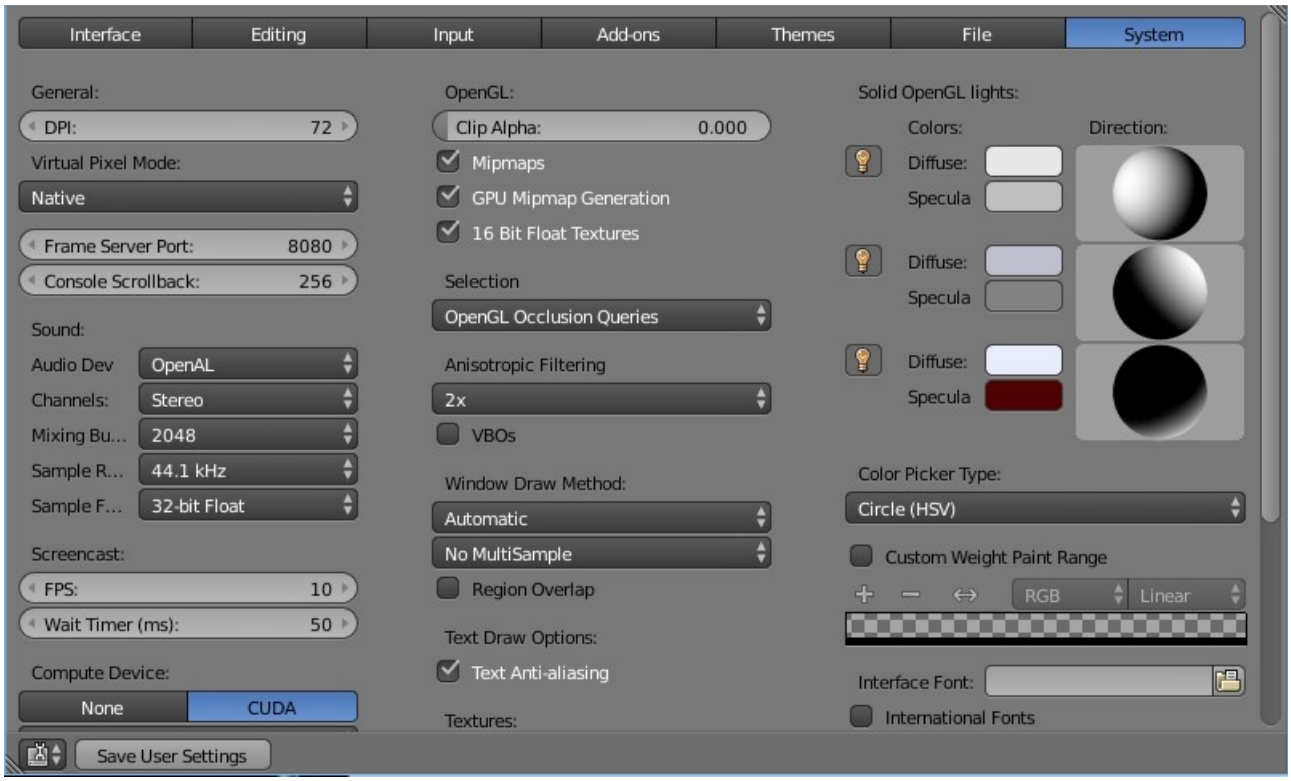
13.8 User Preferences - System Preferences

System Preferences

The *System* tab allows you to set resolution, scripting console preferences, sound, graphics cards, and internationalization.



General

DPI

Value of the screen resolution which controls the size of Blender's interface fonts and internal icons shown. Useful for taking screen shots for book printing and use of high resolution monitors. During

typical usage, you may prefer to use zoom which is a available in many parts of Blender interface.

Virtual Pixel Mode

Allows you to select global scaling. While the DPI only scales the interface, this will scale line width, vertex-size.

This is intended for hi-dpi monitors.

Note
This is auto-detected on OSX.

Frame Server Port
TCP/IP port used in conjunction with the IP Address of the machine for frameserver rendering. Used when working with distributed rendering. Avoid changing this port value unless it is conflicting with already existing service ports used by your Operating System and/or softwares. Always consult your operating system documentation and services or consult your system administrator before changing this value.

Console Scrollback
The number of lines, buffered in memory of the console window. Useful for debugging purposes and command line rendering.

Sound

Sound

Set the audio output device or no audio support:

None
No Audio support (no audio output, audio strips can be loaded normally)

SDL
Uses Simple Direct Media Layer API from libsdl.org to render sounds directly to the sound device output. Very useful for sequencer strips editing.

OpenAL

This API provides buffered sound rendering with 3D/spatial support.

Used for 3D source support by *Speaker Objects* and the *Game Engine*.

'Specific sound options' (With *SDL* or *OpenAL* enabled)

Channels

Set the audio channel count. Available options are: *Stereo* (Default) , *4 Channels* , *5.1 Surround* , *7.1 Surround*

Mixing Buffer

Set the number of samples used by the audio mixing buffer. Available options are:

512 , *1024* , *2048* (Default), *4096* , *8192*, *16384*, and *32768*

Sample Rate

Set the audio sample rate. Available options are: *44.1 Khz* (Default), *48 Khs* , *96 Khz* and *192Khz*

Sample Format

Set the audio sample format. Available options are: *32 bit float* (Default), *8 bit Unsigned* , *16 Bits Signed* , *24 Bits Signed* , *32 Bits Signed* , *32 Bits Float* and *64 Bits Float*

Screencast

TODO

Compute Device

The Options here will set the compute device used by the Cycles render engine.

None
When set to *None* or the only option is *None*: your CPU will be used as a computing device for Cycles Render Engine

CUDA
If the system has a compatible CUDA enabled graphics card and appropriate device drivers installed. When one or both of the options are available, the user will be able to choose whether to use CPU or other computing device for Cycles Rendering.

OpenCL
Note that this currently has limited support unsupported, see: *Cycles* Render engine page

OpenSubdiv Compute

The Options here will set the compute device used by OpenSubdiv for the *Subdivision Surface Modifier.*

None
Disables any OpenSubdiv compute devices, makes sure legacy subsurf code from Blender is used. Use this option when OpenSubdiv causes any bugs or regressions.

CPU
Single threaded CPU implementation. It is mainly useful in cases when GPU compute is possible and threaded CPU option causes artifacts (it is unlikely to happen, but still possible).

OpenMP
Multi-threaded CPU implementation. It is similar to threading model of old subsurf code. Use it for maximum performance in cases when GPU compute is not available.

GLSL Transform Feedback
Uses GPU to perform calculations, has minimal requirements to video card and driver.

GLSL Compute
Uses GPU to perform calculations, supposed to be more efficient than Transform Feedback but also has higher requirements to video card and driver.

Open GL

Clip Alpha
Clip alpha below this threshold in the 3D viewport. Minimum: **0.000** (No Clip) , Maximum: **1.000** ,

Default **0.000** (No Clip)

Mipmaps
Scale textures for 3D view using mipmap filtering. This increases display quality, but uses more memory.

GPU MipMap Generation
Generate MipMaps on the GPU. Offloads the CPU Mimpap generation to the GPU.

16 Bit Float Textures
Enables the use of 16 Bit per component Texture Images (Floating point Images).

Anisotropic Filtering
Set the level of anisotropic filtering. Available Options are: *Off" (No Filtering)* , 2x (Default) , *4x* , *8x* , *16x*

Window Draw Method

Window Draw Method

Specifies the Window Draw Method used to display Blender Window(s).

***Automatic* (Default)**
Automatically set based on graphics card and driver.

Triple Buffer
Use a third buffer for minimal redraws at the cost of more memory. If you have a capable GPU, this is the best and faster method of redraw.

Overlap
Redraw all overlapping regions. Minimal memory usage, but more redraws. Recommended for some graphics cards and drivers combinations.

Overlap Flip
Redraw all overlapping regions. Minimal memory usage, but more redraws (for graphics drivers that do flipping). Recommended for some graphic cards and drivers combinations.

Full
Do a full redraw each time. Only use for reference, or when all else fails. Useful for certain cards with bad to no OpenGL acceleration at all.

Multi-Sampling

This enables FSAA for smooth drawing, at the expense of some performance.

Note
This is known to cause selection issues on some configurations, see: Invalid Selection.

Region Overlap

This checkbox will enable Blender to draw regions overlapping the 3D Window. It means that the Object Tools and Transform Properties Tab, which are opened by using the shortcuts `T` and `N` will be drawn overlapping the 3D View Window.

If you have a capable graphics card and drivers with *Triple Buffer* support, clicking the checkbox will enable the overlapping regions to be drawn using the *Triple Buffer* method, which will also enable them to be drawn using Alpha, showing the 3D View contents trough the Object Tools and Transform

Properties Tab.

Text Draw Options

Text Draw Options
Enable interface text anti-aliasing. When disabled, texts are drawn using text straight render (Filling only absolute Pixels). Default: Enabled.

Textures

Limit Size
Limit the maximum resolution for pictures used in textured display to save memory. The limit options are specified in a square of pixels, (e.g.: the option 256 means a texture of 256x256 pixels) This is useful for game engineers, whereas the texture limit matches paging blocks of the textures in the target graphic card memory. Available Options are: *Off* (No limit - Default) , *128*, *256*, *512*, *1024*, *2048*, *4096*, *8192*.

Time Out
Time since last access of a GL texture in seconds, after which it is freed. Set to 0 to keep textures allocated. Minimum: **0** , Maximum: **3600** , Default: **120**

Collection Rate
Number of seconds between each run of the GL texture garbage collector. Minimum: **0** , Maximum: **3600** , Default: **120**

Sequencer/Clip Editor

Memory Cache Limit
Upper limit of the sequencer's memory cache (megabytes). For optimum clip editor and sequencer performance, high values are recommended. Minimum: **0** (No cache) , Maximum: **1024** (1 Gigabyte), Default: **128**

Solid OpenGL lights

Solid OpenGL Lights are used to light the 3D Window, mostly during *Solid view*. Lighting is constant and position "world" based. There are three virtual light sources, also called OpenGL auxiliary lamps, used to illuminate 3D View scenes, which will not display in renders.

The Lamp Icons allows the user to enable or disable OpenGL Lamps. At least one of the three auxiliary OpenGL Lamps must remain enabled for the 3D View. The lamps are equal, their difference is their positioning and colors. You can control the direction of the lamps, as well as their diffuse and specular colors. Available Options are:

Direction
Clicking with LMB in the sphere and dragging the mouse cursor let's the user change the direction of the lamp by rotating the sphere. The direction of the lamp will be the same as shown at the sphere surface.

Diffuse
This is the constant color of the lamp. Clicking on the color widget, opens the color picker mini window and allows the user to change colors using the color picker.

Specular
This is the highlight color of the lamp Clicking on the color widget, opens the color picker mini window and allows the user to change colors using the color picker.

Color Picker Type

Choose which type of color dialog you prefer - it will show when clicking `LMB` on any color field.

See the different color picker types at the *Extended Controls* page.

Custom Weight Paint Range

Mesh skin weighting is used to control how much a bone deforms the mesh of a character. To visualize and paint these weights, Blender uses a color ramp (from blue to green, and from yellow to red). Enabling the checkbox will enable an alternate map using a ramp starting with an empty range. Now you can create your custom map using the common color ramp options. For detailed information about how to use color ramps, see: to the *Extended Controls* page.

Internationalization

Blender supports a wide range of languages, enabling this check box will enable Blender to support International Fonts. International fonts can be loaded for the User Interface and used instead of Blender default bundled font.

This will also enable options for translating the User Interface through a list of languages and Tips for Blender tools which appears whenever the user hovers a mouse over Blender tools.

Blender supports I18N for internationalization. For more Information on how to load International fonts, see: *Editing Texts* page.