

Blender

# Blender

- Open source & free
- Started in 1995
- 3D suite of tools: modeling, sculpting, texturing, rigging, animation, physics simulations, rendering, compositing, game engine, python scripting... etc.

# Learning Resources

- [Blender Manual](#) – essential for reference
- [Blender Guru](#) – best place to start
- [Lynda](#)
- [CG Cookie](#) (Paid)
- YouTube Channels
  - [Sebastian Lague](#) (Blender character creation tutorials)
  - [Tutor4u](#)
  - [Darrin Lile](#)
  - [BornCG](#)
  - [BlenderDiplom](#)
  - [Sardi Pax](#)
- Google

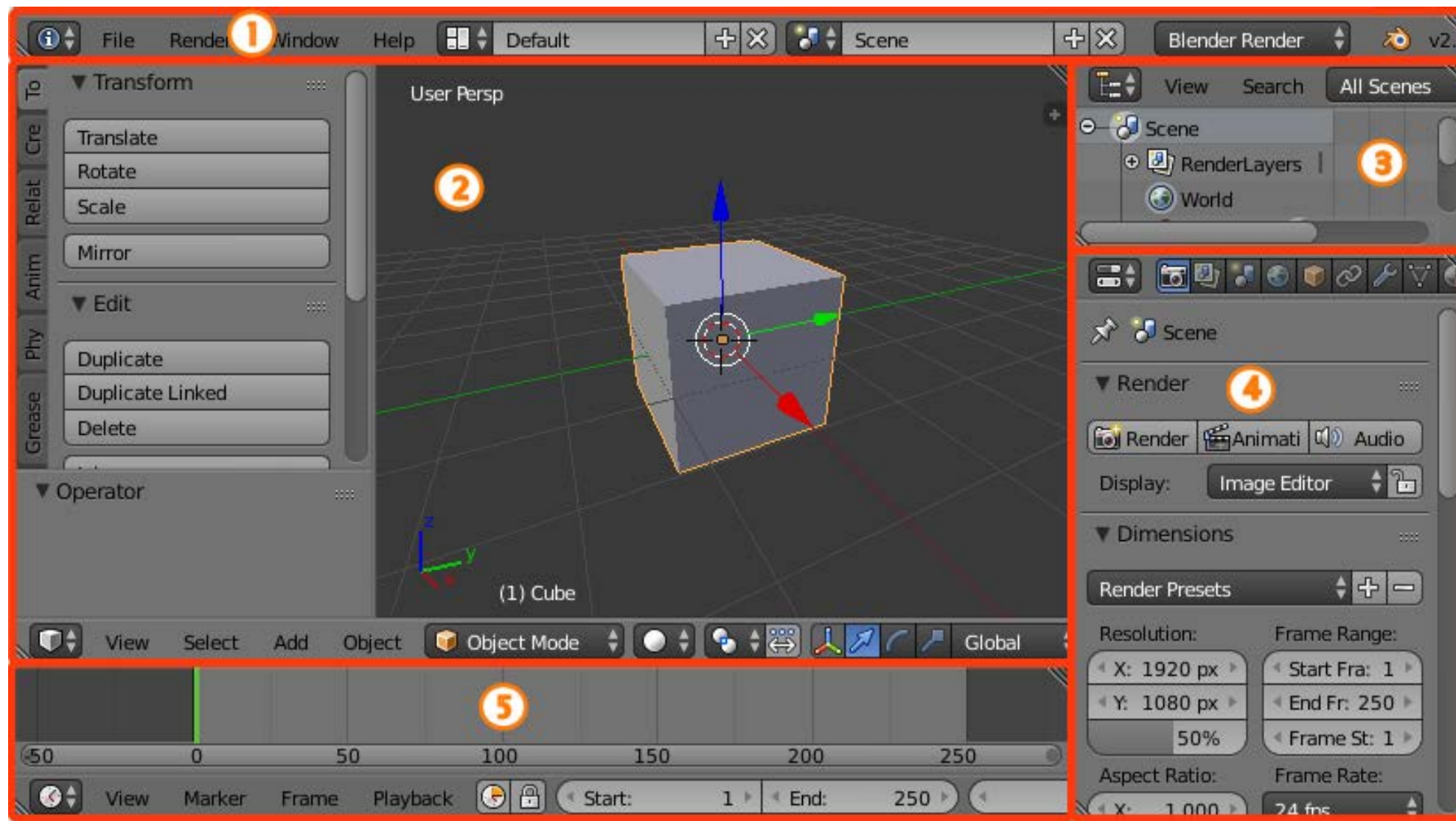


Info

Tool Shelf

Operator

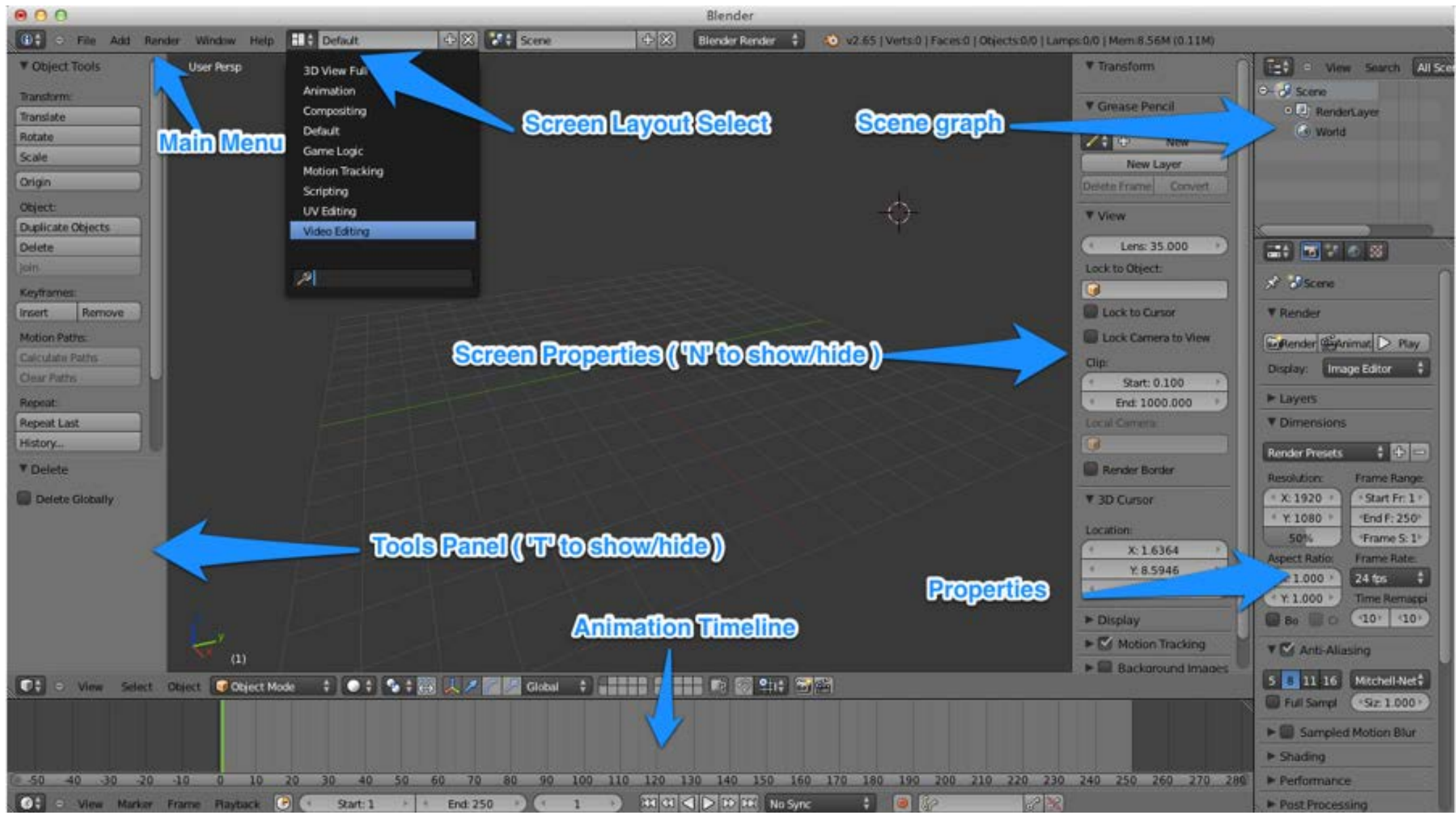
Timeline



Outliner

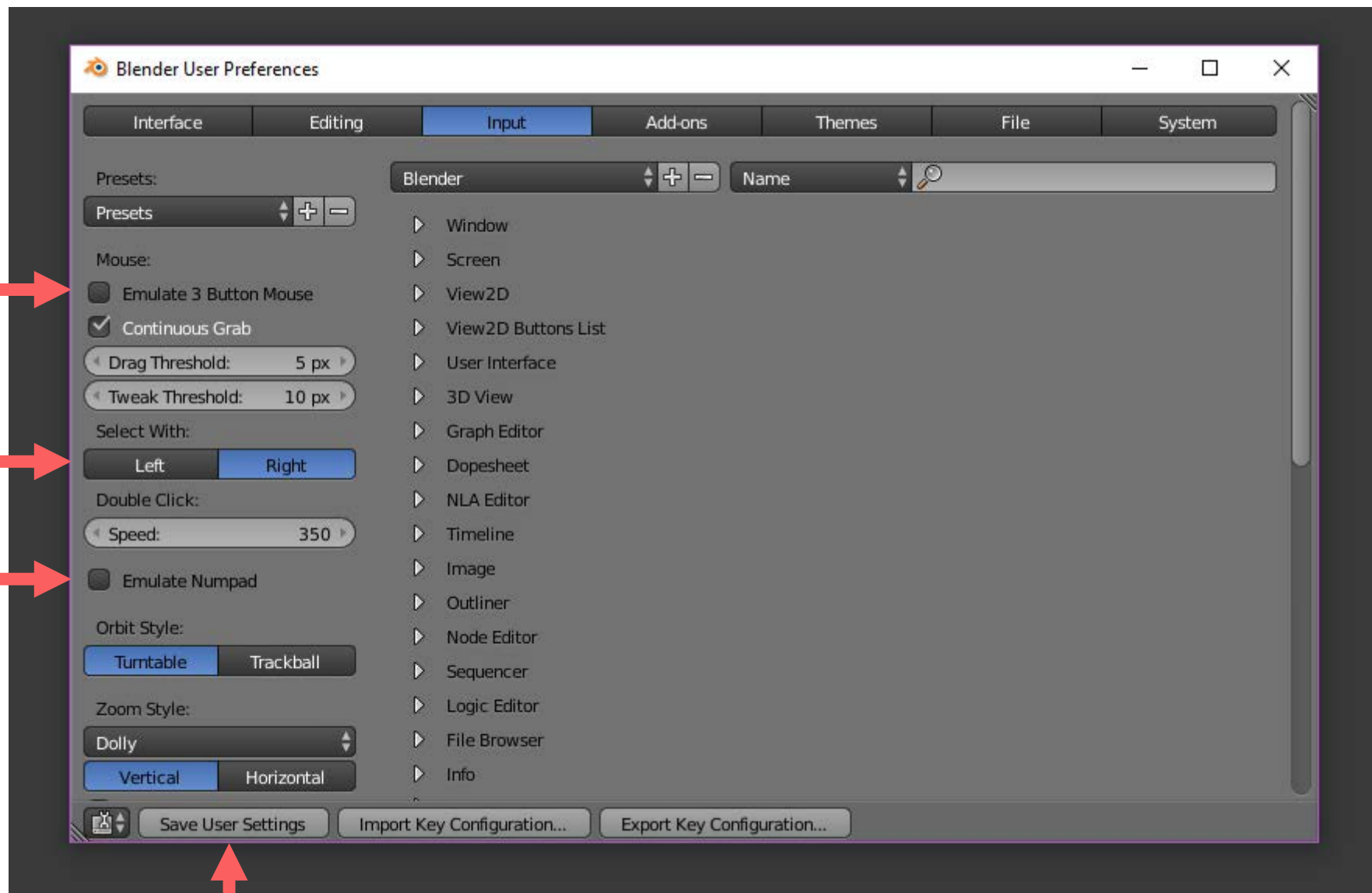
Properties

[https://www.blender.org/manual/interface/window\\_system/introduction.html](https://www.blender.org/manual/interface/window_system/introduction.html)



<http://www.gamefromscratch.com/post/2013/01/18/Programmer-Art-Blender-For-Programmers-Part-1-The-Introduction.aspx>

(Optional)





## Basic Navigation

Orbit	Middle Click
Pan	Shift + Middle Click
Zoom	Scroll
Top View	Numpad 7
Front View	Numpad 1
Side View	Numpad 3
Camera View	Numpad 0
Go to Selected Object	Numpad .
Perspective/Orthographic	Numpad 5
Zoom to Show All Objects	Home
Fly Mode	Shift + F
Toolbar	T
Object Properties	N
Reset 3D cursor	Shift + C

## Common

Add Object	Shift + A
Search	Space
Move	G
Scale	S
Rotate	R
Trackball Rotate	R, R
Move Origin Point	Ctrl + Shift + Alt + C
Properties Bar	P
Toolbar	T
Option Menu	W