

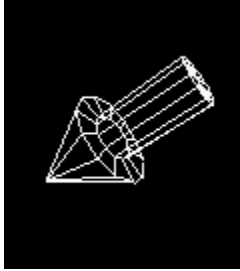
## Contents

The following Help Topics are available:

[3D Viewer Object Types](#)  
[Using the Mouse](#)

For Help on Help, Press F1

## Directional Lights



A **Directional Light** is a light source which casts light in one direction only and is considered to be at an infinite distance from the 3D World. A real world example of a directional light is the Sun.

The RenderWare 3D Object Viewer represents a Directional Light as a wireframe 3D arrow. The arrow gives the direction in which light is cast (the position of the Directional Light has no effect on the light cast).

## Point Lights



A **Point Light** is a light source which casts light equally in all directions. A real world example of a Point Light is an electric light bulb.

The RenderWare 3D Object Viewer represents a Point Light as a wireframe globe. The centre of the globe is the location from which light is cast (the orientation of the Point Light has no effect on the light cast).

## Conical Lights



A **Conical Light** is a light source which casts a cone of light from a point in 3D space. A real world example of a Conical Light source is a spot light.

The RenderWare 3D Object Viewer represents a Conical Light as a wireframe cone. The position of the cone is the location from which light is cast. Light is cast from the apex of the cone through the cone's base.

## Clumps



In RenderWare, visible 3D objects are called **Clumps**. Clumps can have almost any shape and surface appearance. Clumps are stored in **RenderWare Script Files** which have the extension `.RWX`.



## 3D Viewer Object Types

The RenderWare 3D Object Viewer has the following object types:

[Scenes](#)  
[Cameras](#)  
[Clumps](#)  
[Lights](#)

## Using the Mouse

3D Objects ([Clumps](#) and [Lights](#) ) are rotated and dragged with the mouse when holding the **Left Mouse Button** down.

### ***Rotating an Object***

To **Rotate** an object press and hold down the left mouse button while the mouse pointer is over the object. Moving the mouse horizontally will rotate the object about the screen's vertical axis. Moving the mouse vertically will rotate the object about the screen's horizontal axis.

### ***Dragging an Object***

To **Drag** an object press and hold down the left mouse button and **Shift** key while the mouse pointer is over the object. The object will follow the mouse pointer as the mouse is moved.

### ***Moving an Object Toward and Away From the Camera***

To **Move** an object toward and away from the screen press and hold down the left mouse button and **Control** key while the mouse pointer is over the object. Moving the mouse down pulls the object toward the screen. Moving the mouse up pushes the object away from the screen.

The **Right Mouse Button** has two functions in the 3D Object Viewer. Clicking the right mouse button brings up a **Popup Menu** appropriate for the object under the mouse pointer. If either the **Shift** or **Control** key is held down when the right mouse button is pressed the mouse will move the [Camera](#) to change the view of the [Scene](#) .

### ***Moving the Camera Forwards and Backwards***

To **Move** the Camera forwards and backwards press and hold down the right mouse button and **Shift** key. Moving the mouse down moves the Camera backward. Moving the mouse up moves the Camera forward.

### ***Turning the Camera to the Left and Right***

To **Turn** the Camera left and right press and hold down the right mouse button and **Shift** key. Moving the mouse left turns the Camera to the left. Moving the mouse right turns the Camera to the right.

### ***Tilting the Camera Up and Down***

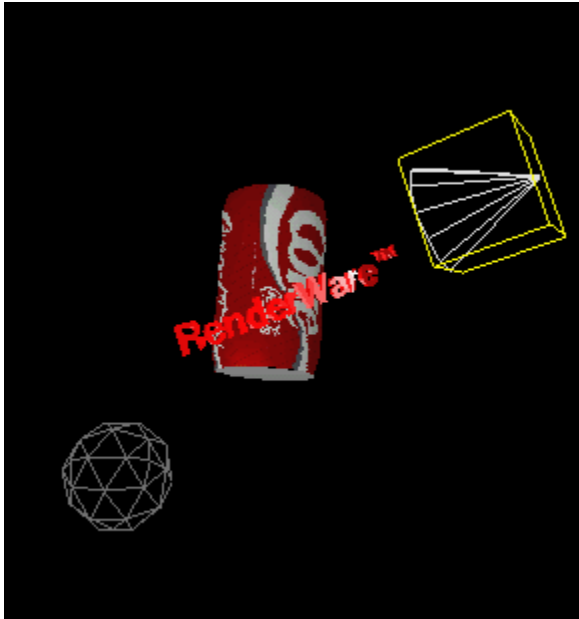
To **Tilt** the Camera up and down press and hold down the right mouse button and **Control** key. Moving the mouse down tilts the Camera down. Moving the mouse up tilts the Camera up.

## Cameras

RenderWare [Scenes](#) are viewed by a Camera. The position and orientation of the Camera controls the view of the Scene.



## Scenes



In RenderWare a 3D world is called a **Scene**. A Scene contains a collection of [Clumps](#) and [Lights](#). In the RenderWare 3D Object Viewer shows a view of a single Scene.

## Lights

A **Light** illuminates the [Clumps](#) which are held in the same [Scene](#) as the light. A Scene can contain any number of lights.

RenderWare provides three different types of light source:

[Directional Lights](#)

[Point Lights](#)

[Conical Lights](#)

