BLENDER SHORTCUTS

Introduction

Note that later versions of these notes will be issued as they are updated. Do not try to learn all these – they will not be part of any exam. This is just a reference for your convenience.

Blender was developed as an in-house production tool and was designed for speed. Almost all major operations have a shortcut key combination and you can define your own additions in User Preferences or reconfigure the defaults. Changing too many defaults is not recommended as you will have to go through the same procedure every time you install Blender on a new computer or work on another machine.

These are some navigation shortcuts you’ll find useful when learning Blender. Remember the same shortcut will do different things in different windows and modes. No-one can memorize them all, but using the most common will greatly speed your work. Blender is set up, however, so that you do not need to use any shortcuts: much is alternately accessible through the drop-up and drop-down menus in the 3D and Info windows. The Spacebar search popup will find everything.

This list is the PC commands; Mac users should substitute Command for Control.

<table>
<thead>
<tr>
<th>Shortcut</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shift-A in Object</td>
<td>Add an item to the scene</td>
</tr>
<tr>
<td>Shift-A in Edit</td>
<td>Add a mesh (this will be one item in Object mode)</td>
</tr>
<tr>
<td>Shift-Spacebar in all</td>
<td>Toggle the current window between full and partial screen</td>
</tr>
<tr>
<td>Control-Up/Down Arrow</td>
<td>Toggle the current window between full and partial screen</td>
</tr>
<tr>
<td>Spacebar in all</td>
<td>Searchable list of commands</td>
</tr>
<tr>
<td>Control-Z in all</td>
<td>Undo last operation</td>
</tr>
<tr>
<td>Shift-Control-Z in all</td>
<td>Redo last undone operation</td>
</tr>
<tr>
<td>A in all</td>
<td>toggle select All or select None</td>
</tr>
<tr>
<td>B in all</td>
<td>Box crossing select</td>
</tr>
<tr>
<td>C in all</td>
<td>Circle select; hold down middle mouse button to Circle deselect. Use Escape or RMB to end circle select mode</td>
</tr>
<tr>
<td>Control-LMB in all</td>
<td>Lasso select</td>
</tr>
<tr>
<td>Shift-RMB in all</td>
<td>Toggle add to/remove from selection; toggle Active/Selected item</td>
</tr>
<tr>
<td>Control-I in all</td>
<td>Invert selection</td>
</tr>
<tr>
<td>Z in all</td>
<td>Toggle wireframe/solid viewing mode</td>
</tr>
<tr>
<td>T in all</td>
<td>Toggle left fly-in (in 3D window)</td>
</tr>
<tr>
<td>N in all</td>
<td>Toggle right fly-in (in 3D window)</td>
</tr>
<tr>
<td>Tab in all</td>
<td>Toggle Object/Edit mode for selected object</td>
</tr>
</tbody>
</table>
Keypad-1 in all          Front View (Control-Keypad-1 for Back)
Keypad-3 in all          Right View (Control-Keypad-3 for Left)
Keypad-7 in all          Top View (Control-Keypad-7 for Bottom)
Keypad-5 in all          Toggle Perspective/Orthogonal view

Home key in all          View all
Keypad-period in all     Zoom to selected
Keypad-slash in all      Toggle isolate (local) view

Control-RightArrow/      Move through screen layout options
Control-LeftArrow         in all

Hold down D in 3D Window with LMB  Grease pencil
Hold down D in 3D Window with RMB  Erase grease pencil

G in Object and Edit     Move (or Grab)
R in Object and Edit     Rotate
S in Object and Edit     Scale

A numeric definition can be added to all the above and below shortcuts. All transforms can also be con-
strained to a particular axis or plane:

G – X in Object and Edit moves the selected object(s) along the world X axis
R – Y in Object and Edit rotates them around the world Y axis
S – Z in Object and Edit scales them just along the world Z axis

G – X – X in Object and Edit moves the selected object along its local X axis
R – Y – Y in Object and Edit rotates it around its local Y axis
S – Z – Z in Object and Edit scales it just along its local Z axis

G – Shift-X in Object and Edit moves the selection in the YZ plane, keeps original X value
R – Shift-Y in Object and Edit tumbles the selection around the X and Y axes
S – Shift-Z in Object and Edit scales the selection on X and Y, keeps the Z dimension constant.

The combination Alt-S scales the selected object or elements of an object along their normals.
Hold Control while moving a slider to move it in 0.1 increments, or while rotating to constrain to incre-
ments.

Control-L in Edit         select all vertices connected to the selected one(s)

The pivot point
Rotation and scaling take place by default around the pivot point, which is the orange dot usually placed
at the center of the object. You can change this in Edit mode by selecting All with the A key (whether
you’re using Vertices, Edges, or Faces doesn’t matter in this case) and moving the geometry around.
The pivot point will stay fixed.
Clicking the Pivot Point selection button at the foot of the 3D window brings up this list. Blender
defaults to Median Point, so that if several items are selected Blender will rotate or scale them around
their geometric center. But this is one of five options. You can also use the Active Element’s pivot point
It’s useful to switch fast between using a Bounding Box center as the pivot point, and the 3D cursor. Use the comma key for the first, and the period key for the second.

You can also use Object – Transform – Origin to Geometry to center the object’s pivot point to the geometry in object mode (I don’t believe there is a key shortcut for that).

Use Shift-S to bring up a list of options for moving the 3D cursor to the center of the world or the center of the selected object. Use Shift-C to return the 3D cursor to the center of the world and recenter the view. To repeat:

<table>
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<th>Key Sequence</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Period in all</td>
<td>Pivot around the 3D cursor</td>
</tr>
<tr>
<td>Comma in all</td>
<td>Pivot around averaged center of selected object(s)</td>
</tr>
<tr>
<td>Shift-S in all</td>
<td>Options for snapping selection and 3D cursor</td>
</tr>
<tr>
<td>Shift-C in all</td>
<td>Reset 3D cursor to center and zoom to extents</td>
</tr>
</tbody>
</table>

030 Configuring Blender

Control-U | Save startup file |

035 Building a Model with Extrusion modeling

Control-R in Edit | Create new edgeloop (scroll mouse wheel to add divisions) |
Control-Tab in Edit | Opens Vertex Select, Edge Select, and Face Select menu |
Shift-G in Edit | Select similar |
O in Object and Edit | Toggle Proportional Editing mode |
Alt-O in Object and Edit | Turn off Proportional Editing |
Control-V in Edit | Open the vertex menu |
Control-E in Edit | Open the edge menu |
Control-F in Edit | Open the face menu |
W in Edit | Open the Specials menu |
Alt-RMB in Edit | Loop select: vertices, edges, or faces |
G – G in Edit | Slide loop on edge |

X or Delete key in Object and Edit | Delete and dissolve menu |

The delete and dissolve menu

This is a powerful set of options that removes geometry in a number of ways; deleting the edges around a face always removes the face, but deleting the face does not have to remove the edges. Similarly deleting the vertices that define an edge will also delete the edge, but deleting the edge only will not necessarily remove the vertices. In other words, deleting lower geometry elements will also remove the higher elements that are defined by that geometry, but deleting the higher elements can retain the lower.
Practice makes perfect on this one. Dissolving geometry simply means combining neighboring elements into one (if possible). This is particularly useful for simplifying coplanar faces in a mesh.

040 Modifiers: Subdivision

Control-1 in all  Enable Subdivision Surface modifier with 1 degree of subdivision
Control-2 in all  Enable Subdivision Surface with 2 degrees of subdivision
Control-3 in all  Enable Subdivision Surface with 3 degrees of subdivision

045 Materials 1

F12 (PC only)  Render image
Control-F12 (PC only)  Render animation
F11  Show last render

055 Cameras 1

Control-T in Object  Make Track (cam then target; choose Track to Constraint option)
Keypad-0 in all  Active camera view (the active camera has a filled triangle)
Control-Keypad-0 in Object  Make selected object the active camera
Control-Alt-Keypad-0 in Object  Align active camera to view

060 Introduction to Animation

I in Object  Insert key frame
Alt-I in Object  Remove key frame
S in Timeline  Create start of animation
E in Timeline  Create end of animation
RightArrow in all  Go to next frame
LeftArrow in all  Go to previous frame
Shift-RightArrow in all  Go to last frame
Shift-LeftArrow in all  Go to first frame
UpArrow in all  Jump to next keyframe
DownArrow in all  Jump to previous keyframe
Alt-MouseWheel in all  Scroll through frames
Alt-A in all  Play/pause animation
Esc in all  Stop animation at current frame
Alt-M in Edit  Merge vertices menu
Control-A in Edit  Scale vertex influence in stick figure

Control-A in Object  Apply location, rotation, or scale
Alt-G in Object  Return to original location
Alt-R in Object  Return to original rotation
Alt-S in Object  Return to original scale
085 UV Mapping and the UV/Image Editor

U in Edit  Unwrap UVs menu

135 Pipes and Text

Alt-C in Object  Convert to Mesh from Curve or Curve from Mesh
Alt-C in Edit  Toggle Cyclic (closed) curve
Alt-S in Edit  Scale vertex influence

165 Introduction to Rigging

Control-Alt-S in Edit or Pose  Scale a B-Bone on XY
Control-Alt-S – X in Edit or Pose  Scale a B-Bone on X
Control-Alt-S – Y in Edit or Pose  Scale a B-Bone on Y

170 The Walk cycle

Control-C in Pose  Copy a pose
Control-V in Pose  Paste a pose
Shift-Control-V in Pose  Paste X-flipped pose
Shift-L in Pose  Add pose to pose library
Control-L in Pose  Browse pose library

180 Making a Movie

Shift-A in VSE  Add item
N in VSE  Toggle Edit Strip menu on right fly-in
T in Graph Editor  Keyframe Interpolation menu

The timeline has a number of useful shortcuts that are of particular value in animation.

By frames:
Alt-A  toggle play/pause animation; this will loop
Right Arrow/Left Arrow  advance and reverse frame by frame
Shift+Right/Left Arrow  go to start/end of animation
Shift+Up/Down Arrow  advance and reverse frame by increments of ten frames

By keyframes:
Up Arrow/Down Arrow  advance to next/previous keyframe
Ctrl+Shift+Up/Down Arrow  go to start/end of animation

General:
E  set end of animation at current frame
S  set start of animation at current frame
M  set marker at current frame
Ctrl+M  rename selected marker (use G to move and X to delete as usual)
Scroll MMB  expand and contract timeline view around cursor position
Hold down MMB  slide timeline view side to side

P and drawing box with LMB  set preview selection
Alt+P  remove preview selection

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