, and select a mod which you run most – which is heaviest on frames (SScot or NSCS10 preferably). Select “Single Race”. In your race options, select a version of Indianapolis and make sure you have about 30 competitors. Start, and then skip to the race session. This should put you last in the lineup with all the cars in front of you. While sitting on pit road, press “F”, and this will give you the FPS in the upper right corner. Take the number you see most (it will vary) and write it in the box to the right. Exit the game and go back to your desktop.</p>	FPS			
<p>B. How much RAM do you have? From your desktop, select Start, then “Run” and a small window will open. (This is in Windows XP, not sure about Vista or Windows 7). Type in dxdiag and press enter. In the window that opens, about ¾ of the way down you will see an option for “Memory”. Write that number in the box to the right. Keep this window open.</p>	RAM			
<p>C. How much Video Ram do you have? From the same dxdiag box, select the “Display” tab. Fill in the total memory, resolution, and bit information in the boxes to the right.</p> <p>Current display mode - Resolution would be something like 800x600 or 1024x768, or maybe larger depending on your settings.</p> <p>Bit appears in parenthesis next to your resolution</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">APPROX TOTAL MEMORY</td> </tr> <tr> <td style="text-align: center;">CURRENT DISPLAY MODE</td> </tr> <tr> <td style="text-align: center;">BIT</td> </tr> </table>	APPROX TOTAL MEMORY	CURRENT DISPLAY MODE	BIT
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BIT				

Now that you have the basic information you need, let's get started making the tweaks. If you already have a high FPS, that is fine. If you have a high FPS, that just means, you may be able to increase the eye candy, sacrifice a little bit of FPS.

So, the first thing you want to go, is go to the root folder of the game, regardless of whether it is NR2003/5/7.

1. Locate the core.ini file – double click it.
 - a. Look for the line [FileLRUCache]
 - i. Underneath that it should say CacheSize=4194304
 1. Just add a 1 before that so it says CacheSize=14194304
 - b. Now, look for [Memory]
 - i. Under that, look for MaxBlockSize
 1. Look at the number you place in Box B for RAM. Open your calculator and multiply that number by 1024. For example, $512 \times 1024 = 524288$ or $2048 \times 1024 = 2097152$
 2. The answer to your math question should be placed next to MaxBlockSize. For example, for 2048 RAM, MaxBlockSize=2097152
 - ii. Still under the [Memory] setting, look for PoolSize.
 1. The number in PoolSize needs to be identical to the number in MaxBlockSize, so input the same number here.
 - c. Click File, then save, and close your core.ini file
2. Now, locate the rend_ogl.ini or rend_dxg.ini file. You will see both rend_ogl and rend_dxg files, but only one of them will have an ini file – which one depends on which mode you are currently running the game in. This is what you will need to open...double click.
 - a. Look for the line TextureSetSize=.
 - i. Now we need to perform some magic to determine what number goes here.
 - ii. Look up in box C on page 1...and fill in the blanks in the next sentence.

(APPROX TOTAL MEMORY) _____mb video card running _____ bit (BIT)

For example, "256mb video card running in 32 bit"

What you need to do here is fine your video card – and bitrate, and then match up the resolution and circle that number.

32mb video card running in 16bit

640x480= 31096832

800x600= 29714432

1024x768= 27262974

1152x864= 25591801

1280x960= 23724032

1600x1200= 18194432

64mb video card running in 16bit

1024x768= 60817408

1152x864= 59146240

1280x960= 57278464

1600x1200= 51748864

64mb video card running in 32bit

1024x768= 54525952

1152x864= 51183616

1280x960= 47448064

1600x1200= 56388864

128mb video card running in 16bit

1024x768= 127926272

1152x864= 126255104

1280x960= 1246387328

1600x1200= 118857728

128mb video card running in 32bit

1024x768= 121634816

1152x864= 118292480

1280x960= 114556928

1600x1200= 103497728

256mb video card running in 16bit

1024x768= 262144000

1152x864= 260472832

1280x960= 258605056

1600x1200= 253075456

256mb video card running in 32bit

1024x768= 255852544

1152x864= 252510208

1280x960= 248774656

1600x1200= 237715456

Insert the number that corresponds with your settings, into the TextureSetSize.

For example – for a 256mb video card running in 32 bit, with 1024x768 resolution, the line would read
TextureSetSize=255852544

- iii. Next, locate the line AnisotropicLevel=8. Change that 8 to a 0.
- b. Save the file and close.

OK, we are done for now, editing files. There is one more thing we can do, but lets save that for later.

Now fill in the boxes below.

Get your Starting Point number (FPS) from page 1	FPS
Follow the same procedure you did on Page one, and get your current FPS	FPS

Your results may vary. You may see an increase in FPS, you may see no change, you may see a small decrease, though a decrease would be unlikely.

If you see a drastic decrease – run your 3d configuration, like you did when you installed the game. This will return all your settings back to the original settings.

If the game crashes...you likely either placed the wrong number in the TextureSetSize or MaxBlockSize blocks. Again, run your 3d config to reset back to original settings, and start over.

In some cases, if you place a number larger than 524288 in the MaxBlockSize – it will cause the game to freeze or crash. Try editing that if nothing else works.

If you see an increase in FPS or even no change, that's a good thing. Basically what you did here, was optimize the graphic settings. You may notice, walls are smoother, track painted lines are smoother...billboards/cars may be sharper. Like I said, there may be another setting we can change – but, that is all according to what your current FPS is now.

If you have framerates of 60+, I recommend making the next change. If below 60, I recommend ignoring the next step, especially if below 40 FPS.

Go into your Players folder, select the folder for your player.

Find the player.ini file

Go to [Graphic Options]

Find Texture_Quality=-1

Change that to Texture_Quality=100

This will keep all textures at 100% quality, and the game will not change them. -1 is auto – which allows the game to adjust as it deems necessary.

Doing this, usually causes a 10 FPS drop. Again, since normally eyes cannot sense a change between 35 FPS and anything higher – this drop would be unimportant, and worth it.