

Using *Adobe*[®] *Illustrator*[®]: Setting Up Rectangular, Colored Grid

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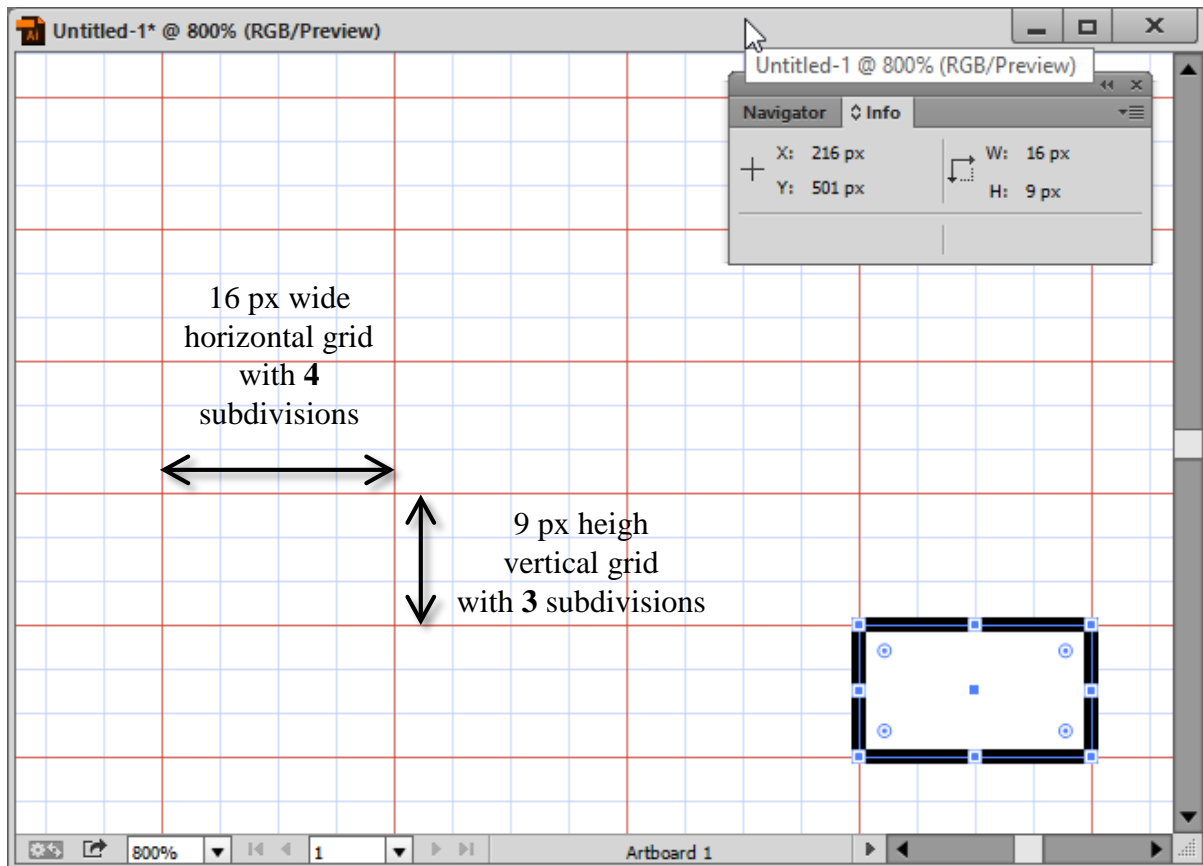
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1 Final Effect Overview



The alignment grids in Adobe® Illustrator® (View > Show Grid) are non-printing grid-lines, customizable by the user, to aid in layout and design. It's great for alignment and designing. Unfortunately, by default Adobe® Illustrator® allows you to specify *only square grids*, i.e. you set one parameter for gridline spacing (and one for its subdivisions) and Ai creates square grid applying your value for both: horizontal and vertical directions. But what if we need something more, for example 16:9 proportion grid (subdivided into 4 and 3)? Hmm.... actually... we can do this!

2 Option 1: Modifying the default *Ai Preferences File*

2.1 Launch Adobe® Illustrator®

2.2 Editing Preferences

2.2.1 Windows

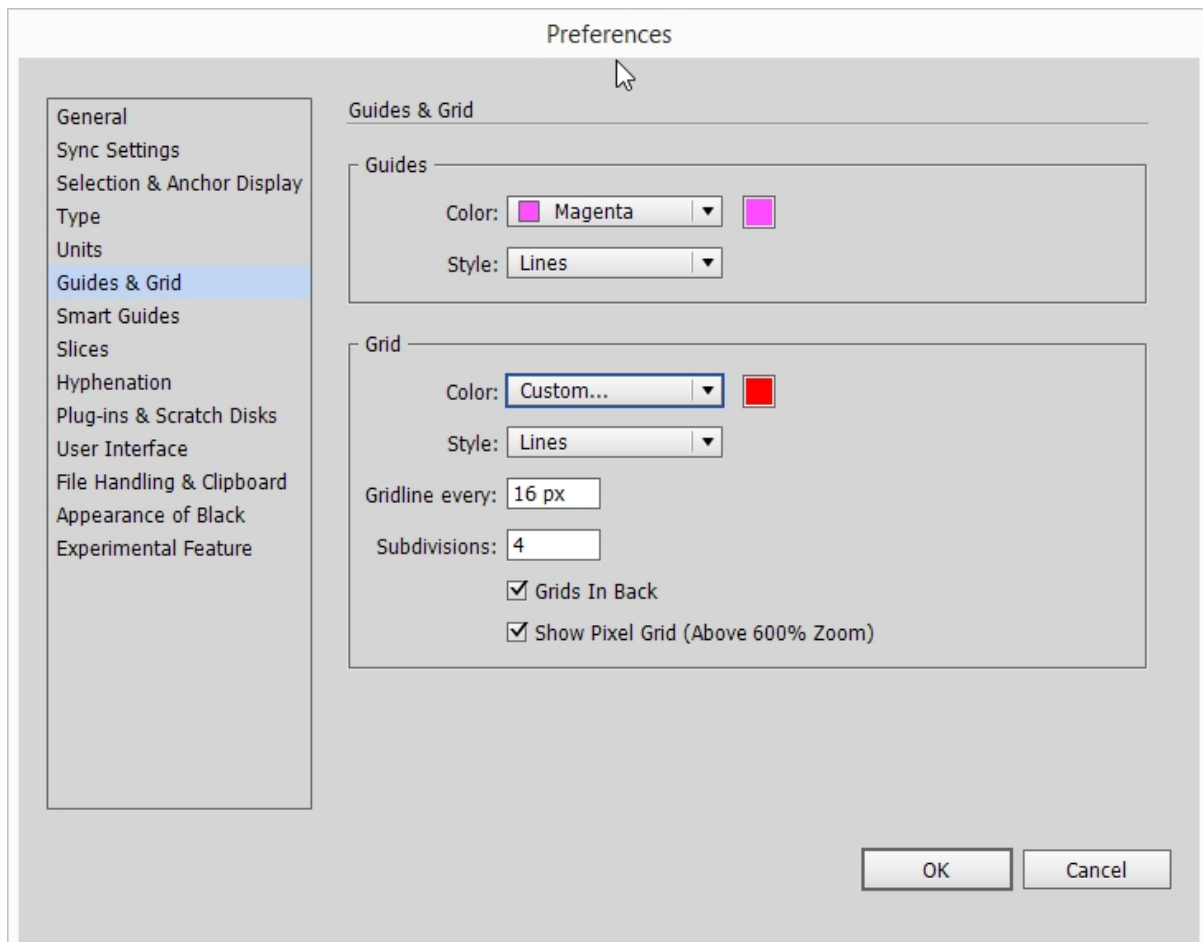
Go to Edit > Preferences > Guides & Grid...

Set *Gridline every* to 16 (I use pixels as my primary unit, but this could be anything else), and *Subdivisions* to 4. Set Color Attribute to Red (RGB 255, 0, 0)

2.2.2 Mac OS X

Go to Illustrator > Preferences > Guides & Grid...

Set *Gridline every* to 16, and *Subdivisions* to 4. Set Color Attribute to Red (RGB 255, 0, 0)



2.3 Quit Adobe® Illustrator®

2.4 Locating the *Ai Preferences File*

2.4.1 Windows

2.4.1.1 *Ai CS6 (32-bit)*

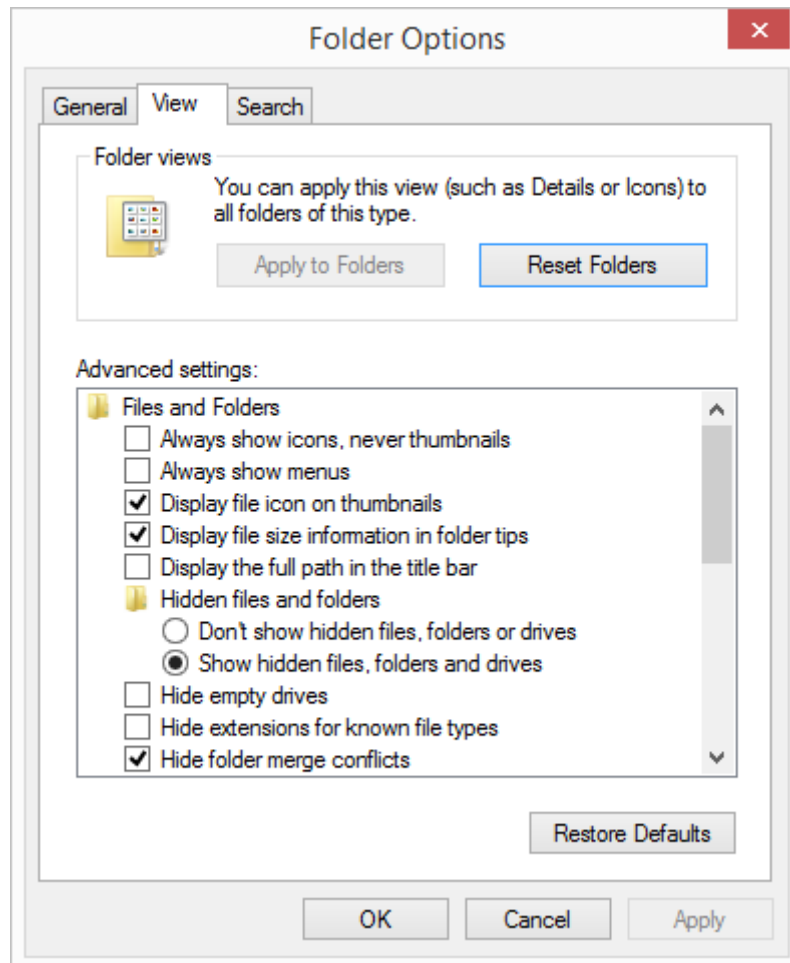
File Name: AIPrefs

File Location: C:\Users\[User Name]\AppData\Roaming\Adobe\Adobe Illustrator CS6 Settings\[language]\x86\

***Note:** The AppData folder located under `C:\Users\[User Name]` is hidden by default. To access it you need to set the 'Show hidden files, folders and drives' option (under 'Folder Options'). If you are not familiar with advanced Windows settings, this should help:

Windows 7: <http://windows.microsoft.com/en-us/windows/show-hidden-files#show-hidden-files=windows-7>

Windows 8: <http://blogs.msdn.com/b/zxue/archive/2012/03/08/win8-howto-19-show-hidden-files-folders-and-drives.aspx>



2.4.1.2 Ai CS6 (64-bit)

File Name: AIPrefs

File Location: `C:\Users\[User Name]\AppData\Roaming\Adobe\Adobe Illustrator CS6 Settings\[language]\x64\`

2.4.1.3 Ai CC (32-bit)

File Name: Adobe Illustrator Cloud Prefs

File Location: `C:\Users\[User Name]\AppData\Roaming\Adobe\Adobe Illustrator 17 Settings\[language]\x86`

2.4.1.4 Ai CC (64-bit)

File Name: Adobe Illustrator Cloud Prefs

File Location: C:\Users\[User Name]\AppData\Roaming\Adobe\Adobe Illustrator 17 Settings\[language]\x64

2.4.2 Mac OS X

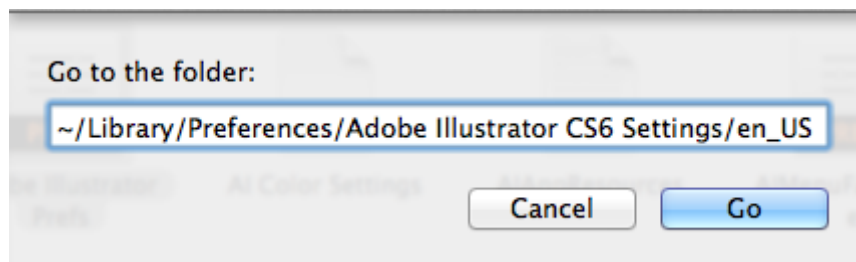
2.4.2.1 Ai CS6

File Name: Adobe Illustrator Prefs

File Location: /Users/[User Name]/Library/Preferences/Adobe Illustrator CS6 Settings/[language]

Note: To access the folder, go to *Finder > Go > Go to Folder*, and type:

~/Library/Preferences/Adobe Illustrator CS6 Settings/en_US



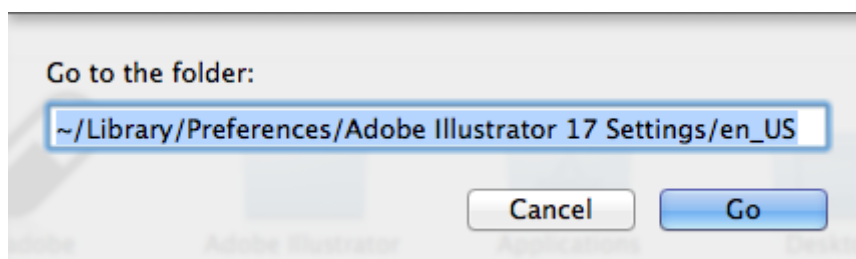
2.4.2.2 Ai CC

File Name: Adobe Illustrator Cloud Prefs

File Location: /Users/[User Name]/Library/Preferences/Adobe Illustrator 17 Settings/[language]

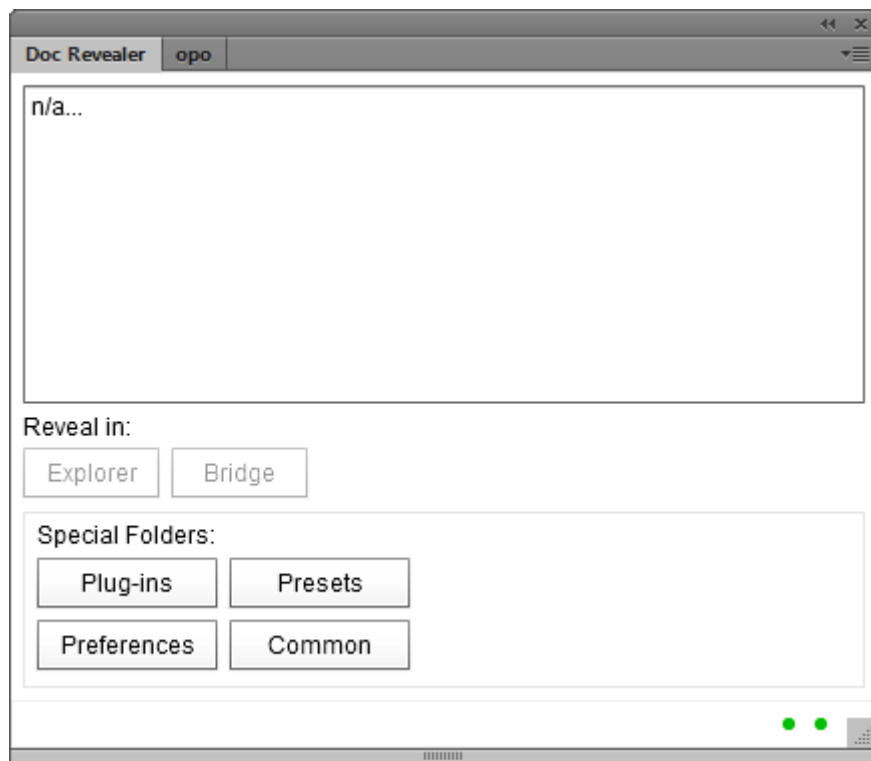
Note: To access the folder, go to *Finder > Go > Go to Folder*, and type:

~/Library/Preferences/Adobe Illustrator 17 Settings/en_US



2.4.3 Operating System Independent

Instead of digging in your hard drive, you can use the *Doc Revealer Tool* (free copy available at <http://63mutants.com>). Just go to its interface and hit the *Preferences* button.



This automatically reveals the Adobe® Illustrator® Preferences folder where Illustrator® stores the AIPrefs (Illustrator® CS6, Windows) or Adobe Illustrator Cloud Prefs (Illustrator® CC, Windows) or Adobe Illustrator Prefs (Illustrator® CS6, Mac OS X) or Adobe Illustrator Cloud Prefs (Illustrator® CC, Mac OS X).

2.5 Opening the *Ai Preferences File* for editing

Since the *Ai Preferences File* is a plain text file you can open/edit it with any text editor, for example *Notepad* (Windows) or *TextEdit* (Mac OS X)

2.5.1 Windows

Right Click on the *File* > *Open With* > select (for example) *Notepad*

2.5.2 Mac OS X

Right Click on the *File* > *Open With* > *Other...* > *Applications* > choose (for example) *TextEdit.app*

2.6 Modifying the *Ai Preferences File*

Find the *Grid* record in your file. It starts with the */Grid* keyword:

```
/Grid {
...
...
...
}
```

This could be something like this:

```
/Grid {
  /Color {
    /Dark {
      /r 1.0
      /g 0.0
      /b 0.0
    }
    /Lite {
      /b 0.5
      /g 0.5
      /r 1.0
    }
  }
  /Style 0
  /Posn 1
  /Vertical {
    /Ticks 4
    /Spacing 16
  }
  /Horizontal {
    /Ticks 4
    /Spacing 16
  }
}
```

The Grid shape is controlled with two variables: *Vertical* and *Horizontal*. Each variable has two attributes: *Ticks* (stands for *Subdivisions*) and *Spacing* (for *Gridline every*). We can modify these settings and set it to whatever we like. We change the *Vertical* spacing to 9 with 3 subdivisions:


```

/Vertical {
    /Ticks 3
    /Spacing 9
}
/Horizontal {
    /Ticks 4
    /Spacing 16
}

```

The Color has also two variables: `/Dark` and `/Lite`. The `Dark` one refers to the color we've already set via Adobe® Illustrator® Preferences Dialog Box RGB 255, 0, 0:

$1.0 = 255/255$

Now, we will modify set `Lite` color (subdivisions) to, let's say light blue RGB 187, 209, 255:

$187/255=0.73333333$

$209/255= 0.81960784$

$255/255=1.0$

```

/Color {
    /Dark {
        /r 1.0
        /g 0.0
        /b 0.0
    }
    /Lite {
        /r 0.73333333
        /g 0.81960784
        /b 1.0
    }
}

```

That's it! Save and Close your file.

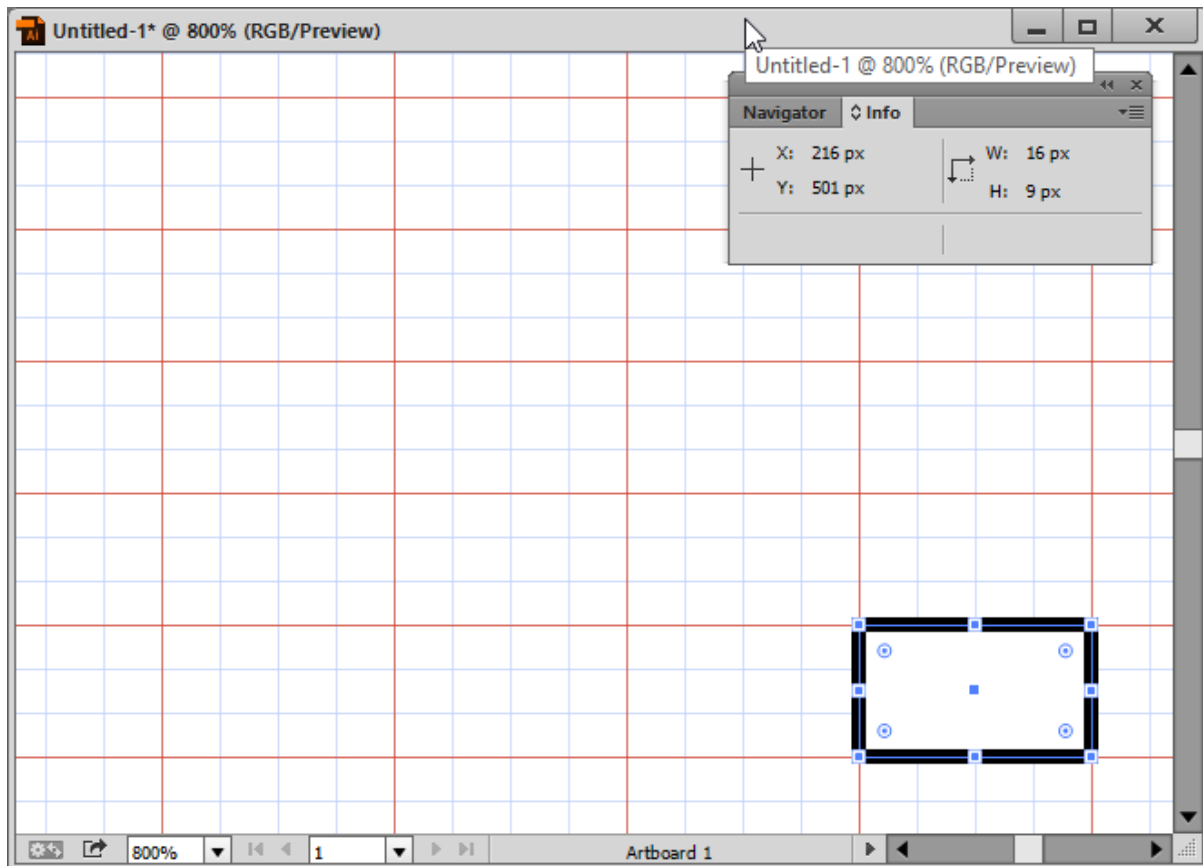
Note: Make sure the file is closed before you start Ai

2.7 Verifying your settings

Launch Adobe® Illustrator®. Go to *File > New*

Go to *View > Show Grid*

16 : 9 with 4:3 subdivisions Grid should appear. Here is my result:

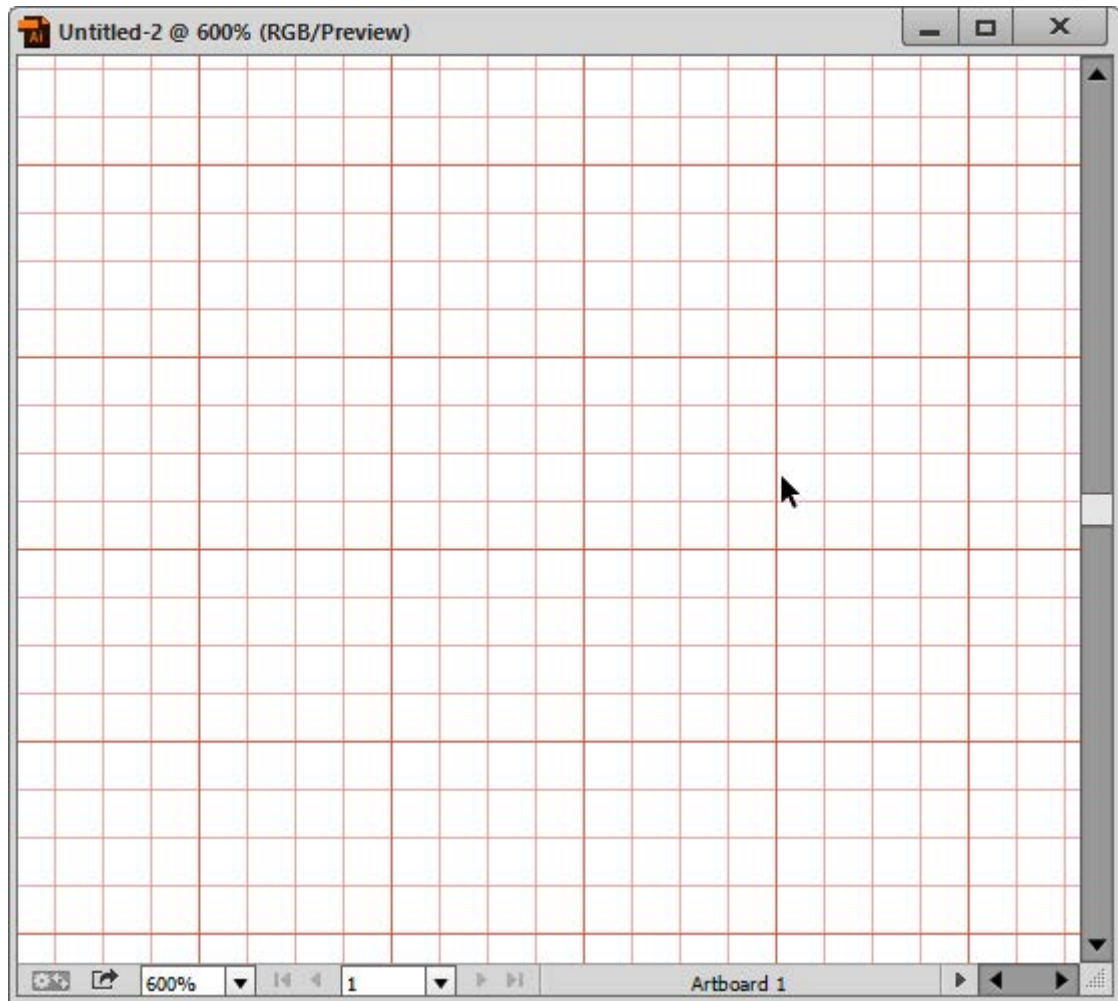


3 Option 2: Modifying the *.ai file.

The method described above overrides the default settings. These settings are only applied to the new *.ai files. But what if we need to modify the grid in one of our existing project file? This is also possible!

3.1 New *.ai file

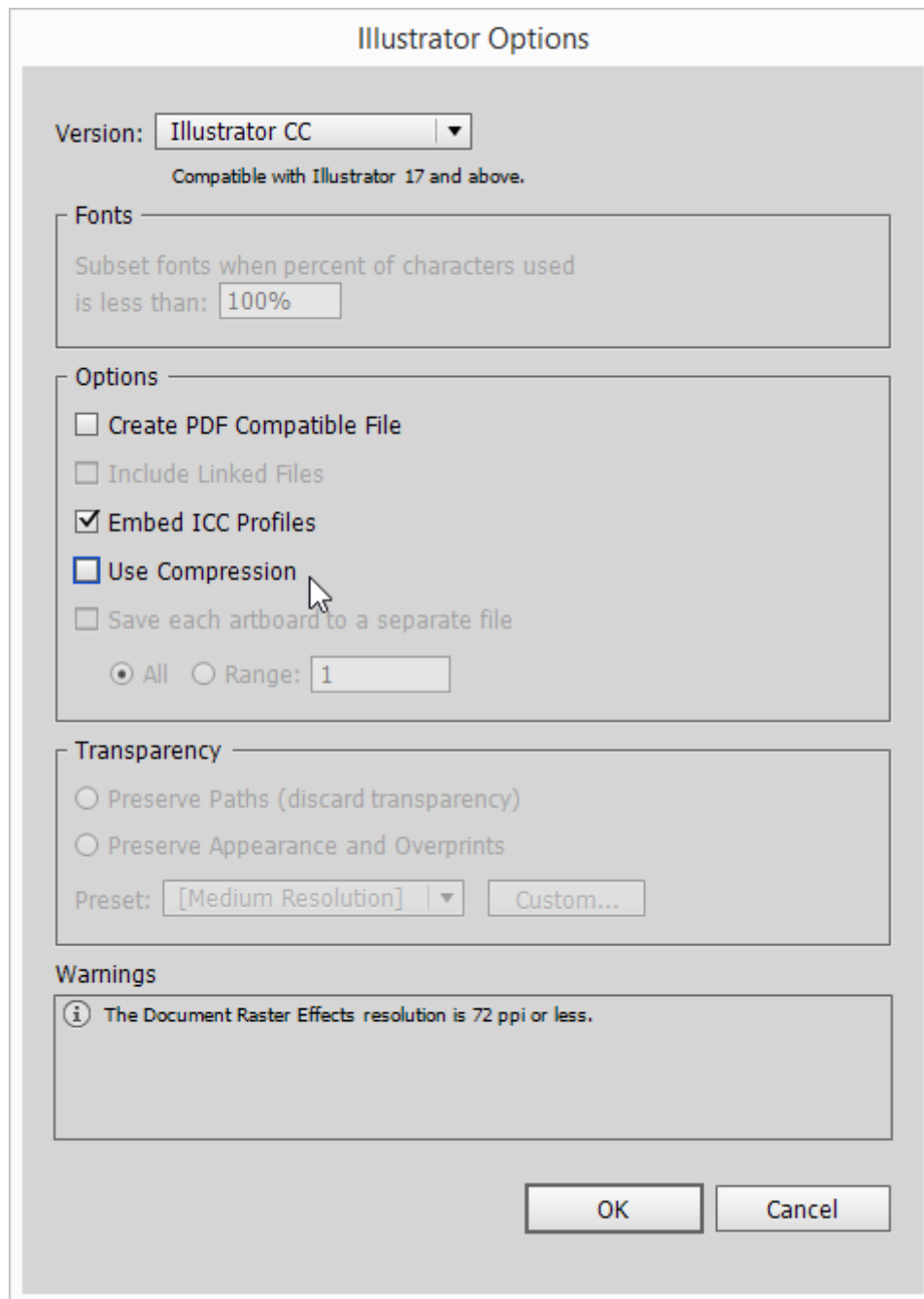
Create a new file. Go to *Edit (windows)/Illustrator (mac) > Preferences > Guides & Grid...* Set *Gridline every* to 16 (I use pixels as my primary unit, but this could be anything else), and *Subdivisions* to 4. Set *Color Attribute* to Red (RGB 255, 0, 0). Then go to *View > Show Grid*



3.2 Saving As Uncompressed File

Now, go to *File > Save As...*

Make sure that the *Use Compression* option is not checked!



3.3 Editing the *.ai file

Now close your file and locate it in your hard drive. Since the uncompressed *.ai is a plain text file you can edit it with any text editor, for example *Notepad* (Windows) or *TextEdit* (Mac OS X). Open the *.ai file in your text editor and find the **second occurrence** of the following line:

```
%AI7_GridSettings: (...)
```

In my case this is line number *10828* and looks like this:

```

<</Length 65536>>stream
%!PS-Adobe-3.0
%%Creator: Adobe Illustrator(R) 17.0
%%AI8_CreatorVersion: 18.0.0
%%For: (Pawel Kuc) ()
%%Title: (grid.ai)
%%CreationDate: 7/26/2014 2:03 PM
%%Canvassize: 16383
%%BoundingBox: 0 0 0 0
%%HiResBoundingBox: 0 0 0 0
%%DocumentProcessColors:
%AI5_FileFormat 13.0
%AI12_BuildNumber: 18
%AI3_ColorUsage: Color
%AI7_ImageSettings: 0
%%RGBProcessColor: 0 0 0 ([Registration])
%AI3_Cropmarks: 0 -980 700 0
%AI3_TemplateBox: 350.5 -490.5 350.5 -490.5
%AI3_TileBox: 56 -874 644 -106
%AI3_DocumentPreview: None
%AI5_ArtSize: 14400 14400
%AI5_RulerUnits: 6
%AI9_ColorModel: 1
%AI5_ArtFlags: 0 0 0 1 0 0 1 0 0
%AI5_TargetResolution: 800
%AI5_NumLayers: 1
%AI9_OpenToView: 166 -501 8 1829 1083 18 0 0 46 111 1 1 0 1 1
0 1 1 0 0
%AI5_OpenViewLayers: 7
%%PageOrigin:-50 -790
%AI7_GridSettings: 16 4 16 4 1 0 1 0 0 1 0.5 0.5
%AI9_Flatten: 1
%AI12_CMSettings: 00.MP
%%EndComments
%%BeginProlog
%%EndProlog
%%BeginSetup
%AI5_Begin_NonPrinting

```

The first two numbers stand for Horizontal Spacing and Ticks, then goes Vertical Spacing and Ticks, then Dark Color in RGB format (3 numbers) and finally the Light Color (last 3). We modify Vertical Spacing/Ticks and Light Color (as described in the previous example).

But be careful with that! The size (length in characters) of the file is fixed. And each record of that file has its fixed length. You cannot add or remove any character! We replace our original line:

```
%AI7_GridSettings: 16 4 16 4 1 0 1 0 0 1 0.5 0.5
```

with

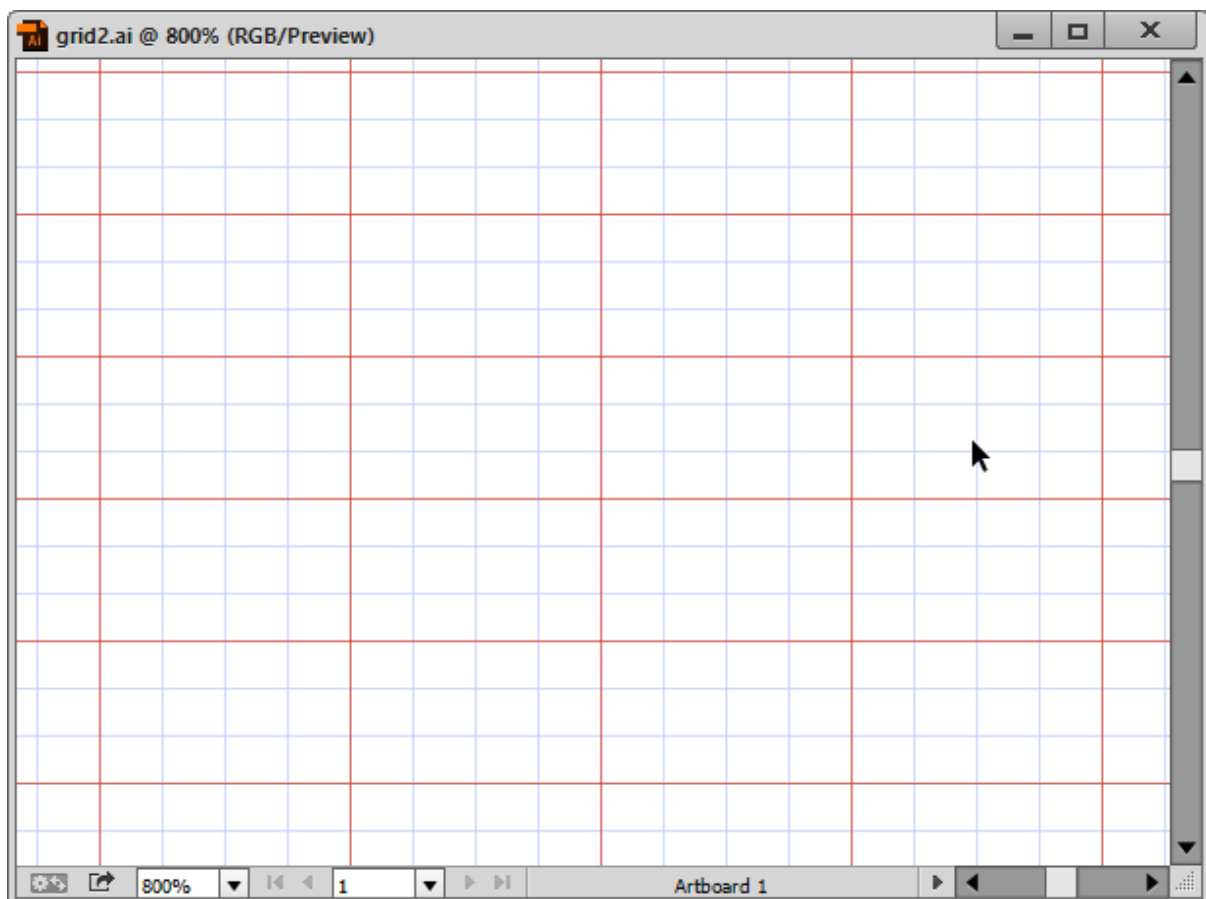
```
%AI7_GridSettings: 16 4 09 3 1 0 1 0 0 0.7 0.8 1
```

As you see the length (including the white spaces) of the new line equals the original one. That's it! Save and Close your file.

Note: Make sure the file is closed before you start Ai

3.4 Verifying your settings

Open your file in Adobe® Illustrator®, the result should be like this:



Note: Now you can set the *Use Compression* option back to *checked*. Just save your file once again: *File > Save As...*

■