Ortelia Set Designer User Manual



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Introducing Ortelia Set Designer

Ortelia Set Designer™ is a 3D interactive tool for designing and discussing theatre sets. It assists designers, directors and actors in the decision making process and encourages users to develop a more profound understanding of the set being designed or discussed.

Ortelia Set Designer™ has been created specifically with theatre professionals, educators and students in mind. Ortelia Set Designer™ enables users to accurately design real or conceptual sets in their own theatre as well as to custom build theatre spaces.

Ortelia Set Designer™ users can test their ideas before actually moving to set production; a design can be saved for later editing or shared with others. Using this application theatre professionals can share their ideas and work with peers. Students can submit their work for assessment. Teachers can assess a student's work and add feedback in the form of notes and queries.

System Requirements

The following hardware and software configurations are recommended for running Ortelia Set Designer.

Operating system:

- Microsoft Windows XP® (SP3)
- Microsoft Vista[®].
- Microsoft Windows 7[®]
- Macintosh and Linux operating systems are not supported.

Hardware:

- Recommended minimum of 2Gb of RAM
- Intel Core 2 Duo or Quad Core processor or above
- DirectX 9.0c (and above) capable graphics card with a minimum of 512Mb graphics memory (we recommend <u>Nvidia</u> graphics cards, see below)

Important Note

Ortelia Set Designer leverages many of the latest developments in graphics cards technology. Specifically, the interactive environment utilizes Microsoft <u>DirectX</u> Shaders (**Shader Model 3 support and above**). Your graphics card should support Microsoft DirectX 9c and above to ensure that your environment will display correctly. The following graphics cards are a minimum specification required to run Ortelia Set Designer.

Minimum Graphics card specification

ATI Radeon HD 3800 Series. and above - 512Mb Memory and above NVIDIA GeForce 8 Series and above - 512Mb Memory and above

Note: We do not recommend the use of integrated motherboard graphics cards. It is highly recommended that a stand-alone graphics card be used.

Getting Started

Installing Ortelia Set Designer™

Important Note: It is highly recommended that you have Administrator privileges when installing Ortelia Set Designer

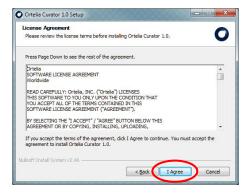
Locate *OrteliaSetDesignerSetup.exe* run the file by double clicking it using the Left Mouse Button. It is recommended that you exit all your other running programs.



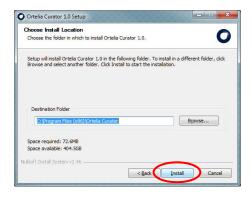
When you run the setup file you will see the following window.



(Windows Vista / Windows 7) You may see a User Account Control message. In this case, allow the setup to run by clicking Yes.

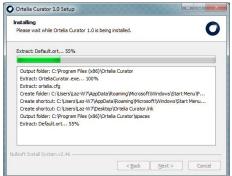


The following screen will be the License Agreement. You will need to click 'I Agree' in order to proceed with the installation of the software.



Following the component selection screen you can choose the destination folder you would like to install to. You can choose the default location or a destination of your choice.

Once you have chosen your destination click 'Install'.



The Ortelia Set Designer Installation will begin.



When the installation completes click 'Finish' to close the installation window.

After you have installed Ortelia Set Designer you can start it by accessing the 'Ortelia Set Designer' shortcut in the windows Start menu or the desktop shortcut.

Activating and Deactivating Ortelia Set Designer

When you purchased Ortelia Set Designer you were issued with a license number and password.

Important Note: Keep your license number and password in a secure location as you will need them if you deactivate your license on one computer and re-activate it on another.

In order to use Ortelia Set Designer you will need to activate your license. The first time you start Ortelia Set Designer you will be prompted to activate the license.

Note: You will require an Internet connection in order to activate your license.

- Be sure to have your license number and supplied password ready.
- Activation is a one-time only operation unless you choose to deactivate your license on a specific computer and reactivate it on another.



The first time you start Ortelia Set Designer the screen shown here will appear asking you to activate your new license.

Follow the procedure outlined below to activate your license on-line.





1. Click on 'Activate Ortelia Set Designer'

2. Click on 'Activate Ortelia Set Designer Online'



3. Enter the supplied License number and password and click 'Continue



4. Ortelia Set Designer will communicate with the licensing server.



5. If your license and password are valid you will see 'Activation Successful'. Click 'Continue' to start Ortelia Set Designer

Should you wish to transfer your license to another computer you will first need to deactivate the license on your current computer and then reactivate on another that has Ortelia Set Designer installed.

To deactivate your license go to the Ortelia Set Designer Start menu.



- Click on 'Deactivate License'
- A dialogue box will appear prompting you verify deactivation.
- III. Once the license is successfully deactivated you will receive a confirmation dialogue.

You can now follow the activation procedure outlined above to reactivate the license.

The Ortelia Set Designer Interface

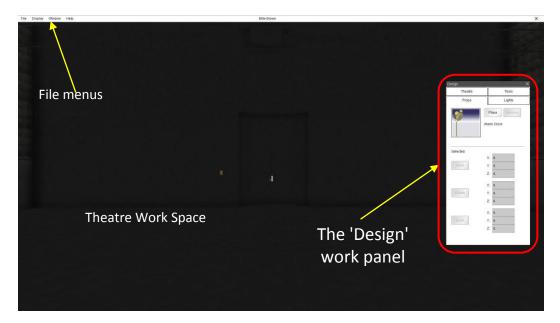
To start Ortelia Set Designer™ go to the Windows start menu and navigate to the Ortelia Set Designer menu. Click on the Ortelia Set Designer link with your Left Mouse Button (LMB).



Note: Load time will depend on the hardware configuration you are using. Refer to our recommended hardware configuration above.

Upon loading you will be placed inside the default theatre or last theatre you used. The '**Design'** work panel will also be visible. There are three key areas within the environment. These are:

- I. The File Menus
- II. The Design Work Panel
- III. The Theatre Work Space



The Ortelia Set Designer Interface

The File Menus

The 'File' menu consists of four menu items with each menu having its own drop-down. The menu items and their drop-downs are detailed below.

The 'File' menu gives users access to commonly used commands.

New	Create a new set design
Open	Open an existing set design
Save	Save the current set design
Save As	Save the current set design with a new name
Load Space	Load a theatre space
Screenshot	Take a screenshot of the current view in the work area
Exit	Exit the Ortelia Set Designer

The 'Views' menu allows users to switch between 3D view and Top view of the theatre space

Ground	Switches to 1st person 3D view
Тор	Switches to the Top-Down view

The '*Display*' menu allows users to turn displayed items within the theatre on/off by checking or unchecking items in this drop-down list.

Props	Show/Hide props
Lights	Show/Hide lights
Measurements	Show/Hide measurements
Notations	Show/Hide Notations

The 'Window' menu gives access to the 'Design' panel and the 'Settings' panel

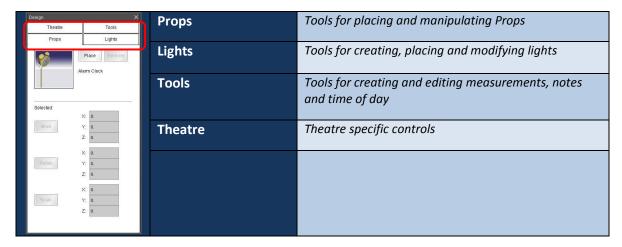
Design	Turns the 'Design' work panel on if it has been closed
Asset List	Opens the 'Asset List' to view and select current props and lights in the scene
Settings	Opens the Graphics Quality settings. Graphics quality is set to medium with shadows on by default. Improve performance by turning shadows off and reducing graphics quality.

The '*Help*' menu gives access to the help features and the '*About*' screen

Reference Manual	Opens this help document as a PDF.
Web	Go to the Ortelia website
About	Application credits and version number

The Design Work panel

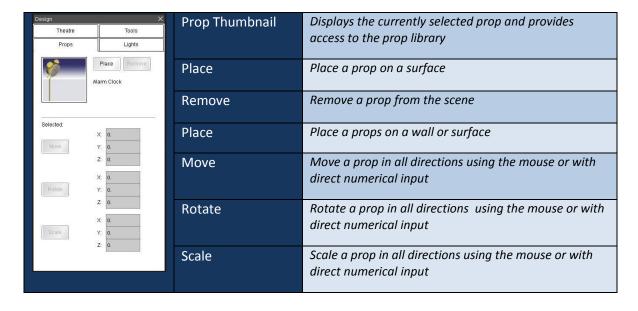
The 'Design' work panel is divided into four individual tabs that allow access to categorised functionality. The work panel tabs are summarised below:



The Design work panel in detail

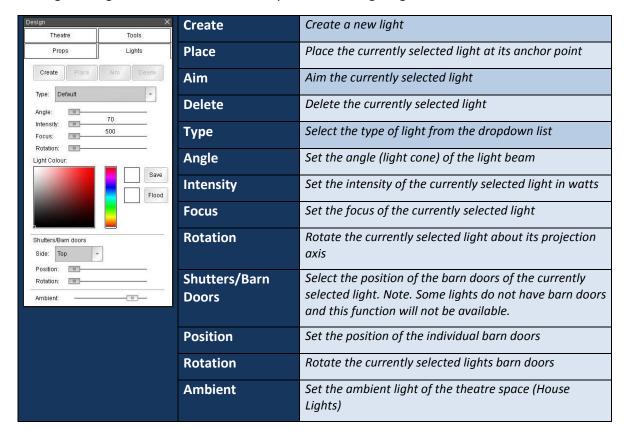
Props

The props tab allows users to place props in the scene and manipulate them.



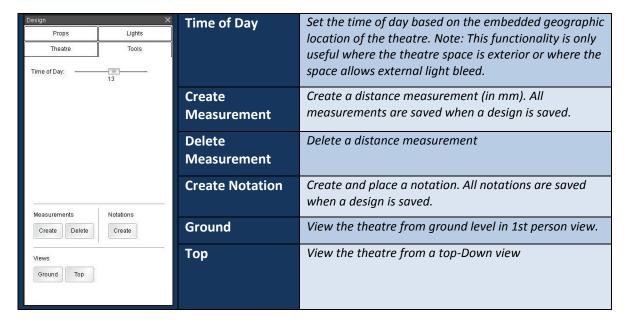
The Lights Tab

The lights tab gives users access to a variety of advanced lighting functions.



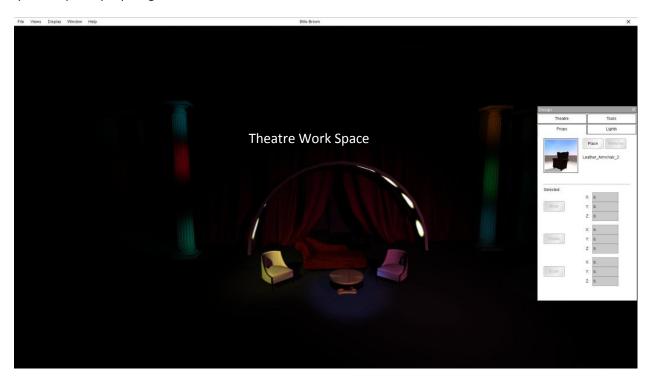
The Tools Tab

The tools tab gives users access to tools for creating and editing measurements, notes, and time of day



The Theatre Workspace

The Theatre Work Space is where users can design a set. All aspects of set and lighting design are carried out within this 3D workspace. The selected theatre space is displayed and users navigate within the space to place props, lights etc.



The Theatre Work Space

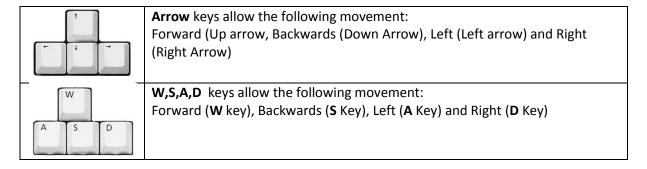
Keyboard functions and Navigating

There are a number of methods for interacting and moving around inside the Ortelia Set Designer ™ 3D environment.

A combination of keystrokes and mouse buttons can be used to navigate.

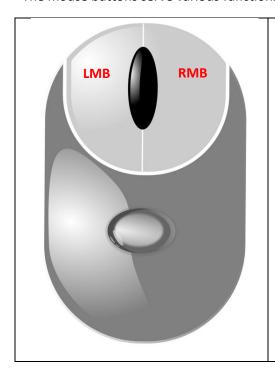
Keyboard functions (Directional Keys)

Both the arrow keys and the W,S,A,D keys can be used as directional keys to move around the environment.



Mouse Functions (Selecting objects, looking around)

The mouse buttons serve various functions.



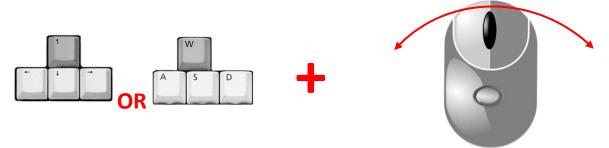
- Left Mouse Button (LMB) This button is the action button. You can use it to select objects in the theatre and complete input actions such as check boxes.
- Right Mouse Button (RMB) This button is used to rotate about the environment. Hold the RMB down and then move your mouse sideways to rotate about. Use this in combination with the direction keys to move freely around the environment. For example, you can simply use the forward and backward directional keys to move in those directions while holding down the RMB to steer.

Note: This is a very effective and efficient way to navigate the 3D environment.

Hint: You can travel faster through the 3D environment by holding down the 'SHIFT' key while moving.

Moving and Turning

Use either the **arrow keys** or the **W,S,A,D** keys to move forward, backwards or pan sideways. Use the **RMB** in combination with the directional keys to turn corners and look around. The figure below demonstrates moving forward in the 3D environment while using the mouse to steer.



Hold down either the Up Arrow key or the W key

and

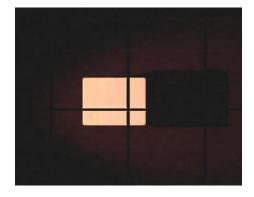
Hold down the Right Mouse Button while moving the mouse sideways

Switching between 1st Person 3D view and Top-down orthographic view.

When placing and positioning props it is often useful to switch from a 1st person 3D view (Ground) to a top down view (Top). This aids in accurate placement of props.



1st person View (Ground)



Top-down view (Top)

To zoom in and out in 'Top' view simply scroll with the mouse scroll wheel

To pan sideways in 'Top' view click and hold down the scroll wheel while moving the mouse in the direction you want to pan. There are two ways to access the views these are:

- Through the 'Views' file menu
- Through the 'Tools' tab in the Design panel.



Accessing views through the 'Views' menu



Accessing views through the 'Tools' tab

In addition to the 1st person and top-down view the default theatre comes with 7 preset views from within the theatre. Predefined theatre views are accessed through shortcut keys. The shortcut involves holding the 'CTRL' Key are pressing the numbers 1 through to 7 on your keyboard. These are defined below.



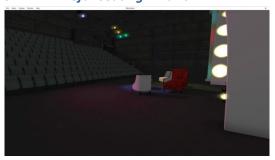
CTRL + 1 - Center - seating- mid row



CTRL + 2 - Left - seating- mid row



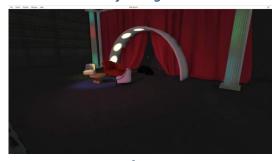
CTRL + 3 - Right- seating- mid row



CTRL + 4 - Rear Left -Stage



CTRL + 5 - Rear Right -Stage



CTRL + 6 - Front - Left -Stage



CTRL + 7 Front - Right -Stage

Workflow

The following section describes the tools used to curate an exhibition

Setting up the Theatre

Loading and Importing Theatres

Ortelia Set Designer comes pre-loaded with a default theatre. The first time you open the application the default theatre work environment will be displayed. If you have your own theatre it can be loaded using the command 'Load Space' from the 'File' drop-down menu.

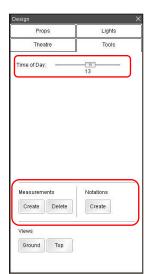


Click 'Load Space', a dialogue box will appear listing the available galleries in your collection. Select your theatre and click the 'Load' button.

To import a new theatre follow the procedure above to open the 'Load Theatre' dialogue box.

Click the 'Import' button if you have a Ortelia theatre file. A 'Open' dialogue box will appear and you can navigate to where your new theatre is located. Select the theatre and click 'Open' to continue.

Note: The 'Import' routine does not import the external theatre space to the 'Theatre' list. *You will need to import the theatre each time you want to use it. (To add a theatre to your list of galleries refer to the <u>Appendix</u>.)*

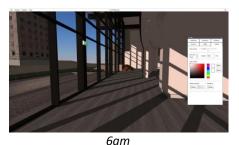


The **Tools** tab provides a variety of functions for setting up your theatre for a new set design.

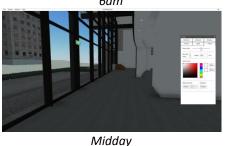
Setting the Time of Day

If you r theatre is an open-air venue or has windows/entrances to the outside the 'Time of Day' function is useful for testing the effects of incoming light and the resulting shadows. The geographic location of the theatre is embedded the theatre model and the time of day slider will take this into account.

In the following example four separate times are tested.







IVIIG

6pm

Testing Shadows

Measuring Distances

The distance measuring functionality of the Tools tab allows users to measure distances within the theatre space. Measurements are stored in the saved set design file.

I. To measure a distance click on the '*Create*' button in the 'Measurements' section of the Tools tab.

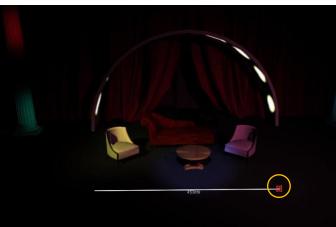


- II. A red box with a crosshair inside will appear attached to your mouse pointer.
- III. Click on the first point of your measurement with the **LMB**.
- IV. Move the mouse to the end point of the measurement. As you move the mouse the distance from the starting point (in mm) will be displayed.
- V. Click again with the **LMB** to complete the measurement.

The following example illustrates the process of creating a measurement.



Click the first point of the measurement using the **LMB**



Move the mouse to the end point of the measurement and finish by clicking with the **LMB**



The completed measurement showing the distance in mm.

To delete a measurement:

- I. Select the measurement you want to delete with the **LMB**.
- II. The measurement line will turn red when selected.
- III. Click the 'Delete' button in the measurements section.

Creating and editing Notations

The notation functionality of the Tools tab allows users to add notes within the theatre space. Notations are stored in the saved exhibition file.

To create a notation:

III.



- I. Click the '*Create*' button in the '*Notations*' section of the Tools tab.
- II. Click with the **LMB** on point you want to place the notation.
- A notation icon will be placed where you clicked
- IV. To add notes or access a note click the notation icon with your LMB
 - V. The Notation panel will appear.
 - VI. Type your notes in the text area of the notation panel.
 - VII. Click 'Save' to finish adding text and close the window.

To delete a notation:

- I. Click on the icon of the relevant notation.
- II. The Notation Panel will open.
- III. Click the '*Delete*' button. The notation will be removed from the exhibition.

Note: Make sure to save changes regularly



The Notation Panel

Placing and manipulating Props

Ortelia Set Designer uses drag and drop functionality to place props. To place props you must have either the '*Props*' tab enabled.

Placing Props

I. Click on the thumbnail in the props tab with the **LMB** to open the Props library.

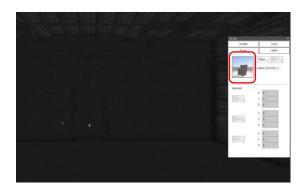


- II. Select a category or sub category of prop from the dropdown list. **Note**: *You can also search for a prop using a keyword in the "Search' dialogue box*
- III. Select a prop from the list of available props by clicking on it with the **LMB**. Note: You can leave the prop library window open or close it by clicking on '**Done**'.
- IV. Click on the 'Place button in the Props tab and move your mouse cursor into the 3D space. The prop will be attached to your mouse pointer and will track over the surfaces your move over.
- V. Click again with the **LMB** to place the prop.
- VI. To remove a props from the theatre space. Select it with the **LMB** and click the '*Remove*' button

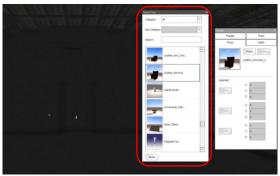
Repeat this procedure for as many props as your require.

Note: You can continue to navigate and look around while placing props by holding down the **RMB** and moving the mouse as well as moving with the move keys in the direction you wish to go.

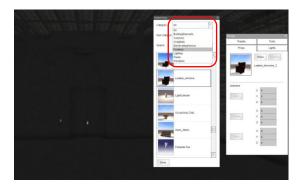
The following example illustrates the procedure outlined above.



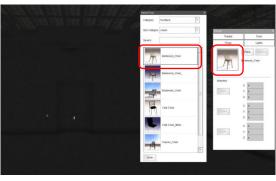




2. The prop library window opens







4. Select a prop from the list and it will appear in the thumbnail view



5. Click the 'Place' button and drag the mouse into the work space



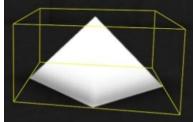
6. Click again with the LMB to place the prop

Props position can also be fine tuned using the numerical inputs provide, the props can be moved in any direction. To fine tune the position of the props on the wall:

Moving, Rotating and Scaling Props

Props can be translated, rotated and scaled either interactively with manipulator handles or with numeric input.

The move, rotate and scale tools are grayed out until such time that a prop is selected. To select a prop

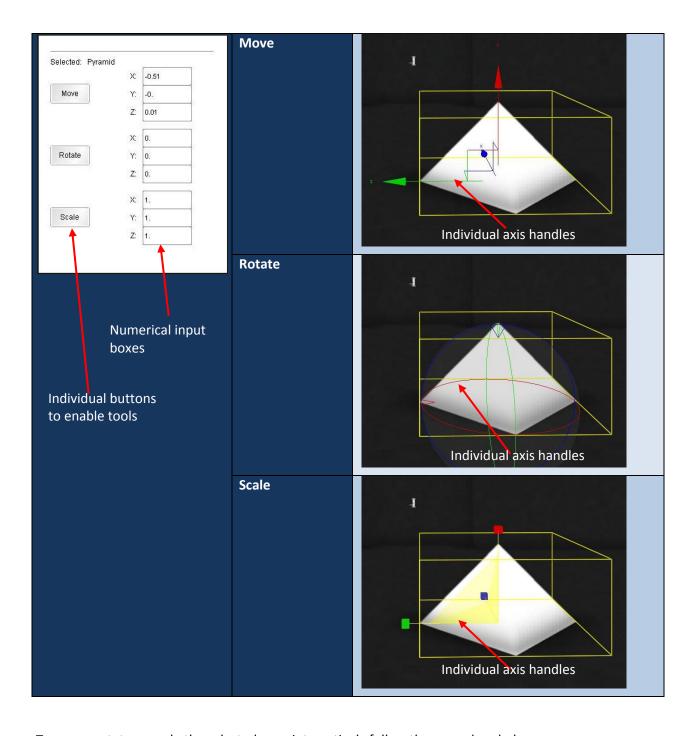


in the scene click on it with the **LMB**. The prop will be highlighted with a yellow bounding box.

The move, rotate and sale buttons and input boxes will now be enabled.

Click on the corresponding button to either move, rotate or scale. A

manipulator relevant manipulator will appear on the model as shown in the examples below.



To move, rotate or scale the selected prop interactively follow the procedure below.

- i. Place your mouse pointer over the axis that you want to work in.
- ii. The selection handle will turn yellow.
- iii. Click and hold with the **LMB** and move your mouse side to side.
- iv. The prop will respond by being moved, rotated, or scaled in the select axis direction.

To move, move, rotate, or scale in all directions at once:

- i. Place the mouse cursor in the center of the handles.
- ii. The center will turn yellow.
- iii. Click and hold with the **LMB** and move your mouse side to side.
- iv. The prop will either: move in all three axis at once following the mouse pointer, rotate in all axis at once, or, scale globally in all three axis.

Note: Props can be placed on any surface including on other props. The placement tool tracks the surface of each object it encounters.

Lighting

The following section describes the tools used to create and manipulate lights

Available light types

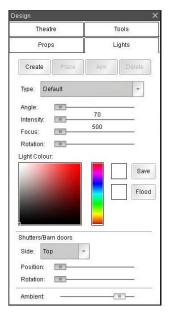
Ortelia Set designer has a number of in-built common theatre lights these are.

Light Type	Description	Example Default Setting
Default	A simple default light of no particular specification	
Beam Projector	A typical Beam Light produces a very narrow intense beam of light with a very soft edge.	
Box Flood	An enclosed light source in a box with one open side. Provides a wide, even distribution of light, over a large area. Typical beam spreads range from 70-150 degrees	
Ellipsoidal Fixed Focal Length	ELLIPSOIDAL REFLECTOR spotlight provides a narrow, directional beam with a hard edge. It is able to provide a sharp focus and has a fixed focal length	
Ellipsoidal Zoom	ELLIPSOIDAL REFLECTOR spotlight provides a narrow, directional beam with a hard edge. It is able to provide a sharp focus. A adjustable focal length ranging from 12 - 50 degrees	

Follow Spot	A narrow spotlight designed to provide a 'hard' beam edge.	•
Fresnel	The FRESNEL SPOTLIGHT, (pronounced: 'fren-el') provides adjustable beam spreads, from SPOT to FLOOD, (about 15-70 deg.) all in one fixture. This fixture produces a directional beam with a very soft edge (only).	
PAR 36-64 PIN	Parabolic Aluminized Reflector. Very narrow angle, low voltage PAR lamps. Beam spreads are very narrow and range from approximately 5 to 10 degrees	
PAR64 - 1K	Parabolic Aluminized Reflector. PAR64 (1000 watt) PAR can range from very narrow to wide flood	
Plano-Convex	A simple 'box' housing containing a lamp and reflector behind a plano- convex lens. Modern units range from 300 to 2000 watts. Provides a circular beam pattern with a sharply defined 'hard' outer edge	
Scoop	A streamlined box flood, with similar lighting characteristics	

Creating and Adding Lights

Enabling the 'Lights' tab allows users to create add lights within the theatre space. Lights are stored in the saved exhibition file.



- I. To create a light click the 'Create' button.
- II. Click on the 'Type' dropdown to select the type of light.
- III. Move the mouse cursor into the theatre environment. The light will be attached to the mouse pointer.
- IV. Click with the **LMB** where you would like to anchor the light.
- V. Move the mouse pointer to the point you want your light to aim to. You will notice that the light now follows the mouse. Note: When aiming the cursor will track over props in real time. To aim the light through a prop to a point behind it, it is advised to switch to 'Top' view for accurate positioning.
- VI. Click on the point you want the light to aim at with the **LMB**.

You can now adjust a variety of parameters associated with the light type such as colour, angle of the light cone, the intensity of the light and the focus of the light etc..

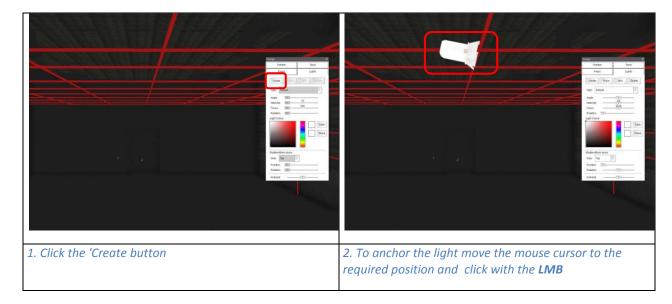
Note: A light that is highlighted in red is the active light you are working on.

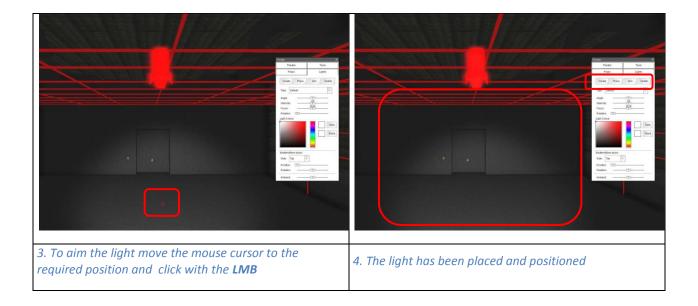
Note: When a new light is created it will default to the currently selected light as a starting point. You can change the light type and parameters at any time.

Note: You can continue to navigate and look around while placing props by holding down the **RMB** and moving the mouse as well as moving with the move keys in the direction you wish to go.

To select a light click on it with the LMB.

The following image sequence illustrates the procedure outlined above.





Note: Lights are computationally expensive. The number of lights you can have in one design will depend on the graphics card hardware you have. Refer to the recommended hardware section of this manual. If you are experiencing performance issues as you add lights it is recommended that you reduce the graphics quality and turn of shadows in the 'Settings' menu.

Ambient Theatre Light

The ambient light of the theatre can be adjusted using the 'Ambient' slider at the bottom of the Lights tab.



To adjust the ambient light (House Lights) of the theatre. Click on the slider with the **LMB** and drag it to a level of ambience required.





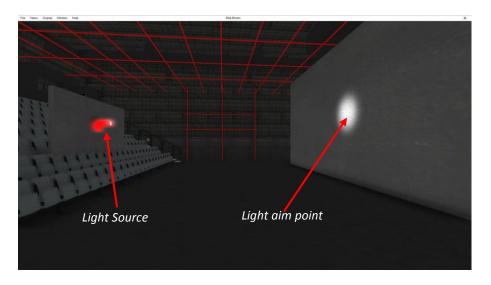


High Ambient Light

Editing Lights and Mixing Light Colours

The lighting functionality in Ortelia Set Designer allows you to colour lights in an infinite combination. In addition, the light controls relevant to each light type allow for a high degree of variability. This section describes how to edit light parameters and mix light colours.

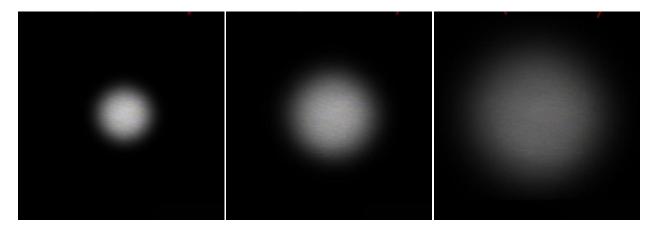
In all the examples described below are light has been placed on one wall and aimed at the adjacent wall as shown in the example below.



Cone Angle

Cone angle of lights can be adjusted using the 'Angle' slider.

Note: As the cone angle increases the intensity of light will drop off as the light is spread over a greater area.

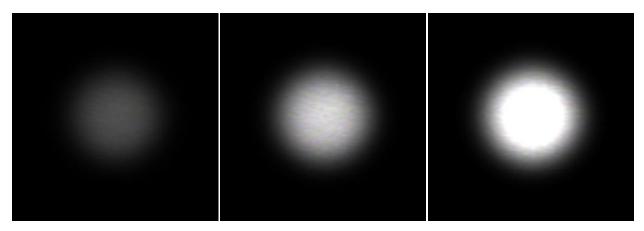


Increasing cone angle

Light Intensity

Intensity (brightness) of lights can be adjusted using the 'Intensity' slider.

Note: As the brightness increases the soft edges of light will sharpen.

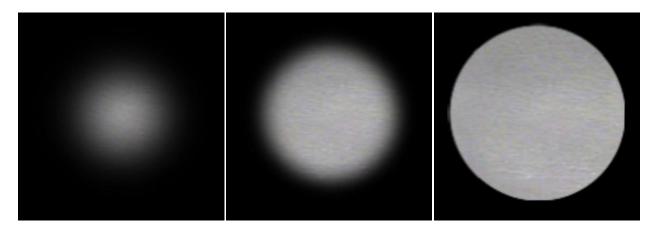


Increasing light intensity (Brightness)

Light Focus

Focus(sharpness) of lights can be adjusted using the 'Focus' slider.

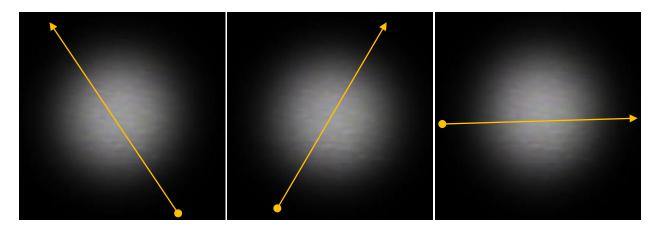
Note: As the focus increases the soft edges of light will sharpen.



Increasing light focus

Rotation

Some lights can be rotated about their projection axis. This functionality is particularly relevant to lights with ellipsoidal lenses and barn doors.

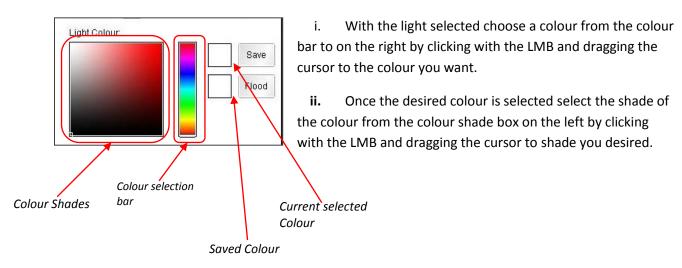


Rotating along the axis of projection

Assigning and Mixing Light Colours

All lights can be assigned colours and used in conjunction to mix colours.

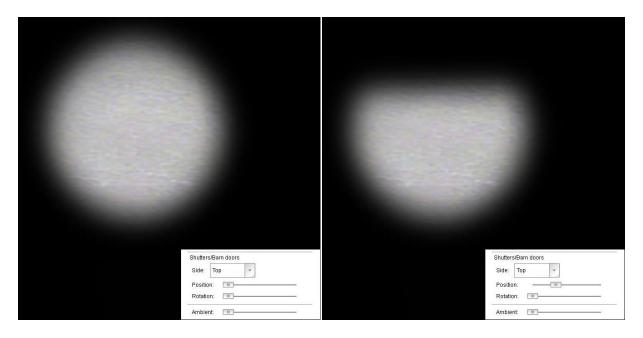
To assign a colour to a light. Select the light either by clicking on it with the **LMB** or select it from the 'Asset List' under the 'Window' menu. **Note**: Be sure to have the Lights Tab enabled.



- iii. The Light will change colour to reflect your choice.
- iv. To save a colour and apply to other lights individually, click the 'Save' button. The saved colour will appear in the 'Saved Colour' box.
- v. Click on the light you wish to colour with the **LMB** then click on the 'Saved Colour' box. The selected surface will change colour to reflect your changes.

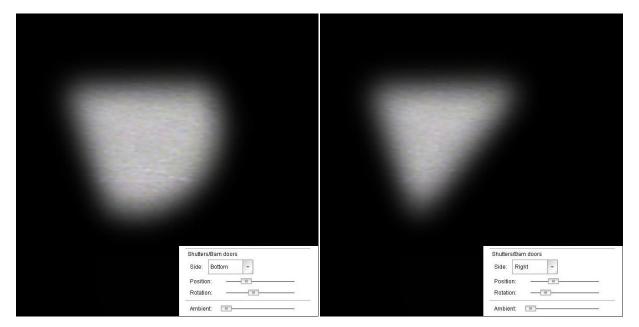
Shutters and Barn Doors

Many lights have shutters or barn doors. Each individual shutter/barn door can be moved in and out as well as rotated to a limited degree using the slider controls provided. Controls are accessed through the 'Shutters/Barn doors' section of the Lights tab.



No barn doors applied

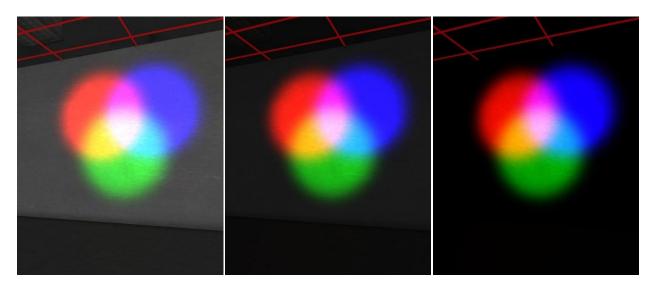
Top barn door applied



Bottom barn door applied and rotated slightly

Right barn door applied and rotated

Note: The amount of overlap between lights of different colours combined with Angle, Intensity and Focus will influence the colours and tones generated when mixing different coloured lights.



The effects of colour overlap and decreasing ambient light

Glossary

Appendix

Adding a external theatre to the Theatre List

There may be instances where you need to add an external theatre file to you list of saved galleries. The following steps will guide you through the process.

- 1. Locate the theatre file you would like to add. The extension will be .ort, for example, MyTheatre.ort.
- 2. You need to copy this theatre file to the 'spaces' folder in the Ortelia Set Designer program folder. (*Typically this will be C:\Program Files (x86)\Ortelia Set Designer \spaces*)
- 3. The next time you start Ortelia Set Designer you theatre will appear in the list.

Help and Support

Support Options:

Website: http://ortelia.com/ortelia-virtual-set-designer/

Email: support@ortelia.com

Please allow 24 hours for support requests to be answered.

Contact Details: Ortelia Interactive Spaces PO Box 3129 Newmarket , 4051 Queensland Australia

