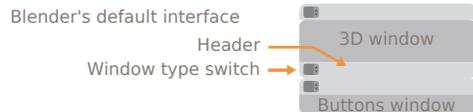


## 1. Blender's Interface

Blender's interface consists of an arbitrary number of workspaces with multiple window each. Each window displays a part of your scene's data. The type of data that a window displays is indicated in the header.



You can change the type of a window at any time by clicking the header.

To add or delete windows, right-click on edge of a window.

Resize windows by grabbing a window edge.

You can access the preferences by pulling down the top header or by opening an User Preferences window.

To set (and save) the current layout as the default, press Ctrl-U. It will override previous default layout.

Tools and actions relative to a window are always available in the window's header.

Hotkeys and actions are context sensitive meaning that they work based on the location of mouse cursor.

## 2. Navigating in the 3D View

You can rotate the 3D View with the Middle Mouse Button (MMB).

Panning is accomplished with Shift-MMB. To zoom, use the mouse wheel or Ctrl-MMB. If you don't have an MMB, you can use Alt-LMB instead

The numpad allows to navigate in the 3D View as well:  
 7, 1, 3 set the view to Top, Front, Right; use Ctrl-7, Ctrl-1, Ctrl-3 to view Bottom, Back, Left  
 8, 2 rotate Up, Down; Shift-8, Shift-2 pan  
 4, 6 rotate Left, Right; Shift-4, Shift-6 pan  
 5 flips between Orthogonal and Perspective view

All those controls and more are also available in the view menu located in the 3D View header.

## 3. The Buttons Window

You can access different button categories with the icons along the Button window's header. Each category regroups buttons that share the same use. Each button category also has subcategories.

You can scroll panels with Shift-Mousewheel, zoom panels with Ctrl-Mousewheel, organise panels with drag & drop and align panels vertically with RMB.

## 4. Managing 3D Objects

The default scene is composed of a cube, a lamp and a camera. You can select any of these objects with RMB, select multiple objects with Shift-RMB and select/deselect all with A.

To move these objects, click with LMB on the 3D Widget. You can change the widget mode to Rotate/Scale/Grab by activating the corresponding icons in the 3D View header. Note that you can do the same thing with the bolded hotkeys.

Each object has a little dot that represents its center. You can change the center position in Buttons Window/Editing/Mesh while in the Object Mode.

The red and white cross is the 3D cursor. Its position can be set with a simple LMB click in the viewport. This cursor is used as a reference point.

You can add new objects by pressing Space and then go to the Add menu.

Objects can be duplicated with Shift-D and link-duplicated with Alt-D.



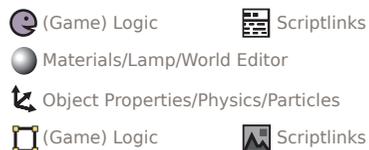
## 4. Managing 3D Objects

In Blender, editing the object position, and editing the object shape and properties are two different and separated tasks. For each type of modification, there is an associated "Mode". You are always in a certain mode. The current mode is indicated in the header.



The default is Object Mode. It allows to select different objects and to manipulate them.

The Edit Mode allows you to model the selected object. You can modify only one object at a time. If you want to select or modify other objects, you must escape Edit Mode and go back to Object mode. You cycle between Object and Edit modes with Tab.



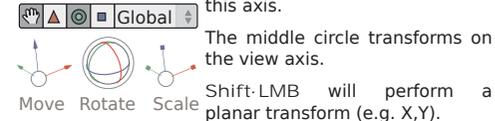
## 6. Mesh Modelling

To model a mesh object, you need to enter Edit Mode. In Edit Mode, you can select three kind of items: Vertices, Edges and Faces. To switch between different selection modes, use the buttons placed in the 3D View header or with Ctrl-Tab.

Once you have selected different elements, you can:  
 Grab, Rotate, Scale;  
 Extrude any selection; Knife any selection  
 Delete the selection with X or Delete;  
 Apply various tools from the W and Ctrl-E menus;  
 Subdivide loops with Ctrl-R;  
 Separate selection; Duplicate selections with Shift-D.

Note that if you duplicate your object in the Edit Mode, the result will still count as one object, even if it looks like two duplicated objects. In the Edit Mode you can modify the object geometry as you like and it will still remain a unique object. If you want to duplicate your object and have two different objects as a result, do so in the Object Mode. (See §4)

LMB on the colored parts of a widget will transform on this axis.



MMB during transform also allows you to constraint transform without using widgets.

## 7. Lamps and Materials

To tweak lamps settings, select a lamp and go to the Materials buttons. You can tweak all the lamp settings in the Lamp subsection. There you can also change between light types.

To change the color and look of an object, select it and go to the Material buttons. Check the official documentation for details.

## 8. Layers

Layers are used to easily show, hide and group different objects. Each object belongs to a layer or layers. To change the layer of an object, select it and press Move.

You can then show different layers with the layers buttons available in the 3D Window header. To show multiple layers at the same time, use Shift-LMB on these layers.



## 9. Rendering

To render the view of a camera, you must first check that the desired camera is activated. To activate a camera, select it and press Ctrl-Numpad 0.

To change the camera settings, select it and go to the Edit buttons.

If you want to change the background of your scene, go to the Material buttons and then to the World subsection.

To change the render settings, go to the Render buttons. You can then select the size of your render, the anti-aliasing settings (OSA) and the output format.

To render your scene, press Render or F12.

If your scene renders as black, check that there is light in your scene and all needed layers are activated.

Save rendered image with F3. Remember to add the file extension to the filename.

## 10. Final Words

The QuickStart covers only the most basic features. To find out more information about modifier stack, fluid simulator, particle engine, animation features, video sequencer, node editor, game engine etc. we very strongly recommend that you read the complete documentation. You can find it on:

<http://wiki.blender.org>.

As you may have noticed, Blender is mostly hotkey oriented. Once you get the hang of these, you will find your experience on Blender much more enjoyable and productive.

If you have difficulties to find the hotkey of a specific function, you can check if it is listed in the Space menu or in the window headers menus. They are also in the Help menu.

Finally, you can find a Hotkey Map available in the Blender wiki.

If you have further questions, ask them on the forum at <http://www.blenderartists.org>, or on the #blenderchat channel at the freenode IRC network.

Check <http://www.blendernation.com> for daily Blender news and <http://www.blenderart.org> to find a free Blender magazine.

Good luck and Blend on!

-The Blender Team