

## **Introducing Simmetry3d Cameras**

This tutorial introduces you to the different camera modes in Simmetry3d.

### **Concepts**

In this tutorial you will learn:

- what cameras are
- how to manipulate the active viewport view using the cameras

### **Prerequisites**

- Introduction to Simmetry 3d




## Introducing Simmetry3d Cameras

When building a scene in Simmetry3d, you will need to be able to view your project from different directions and angles. Each Viewport of a scene is said to be viewed through a **camera**. Changing the position or direction of this camera changes the view from the camera.

It is important to understand here that the terrain is not moving but instead it your view point that is altering.

Simmetry3d provides several different ways to move the current camera. i.e. the camera in the current *Viewport*. These are referred to as the **camera tools**. Each camera tool provides a different way of controlling the movement of the camera.


The different camera tools are as follows:

- Fixed Rotate 
- Free Look 
- Walk 


All the camera tools are designed to respond in similar ways to the user input, so although the movement of the camera may be different, as you familiarise yourself with one camera tool, you should become more familiar with the operations of the other tools.


### Walk Tool

The walk tool gives the user a “first person” view of the terrain. It sets the camera to be at head height above the terrain and lets the user simulate walking across the terrain.

To activate this tool, press on the walk tool button  , or select Fixed Rotate from the View3d menu


### EXERCISE

- Set Simmetry3d to one Viewport by pressing Single Camera View 
- Load “cameras.s3d”


- Start the Walk tool 
- Notice the parameters that have appeared in the tool options bar
- Press the up arrow to move forward across the terrain
- Press the down arrow to move backwards across the terrain
- Press the left arrow to move sideways to your left
- Press the right arrow to move sideways to your right
- To look around, press and hold the left mouse button, then move the mouse to make the camera change the angle of view. When you let go of the mouse button the angle will stay in that position.
- On the Tool Option Bar, set the Person Height to 0.8 – this allows you to see more at a child height if you so wish.

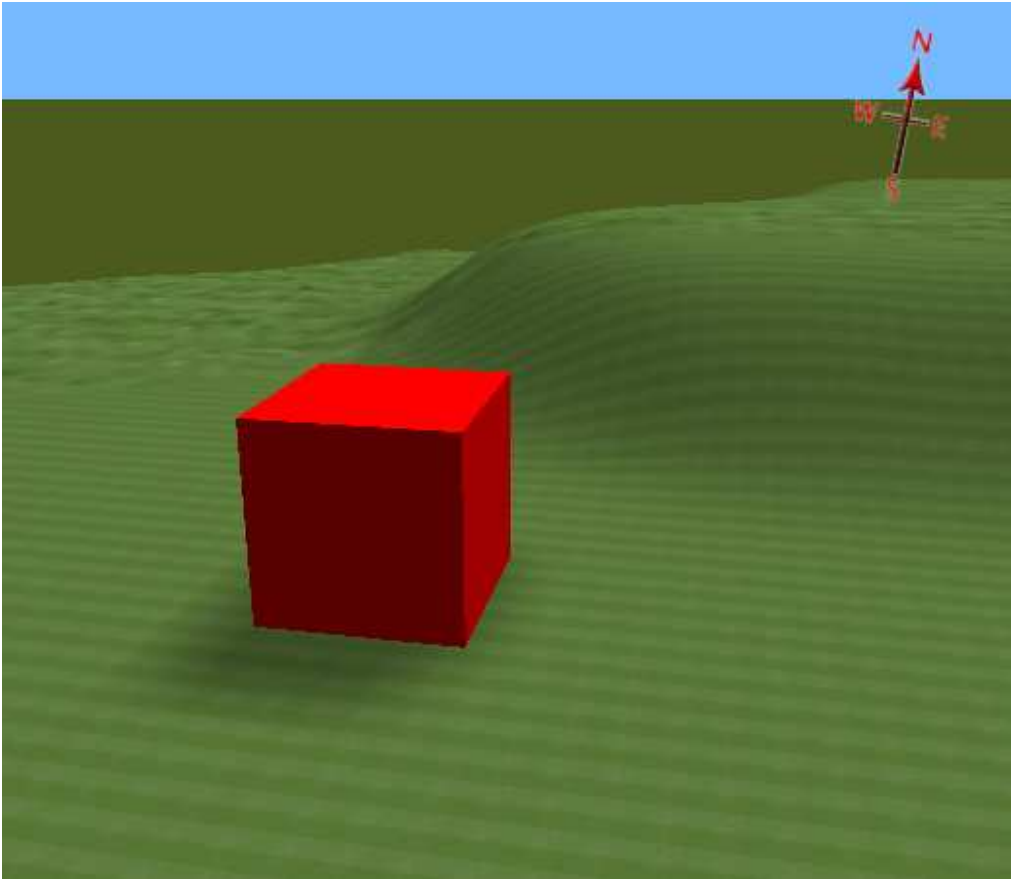
## Free Look

The Free Look camera tool will let the user alter both the position and direction of the camera. This allows the user to move the camera to look at any part of the scene from any angle.

To activate this tool, press on the Free Look tool button , or select the Free Look option from the View3d menu.

## EXERCISE

- Set Symmetry3d to one Viewport by pressing Single Camera View 
- Load the project “cameras.s3d”
- Start the “Free Look Tool”
- Press and hold the left mouse button
- Angle the camera until it points at the red cube
- Hold down the Shift key
- Move the mouse forward to move the camera forward towards the red square, adjusting the angle, if necessary, by releasing the Shift key and moving the mouse




- Release the left mouse button.


N.B. The mouse wheel, if present, will also move the camera forward and backward while running the Free Look tool

- Press and hold the left mouse button
- Angle the camera until it points at the blue cylinder
- Move towards the blue cylinder using the Shift key or the mouse wheel
- Angle the camera to look towards the yellow cone.
  
- Press and hold the Control Key
- Move the mouse upwards to move the camera upwards away from the terrain
- Move the mouse downwards to move the camera nearer to the terrain
- Move the mouse left to move the camera right along the terrain
- Move the mouse right to move the camera to the left along the terrain
- Release the Control key and Left Mouse Button

## Fixed Rotate

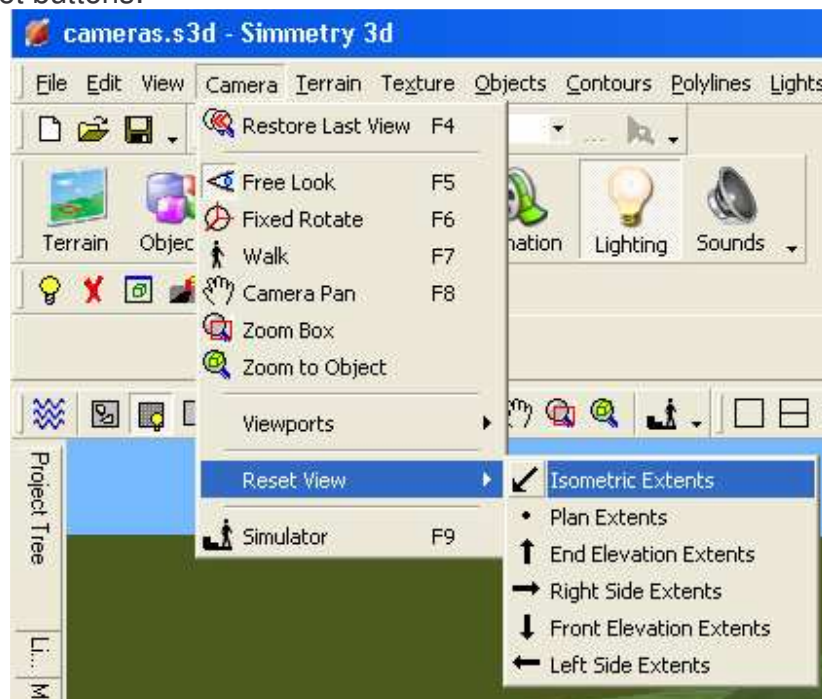
The Fixed Rotate camera tool will let you rotate the camera around a central point.

To activate this tool, press on the fixed rotate tool button  , or select Fixed Rotate from the View3d menu.

- Set Simmetry3d to one Viewport by pressing Single Camera View 
- Load the project “cameras.s3d”
- Start the “Fixed Rotate Tool”
- Press the left mouse button and hold it.
- Move the mouse left and try and rotate around the terrain.
- Tilt the camera away from the terrain by moving the mouse up.
- Move the mouse down to reverse the tilt
- Release the left mouse button.

Note: if the terrain disappears or screen turns blue you have most probably moved the mouse to a point where you are viewing the underside of the terrain. Just move on to the point below.

- To re-centre the camera on the terrain, Press one of the camera view reset buttons:



- Press and hold the Shift key down
- Press and hold the left mouse button
- Move the mouse upwards to move the camera closer to the terrain

- Move the mouse downwards to move the camera away from the terrain (This operation can also be performed by using the mouse wheel, if you have one)
- Release the left mouse button and Shift key
- Press and hold the Control key
- Press and hold the left mouse button
- Move the mouse upwards to move the camera upwards away from the terrain
- Move the mouse downwards to move the camera nearer to the terrain
- Move the mouse left to move the camera right along the terrain
- Move the mouse right to move the camera to the left along the terrain
- Release the left mouse button and Control key

## Advanced Options

Other camera tools include:

### Zoom to Object

This tool allows you to click on an object and zoom close into that object. Simply left-click the mouse on the object you wish to view closer up. If you click the mouse, but not on an object the view will be centred on that point you selected.

### Zoom Box

This tool lets you select a rectangular area, which will then become the view that the active camera shows. Left click and hold the mouse in the 3d view to set the top position of your new view. While still holding down the left mouse button, move the mouse to "drag" out the rectangle that you are specifying to move to. The zoom rectangle will appear as a red rectangle in the 3d view.

### Camera Pan

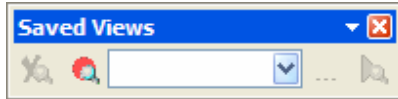
This camera tool allows you to move the camera laterally, but not move it forwards or backwards. Left click and hold the mouse in the 3d view, then move the mouse to set the position of the camera in the active viewport.

### Restore Last View

This tool will move the camera in the active viewport back to its last position. The tool maintains a history of camera positions, one entry for each time you move the camera in a viewport. You are then able to move back to previous positions.

## Saved Views

Try using the Saved Views to store a particular camera view and then return to it. The Saved View functionality is accessible through the Saved Views Toolbar on the main editor.



Try opening the Edit|Global Settings dialog to configure the mouse tab, which controls the sensitivity of the mouse.