

## Website Format

As I start to write these tutorials (August 2015) I am using **Blender 2.75a**. That may well change as new versions of Blender tend to come out two or three times a year (October 2015 release of Blender 2.76).

I have drawn knowledge from my experience and from several sources of information I have read or viewed but will try and follow closely that of the **Blender 2.6 Reference Manual** so the format will be most consistent with that source but geared to using Blender to make Trainz assets.

A rather **narrow page format** has been used, as I believe shorter line length is easier to read. The narrow page also better fits tablets, such as the iPad.

I have used a **Breadcrumb Trail** at the top of the page so you can more easily keep track of your location within the website.

You can navigate to other locations using the Table of Contents. The **track down the left side of the page** is a **button** linking back to the Table of Contents. Accessing the table of contents via this button will open a new window for the table of contents so you can look up in formation (e.g., in the In-Depth or Tools section of the website) without losing your current location.

I started to learn Blender using James Chronister's Blender Basics, Classroom Tutorial Book

<http://www.cdschools.org/Page/455>

because it has a **hands-on project** that builds as you go along from chapter to chapter, a format I have tried to follow here. It is also in .pdf format. Likewise, I have provided **.pdf formatted files** so you can save a copy to your hard drive and easily access it and make notes etc.

Many of the **figures** in my website can be **enlarged** for better viewing. They will open in a new window so you don't lose your place, and if you set your browser to fill the screen the figures should also fill the screen, even if the website page does not. (Enlarging the figures is not possible with the .pdf files so, you may want to use the .pdfs in combination with the website page so you can view the figures enlarged.)

I have used **bold formatting for emphasis** (as evident on this page) and to highlight keyboard shortcuts.

Modeling in Blender is facilitated if you use your **right hand on the mouse** and your **left hand to enter keyboard shortcuts**. Most of Blender's commands can be found in menus or panels but it is usually much easier to use the built-in keyboard shortcuts. I will emphasize using the keyboard shortcuts in these tutorials, but you may want to keep in

mind that Blender's tools and controls can also be accessed from the menus. As you become familiar with Blender you can also add your own keyboard shortcuts to facilitate modeling.

Note: Blender's keyboard shortcuts are context sensitive. How can that be you ask? It is because they depend on the position of the mouse within Blender's interface. This is something to remember as it can be a source of frustration. You type in a keyboard shortcut and nothing happens or not what you intended. It is because the mouse cursor is not hovering over the right part of the interface. More about this later.

The tutorials are intended to build on each other so if you are new to creating Trainz assets you should probably **do the tutorials in order**.

I have provided **in-depth coverage** of aspects of Blender that are essential to making Trainz assets. I have also covered the tools essential to a section of **Tools**. You can refer to these at any time but when the tool is used, at least for the first time, in a tutorial I'll direct you to the appropriate entry for focused instruction on the tool's function and use.

## Conventions Used

**LMB** = Left Mouse Button

**RMB** = Right Mouse Button

**MMB** = Middle Mouse Button

Note: I prefer to use Blender's "Emulate a 3 Button Mouse" which shifts the middle mouse button function to the left mouse button (LMB) in combination with the modifier keys (e.g., ALT/OPT + LMB to rotate and SHIFT + ALT/OPT + LMB to pan).

**Wheel** = Scrolling the mouse wheel  
(with "Emulate a 3 Button Mouse" invoked the scroll wheel is just used to zoom).

**SHIFT, CTRL, ALT/OPT** and **CMD** refer to the keyboard modifier keys.

**G-KEY** = Keyboard shortcut "g". Don't use the Shift key for keyboard shortcuts unless specified (i.e. **SHIFT + G-KEY** ).

**NUMPAD-0** to **NUMPAD-9**, **NUMPAD-PLUS** and **NUMPAD-MINUS** refer to the numeric keypad.

Finally, remember that Blender is only a set of tools. It can only be mastered by hands-on practice. I encourage you to do the exercises and tutorials as you go. Remember, you can

close a Blender file without saving and when you open Blender again you have a fresh default scene to start experimenting with. Alternatively, you can save you file (**SHIFT + CMD + S-KEY**) by naming it (name.blend) and saving it and then you can reopen it later and carry on from where you left off.