Magic 3D Easy View

English

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1.Preface

Preface

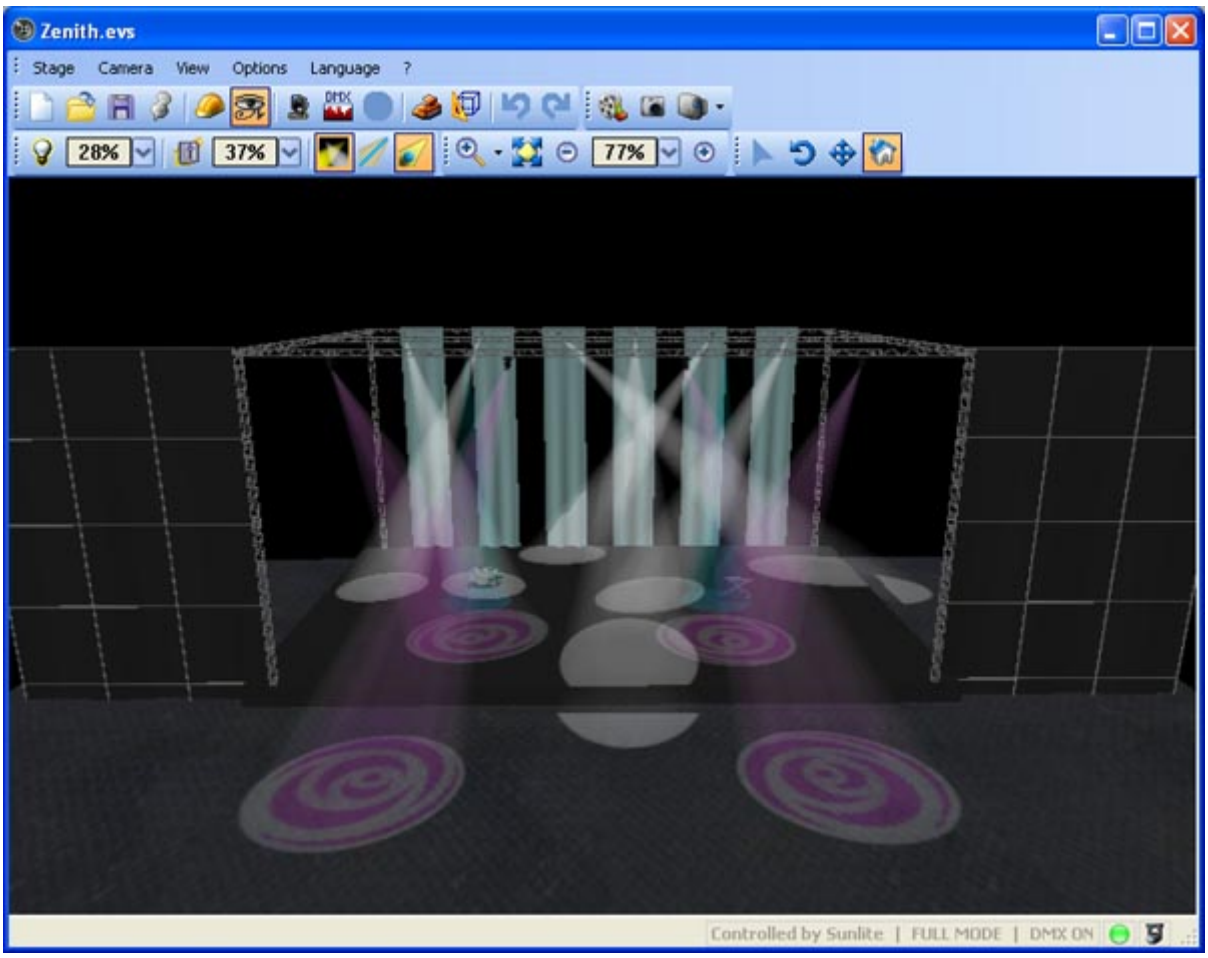
Our visualizer provides a real-time 3D rendering of your stage. It allows you to preview light movement, colors, and every other effect available in robotic/intelligent lighting (iris, strobe, dimmer, shutter, etc). Light beams from conventional lighting (PAR) can be visualized as well.

It is also possible to insert objects to customize your stage, such as trusses, furniture, etc. from our own libraries of objects, or to import objects from other CAD software. With a little practice, you will be able to reconstruct stages and venues in a very realistic way.

Note: The most accurate 3D representations come from carefully created profiles/libraries of lighting fixtures.

The 3D visualizer includes different □modes□, each receiving the DMX signal from a different source (software, console/desk, network, etc). The software is capable of visualizing up to 4 DMX universes simultaneously.

The patching for the fixtures within the 3D visualizer can be done automatically if it is linked to a software controller. If this is not the case, fixture patching must be done manually. Entire DMX universes follow the same rule. Moreover, you can separate DMX universes within the visualizer, i.e. Universe 1 linked to a USB/DMX-IN interface, while Universe 2 linked to Art-Net protocol.


Zenith.evs
Stage
Camera
View
Options
Language
?
28%
37%
77%
Controlled by Sunlite | FULL MODE | DMX ON

2.First steps

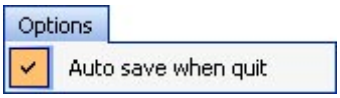
First steps

This chapter introduce the basics to simply use the 3D visualizer. It includes a description of the files used to save the projects and the first steps to create a 3D stage.

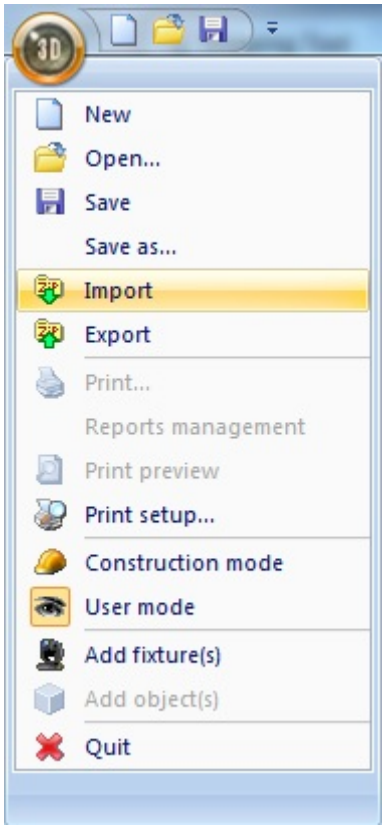
2.1.3D stage

3D stage

3D stages are saved with the "evs" format and can be open/saved indefinitely. Stage dimensions, inserted objects and fixtures are also saved in these files.



It is also possible to import or export 3D stages to or from zipped files with the "Import / Export" buttons of the main menu. Saving a 3D stage including all required files (X files, BMP or JPG files for the textures...) and then re-open it on another computer which does not contain the same objects.

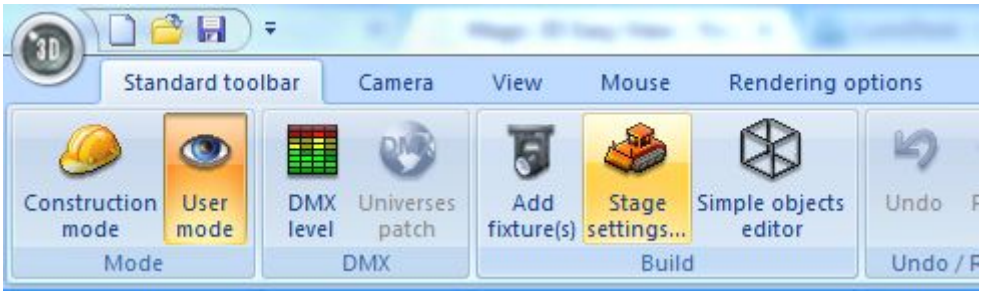


2.2.Your first stage

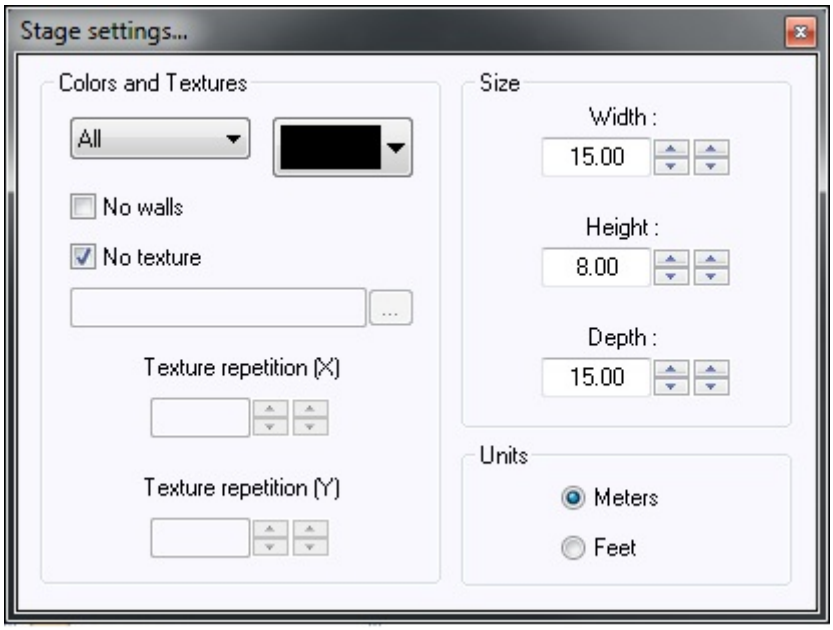
Your first stage

The following section describes how to create your first stage, introducing you to the basics of our 3D visualizer. It will also include a description of the files used to save different projects.

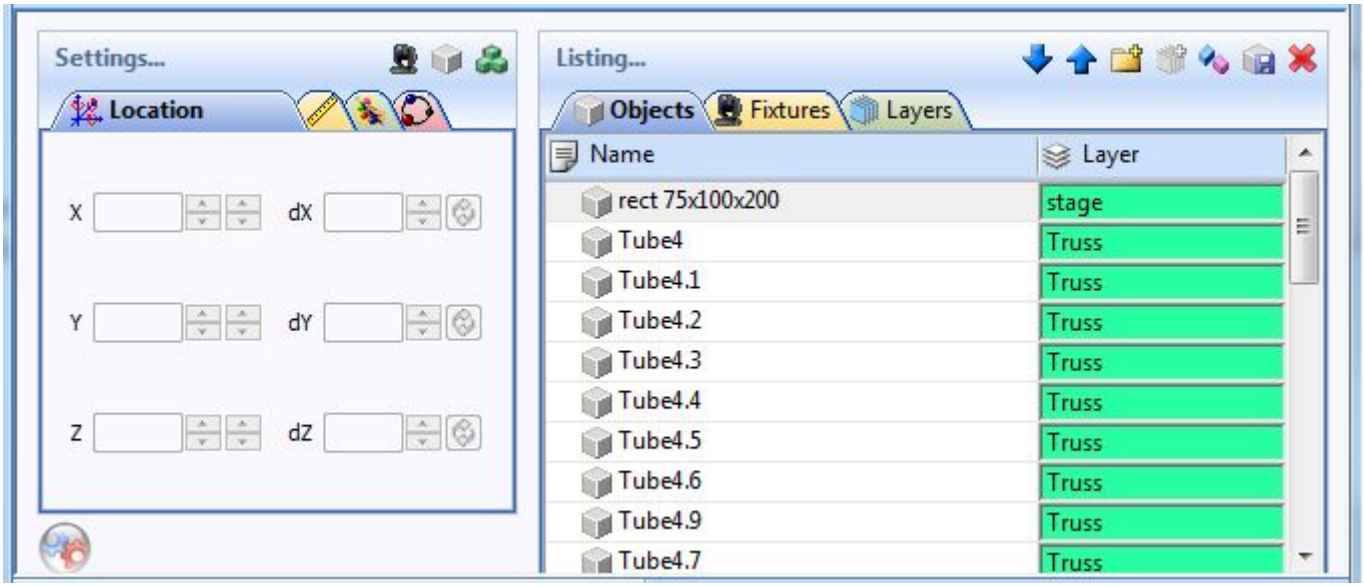
Your First Stage



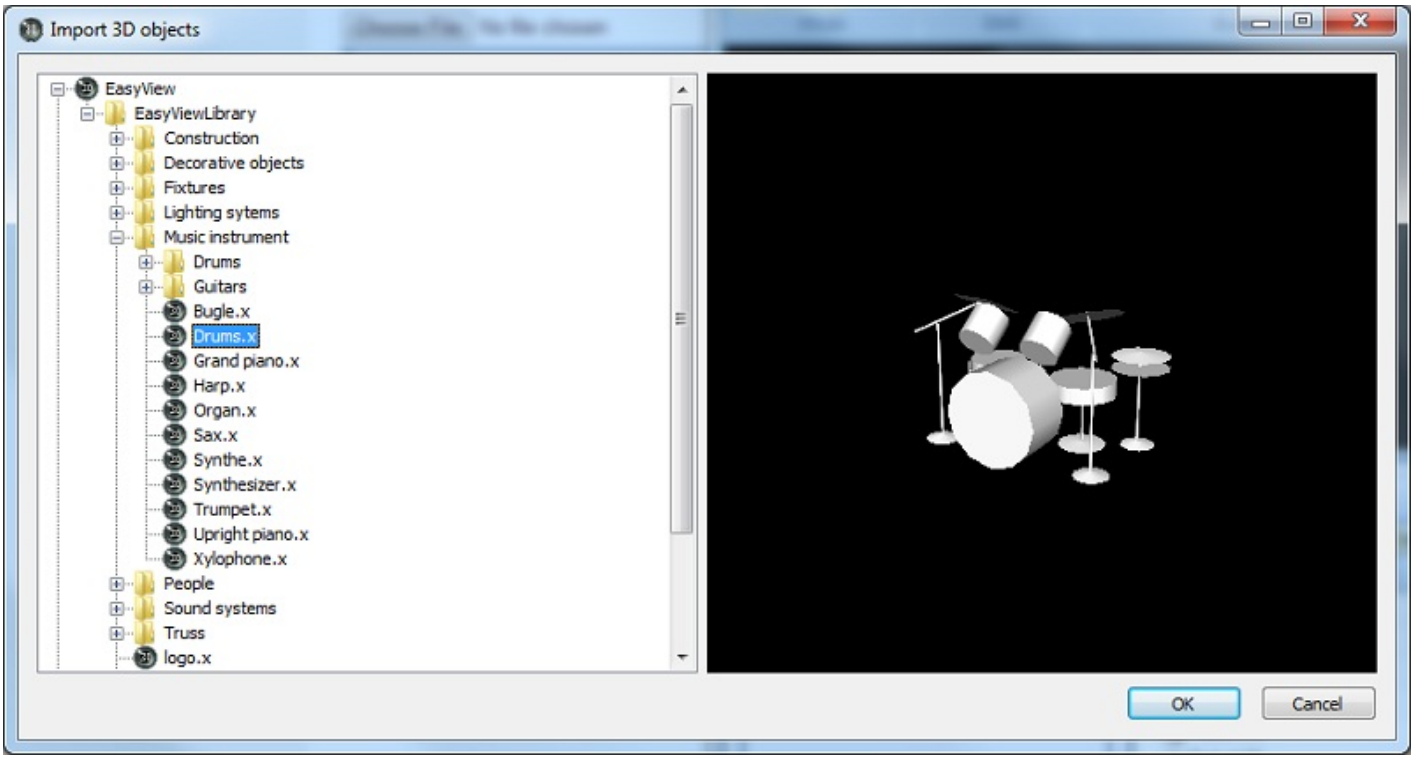
- From the standard toolbar, select "Stage settings." A window will open, where you can adjust the size and color/texture for each of the walls on your stage. Notice the options available to select individual walls, show or hide walls, repeat textures in both the X and Y axis, and change units between metric and English.



- From the "Stage" menu, select "Build mode." This will split your 3D visualizer window into 4 sections: 3D rendering, 2D top view, 2D front view, and Object/Fixture Settings. You can control the size and content of these sections, even hide them.



- From the "Object Settings" section click on the "Add object" button (gray cube next to the red arrow in the picture above) to insert an object from our libraries (i.e. /Music Instrument/Drums.x)



- The object will be inserted at the center of the stage. You can move this object around the 3D stage using your mouse. Furthermore, using the object editing tools (green arrow) you can change the position, orientation, size, color, etc. of any object selected from the list (blue arrow). These tools are explained in later sections of the manual.

- Repeat these steps to add more objects.

3.User mode

User mode

The software has 2 modes : User mode and Build mode. The first one is for the visualization, all features to modify the stage are disabled. This chapter introduces all features dedicated to the visualization, even if most of them are available from the other mode as well.

3.1.Rendering options

Rendering options

Several options are available to customize your stage and the rendering. Most are in the "Rendering Options" toolbar.

Ambient lighting

It is possible to modify the intensity of Ambient lighting with the fader located on the "Rendering Options toolbar".

Light Beam

The light beam fader on the Rendering options toolbar will allow you to adjust the brightness of the light beams displayed in the 3D view.

Rendering mode

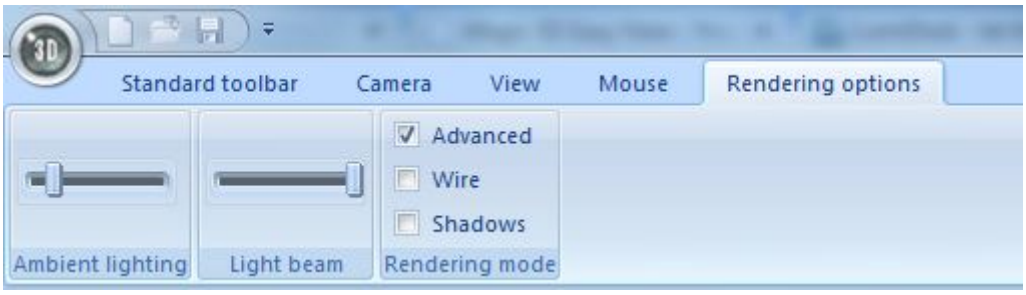
It is possible to switch between "Normal" and "Advanced" rendering mode. The software starts automatically in "Advanced" mode if your graphic card is compatible. However you can switch to the "Normal" mode if you think that it runs too slowly by unchecking the "Advanced" checkbox on the Rendering Options toolbar.

Wire

When wire mode is enabled, the light beams will be replaced with a small line pointing in the direction of the light beam.

Shadows

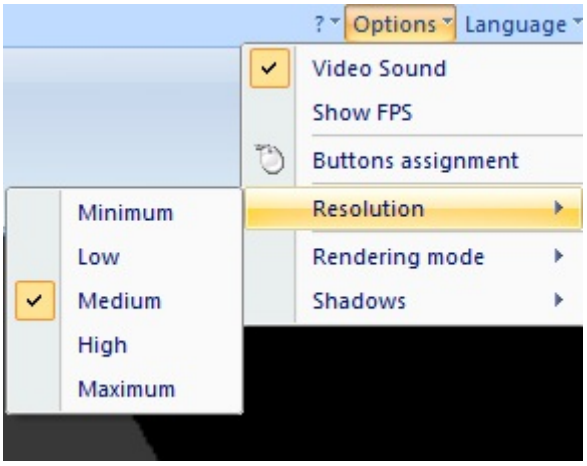
It is possible to switch between having the rendering of shadows enabled or disabled. Having shadows enabled will give a more realistic appearance to the 3D view, but disabling shadows may provide greater performance. To enable or disable shadow rendering, click on the "Shadows" checkbox on the rendering options toolbar.



3.2.Resolution

Resolution

It is possible to choose from 5 different levels of screen resolution for the 3D views. This option allows you to adapt the software to the performance of your graphic card. If the rendering is too slow, select a lower level of rendering.



3.3.Cameras

Cameras

Views

It is possible to move the camera with the mouse (see the buttons assignment from the "Options" menu) if the "Camera Moving" option is selected from the "Mouse" menu. Differents views (front, left...) can be selected from the "Camera" menu or from the toolbar. They can also be selected with the 1 to 5 keyboard keys.

Personal views

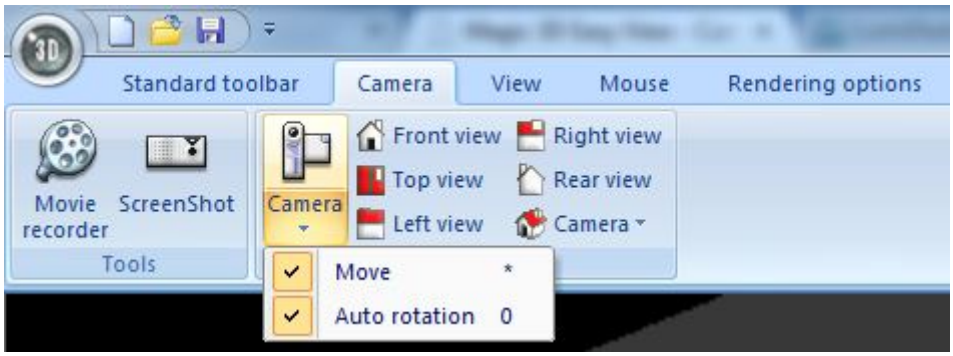
Up to 4 different views can be created in addition to the default ones, using the "Save" option from the menu. The current view (position and orientation) will then be saved. Those views can be called from the menu or with the 6 to 9 keyboard keys.

Auto rotation

An auto rotation option is available from the "Camera" menu or the 0 keboard key.

ScreenShot

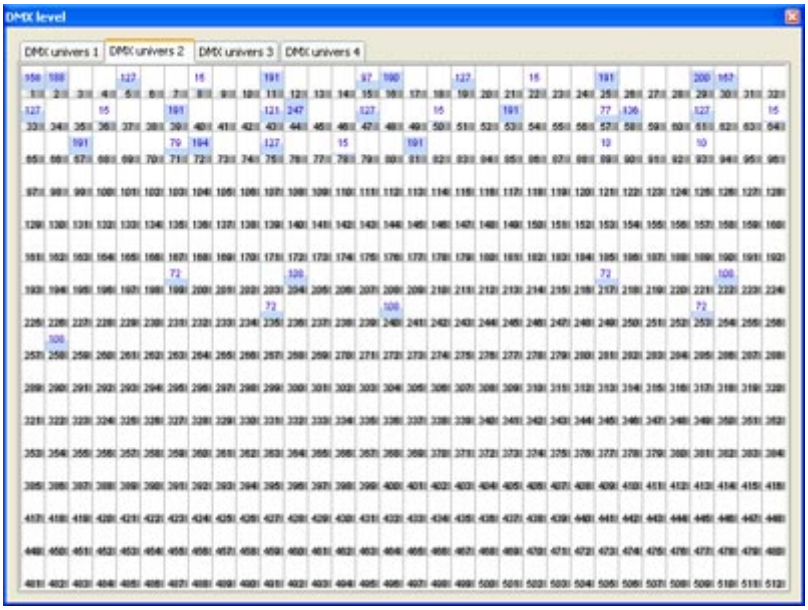
Pressing the ScreenShot button will allow you to save an image of the stage as you currently see it.



3.4.DMX levels

DMX levels

It is possible to visualize the DMX levels of the 4 universes by opening the following window from the "Standard" toolbar.



3.5.Universes patch

Universes patch

If not connected to another software, the 3D visualizer can receive up to 4 DMX universes through Art-Net. The user has to patch each universe to the correct input with the following window (available from the standard toolbar).

3.6.Movie recorder

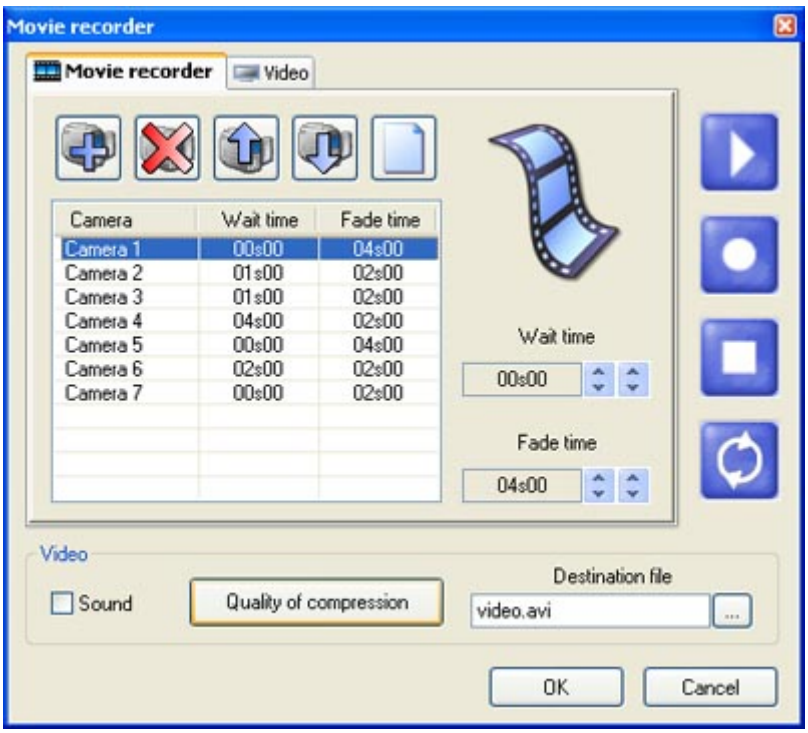
Movie recorder

It is possible to record a video, using the "Movie recorder" tool which is available from the "Camera" menu or from the toolbar.

The first tab allows you to specify a list of different points of view and their fade and a wait time. It is possible to preview the movie by clicking on the play button (you can select either to loop or not).

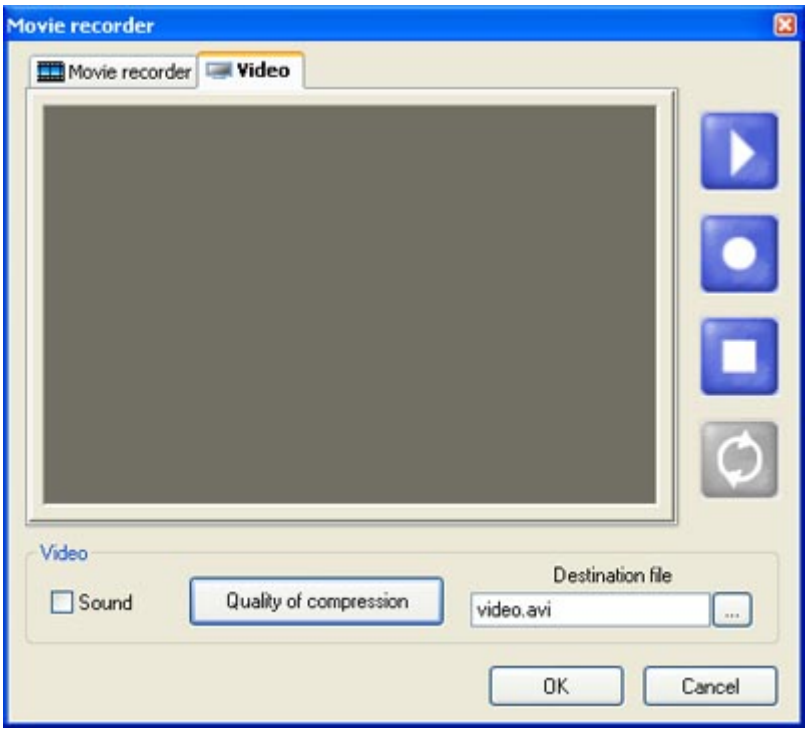
A destination file and a compression quality have to be selected before you can start recording. Once this is done, press the record button to start recording.

Positions are saved in the stage file. it is also possible to reset these positions by clicking on the "New" button. It is also possible to add sound to the video by selecting the sound option. The attached sound has to be played within the Windows Media Player while the video is being recorded. Make sure that the Windows recording options are correctly setup.



The second tab allows you to visualize the created video or to record a video following the movement of the mouse.

The "Play" button starts the selected video.



4.Construction mode

Build mode

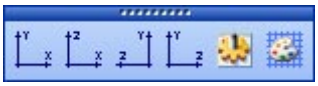
This chapter introduces the second mode of the software : Build mode. The screen is split and contains the 3D view, the "Objects settings" window, and the 2D views.

4.1.2D views

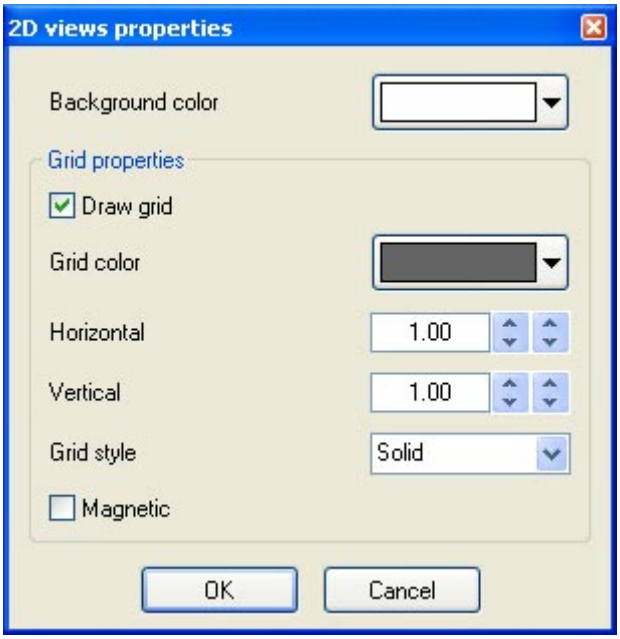
2D views

Position of views

The Build mode screen is split with the 3D view, the "Objects settings" window and the 2D views.



Grid options



4.2.Stage size and color

Stage size and color

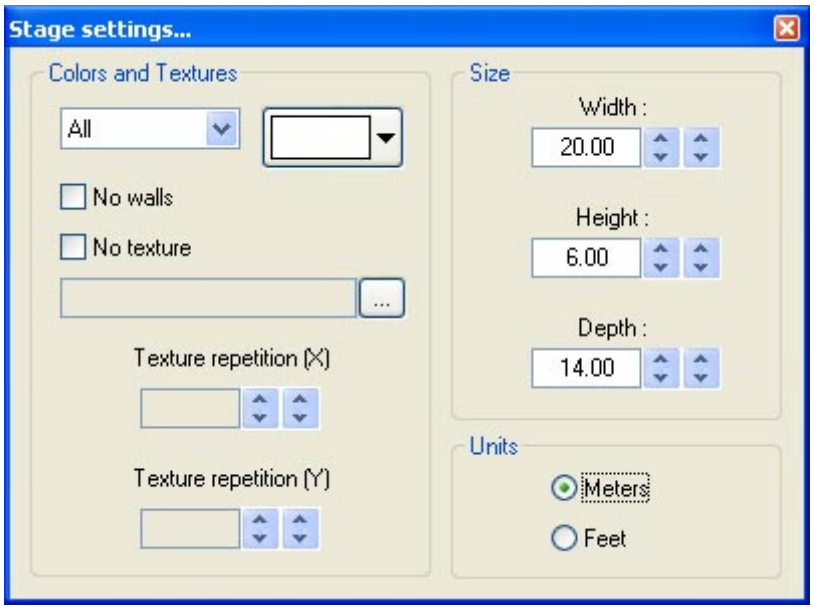
Colour and dimensions of stage (width, height and depth) can be defined within this window (available from the "Stage" menu or from the standard toolbar).

Colour & Textures

First you must select the face or select all faces to make your stage unicolored. To change colour, remove "x" from the "default" checkbox, then select the colour from the following window.

As for the colour, you must unselect the "Default" option to choose a texture for the walls. Select the image (BMP or JPG) by clicking on the "..." button. You can also make your texture repeating (horizontally and vertically) by using the "Texture repetition (X and Y)" controls.

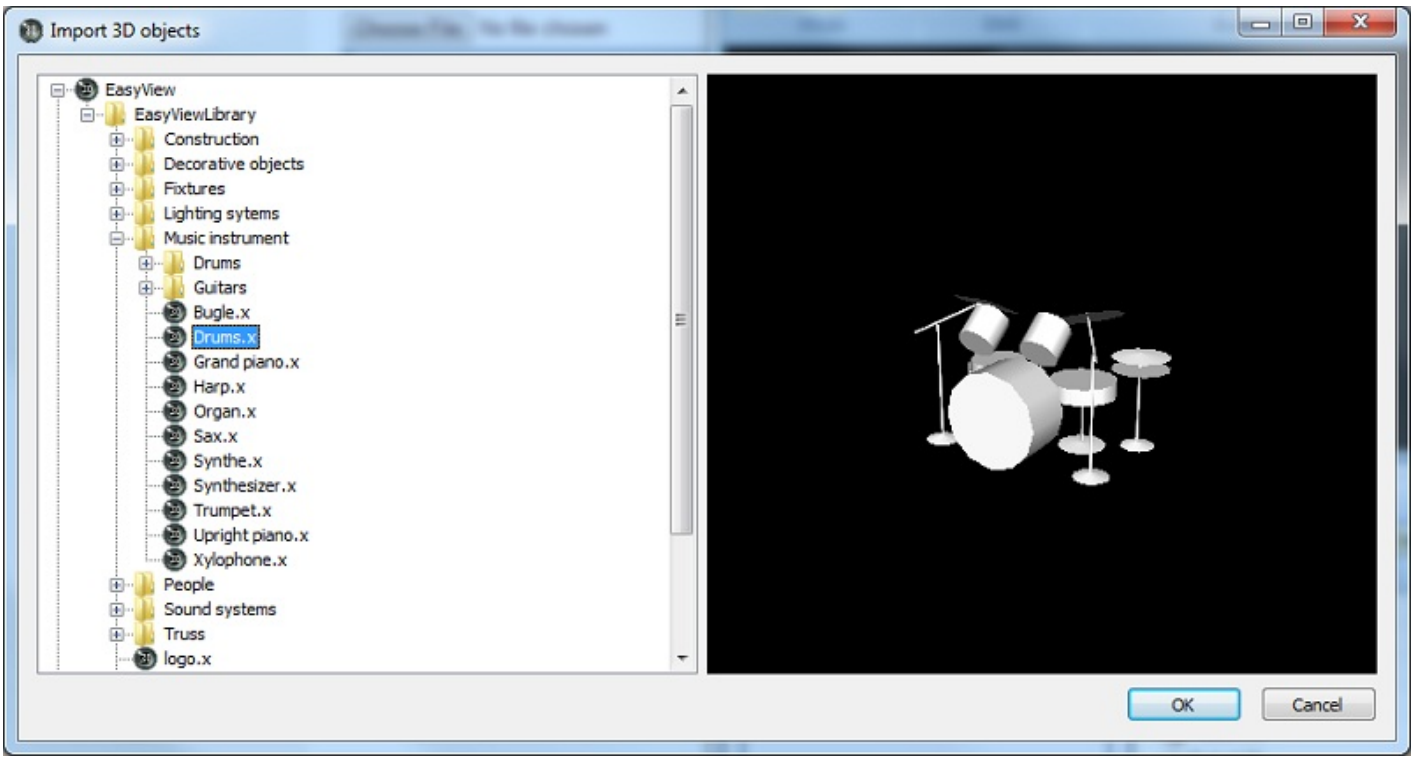
Units



4.3.Inserting objects

Insert objects

The software gives the opportunity to insert objects from a library. Trusses, furniture and sound systems can be found there. Objects may be removed from the stage at any time. To reach this library, you need to open the following window by clicking on the "Add" button :



The library on the left side displays the available objects to be inserted. Once selected, the object automatically appears in the visualization window. The object selected may be previewed before it is inserted. Click on "Select" to insert the object in your stage.

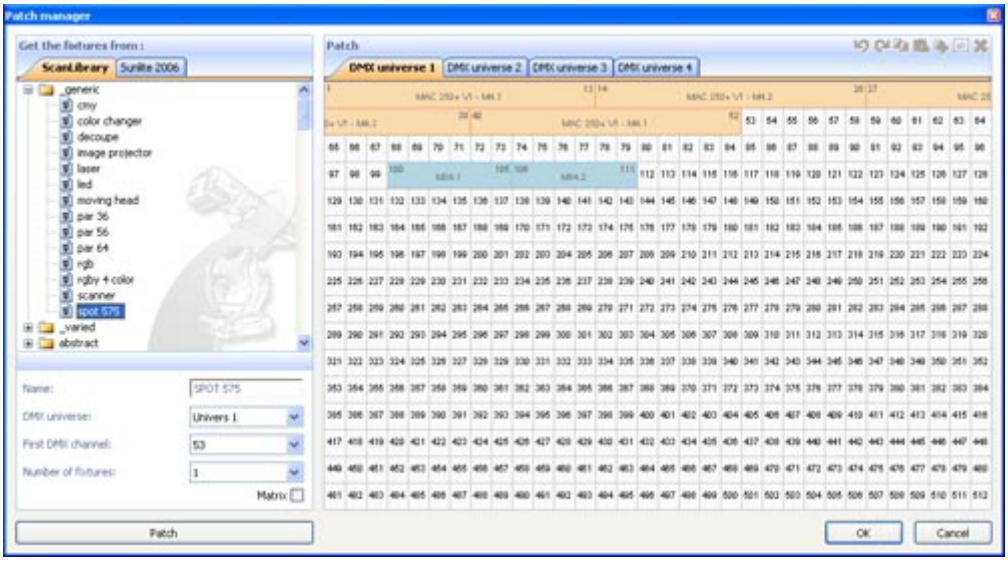
All the 3D objects available in the software are situated in the objects library. However you can use your own objects (X format). It is better to use simple objects because it is a real-time application and big objects can make the program run slowly.

If you want to insert objects coming from another library, you will have to choose whether you want to copy the object in the library.

4.4.Inserting fixtures

Insert fixtures

As for the objects, the software makes it possible to insert fixtures from the library by clicking on "Add fixture(s)" from the "Stage" menu or from the standard toolbar. The following window appears :



Select a fixture from the list and then patch it using the "Patch" button after having specified the starting DMX address and the number of devices or by drag&drop. Make sure you select the correct universe first by selecting the right tab.

It is also possible from the toolbar or by clicking with the right button of the mouse on a fixture to :

- copy/paste fixture(s)

- duplicate fixture (s) with a wizard

- rename a fixture

- delete fixture (s)

All actions can be canceled with the UNDO button.

To select a fixture, click on it or click and draw a selection rectangle. Then, moving the selected fixture (s) becomes possible by holding the left button of the mouse. To move a fixture to another universe, just drag it to the corresponding tab and this will open the new universe.

When controlled by another sofware, the 3D visualizer can receive the patch information directly. 2 modes are available :

· The "Automatic" mode will insert all fixtures from the controller patch and remove the current devices

of the 3D visualizer that are not in the controller.

· The "Manual" mode, allows you to patch any fixture coming from the controller or not (several fixtures can be patched to the same DMX address)

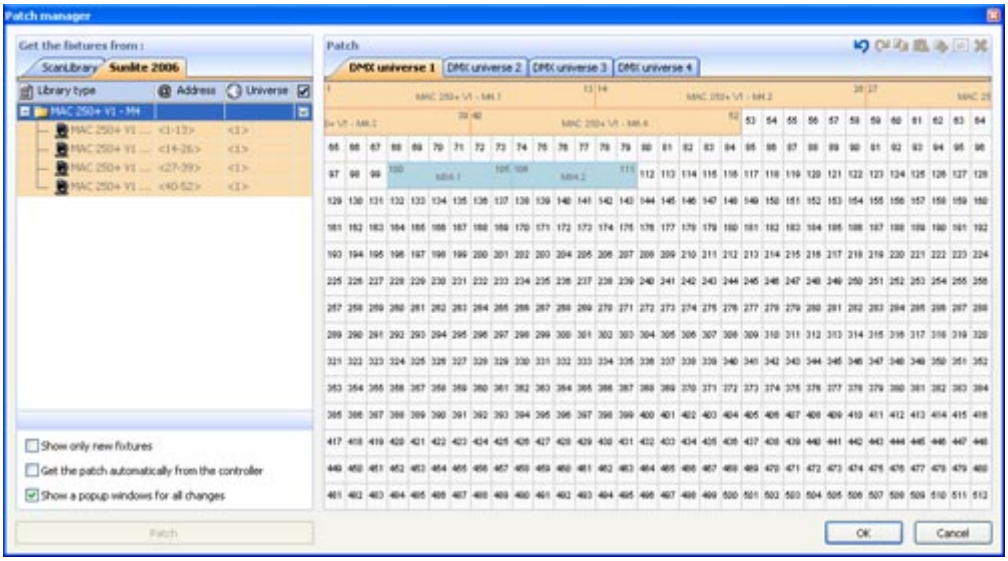
It is better to use this window only in "Automatic" mode to not lose all changes made before. The list on the left side shows the fixture information received from the controller. The "orange" fixtures are those available in the controller and already patched in the 3D visualizer, the "blue" are those patched in the 3D visualizer and not in the controller. The user can select the devices they wish to insert. Click on "Patch" to insert the selected fixtures.

The 3 options allow you to select the patch mode and 2 display options. Here they are :

· to show only the fixtures available in the controller and not patched in the 3D visualizer or the entire patch

· "automatic" or "manual" patch

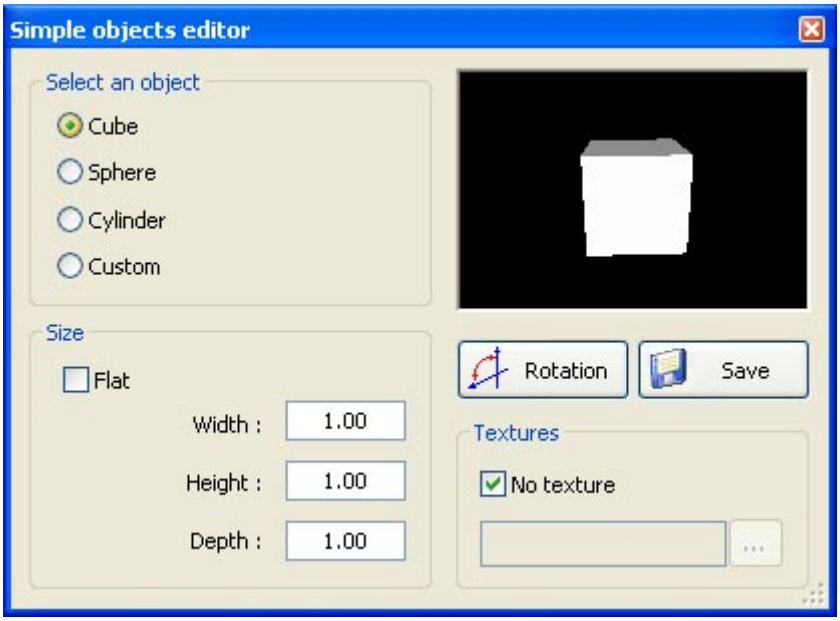
· whether or not to display the popup window when the patch has changed



4.5.Simple objects editor

Simple objects editor

This new tool enables you to create your own objects and reuse them later on:



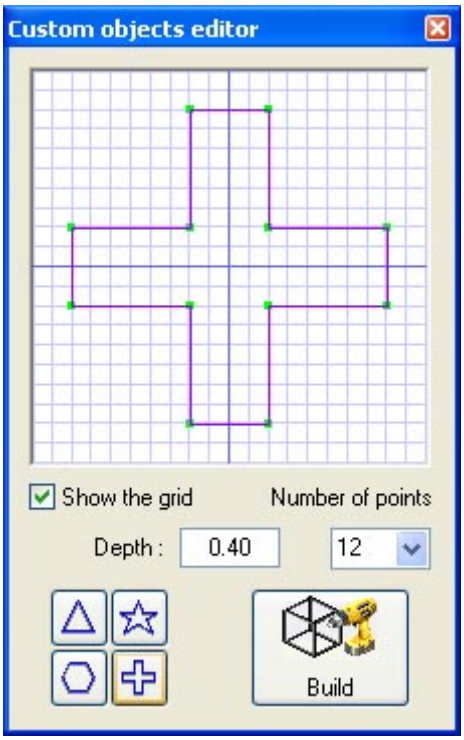
3 different types of objects can be created:

· Cube
· Sphere
· Cylinder

You can modify dimensions and then save them under the Microsoft X format. The "Flat" option enables you to add 2 cm in height and to quickly create a rectangular or circular screen in shape and reuse it over and over again in your future stages.

Textures

You can also add a texture to an object. You must unselect the "No" option to do so. Then, you just have to select an image by clicking on the "..." button.

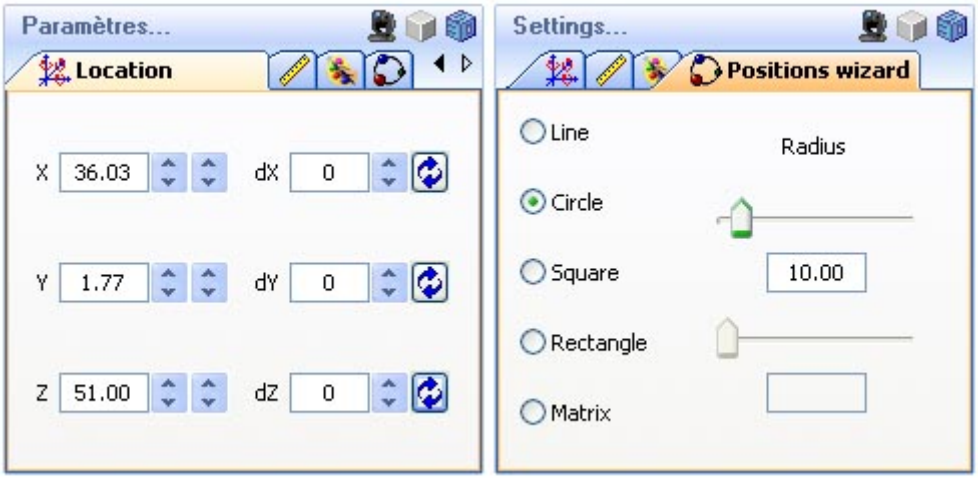


4.6.Objects settings

Objects settings

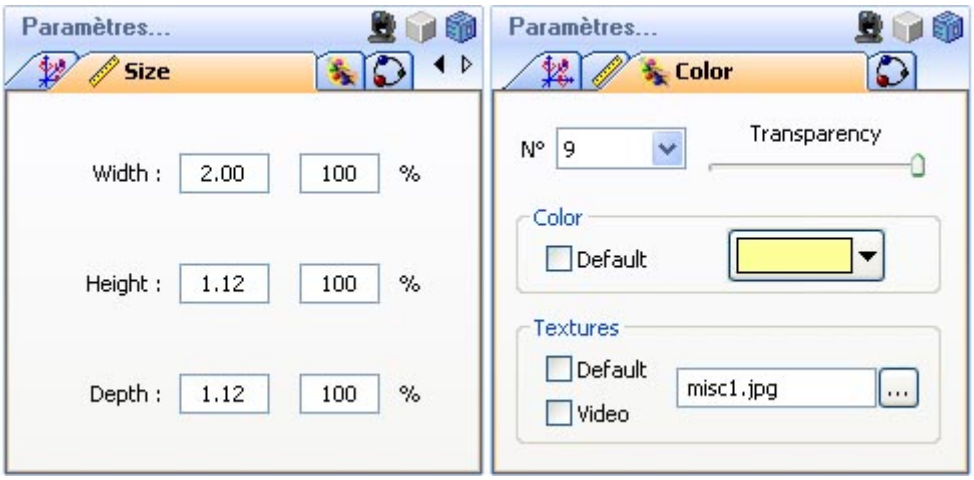
Moving objects or fixtures

In this window, objects and fixtures can be shifted individually or in a group using the multi-selection mode. There are six different settings available: three movements on the X, Y, Z axis (width, height and depth of the stage) and also three rotating movements around these very axes. Thus, objects can be positioned as they actually are on your stage. You must open the "Location" tab to do so and select objects and fixtures from the list (see below). The last tab allows you to simply setup the positions of the fixtures in line, circle, rectangle...



Changing size and colour of objects

We must go to the "Size" and "Color" tabs to change these settings. It is possible to modify the transparency of a 3D objects, this can be very useful to create a window...



Fixtures list

The list is located in the "Objects" tab of the "Objects settings" window. All fixtures are listed and folders can be created to simply classify them. The drag & drop is used to move the fixtures within the list. To add a new folder, click on the "New folder" button from the toolbar. The up and down arrow allow to expand or collapse the list.

To rename a fixture, double click on it and then enter the new name. It is also possible to select another layer for the fixtures by double clicking on the layer cell and selecting a layer from the list.

The list shows information that can not be modified like the name of the profile, or the DMX address and some options that can be modified like the beam color, the frost effect and gives the possibility to invert PAN/TILT channels.

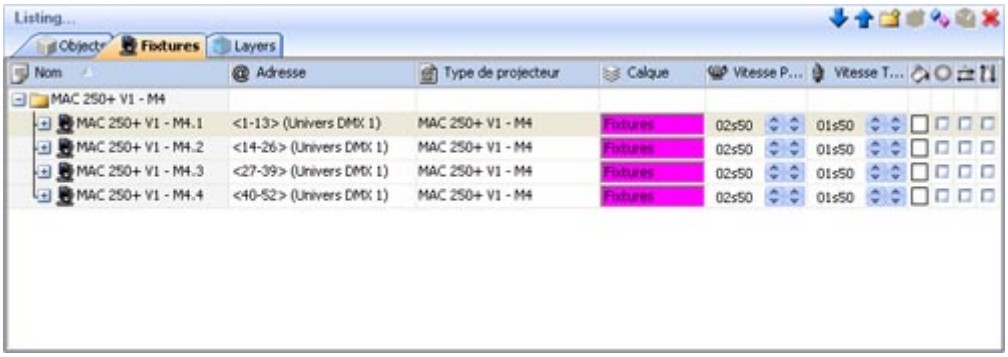
The 4 last columns are :

- Gel color (can be modified by clicking on the color)

- The frost effect (a frost effect is available for every fixture)

- Invert Pan

- Invert Tilt



Duplicate objects

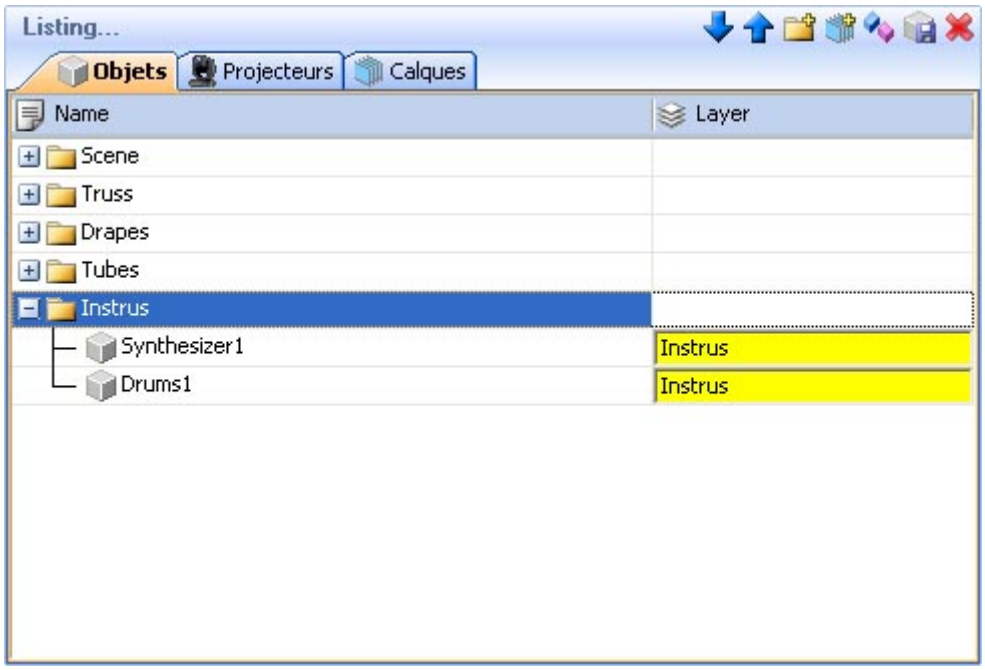
By using the "Duplicate" function, you can edit in and quickly position one or several objects. For example, imagine that you have designed a set of truss elements in circle and that you would like to carry out the same layout at 4 meters away on the left side... The "Duplicate" function enables you to reinsert the whole set of objects and to move them proportionally in order to get a similar layout. Now, you can select your first group of objects (referred to as "circle 1") and by a simple mouse click, make the following "Duplicate" menu appear on the screen.

Objects list

The list is located in the "Objects" tab of the "Objects settings" window. All objects are listed and folders can be created to simply classify them. The drag & drop is used to move the objects within the list. To add a new folder, click on the "New folder" button from the toolbar. The up and down arrow allow you to expand or collapse the list.

To rename an object, double click on it and then enter the new name. It is also possible to select another layer for the objects by double clicking on the layer cell and selecting a layer from the list.

Note: It is possible to choose whether or not to display column of the list by clicking on the title bar with the right mouse button.



4.7.Layers

Layers

Like picture editing sofware, the 3D visualizer works with layers. All fixtures and objects are included in one or several layers. By default, all inserted objects are placed in the "Objects" layer and the fixtures in the "Fixtures" layer. However, the user can create their own layers and move objects and fixtures from layer to layers by drag & drop.

Here are the layers properties :

· Color: A color can be defined for each layer, all objects of this layer will be displayed with this color in the 2D views

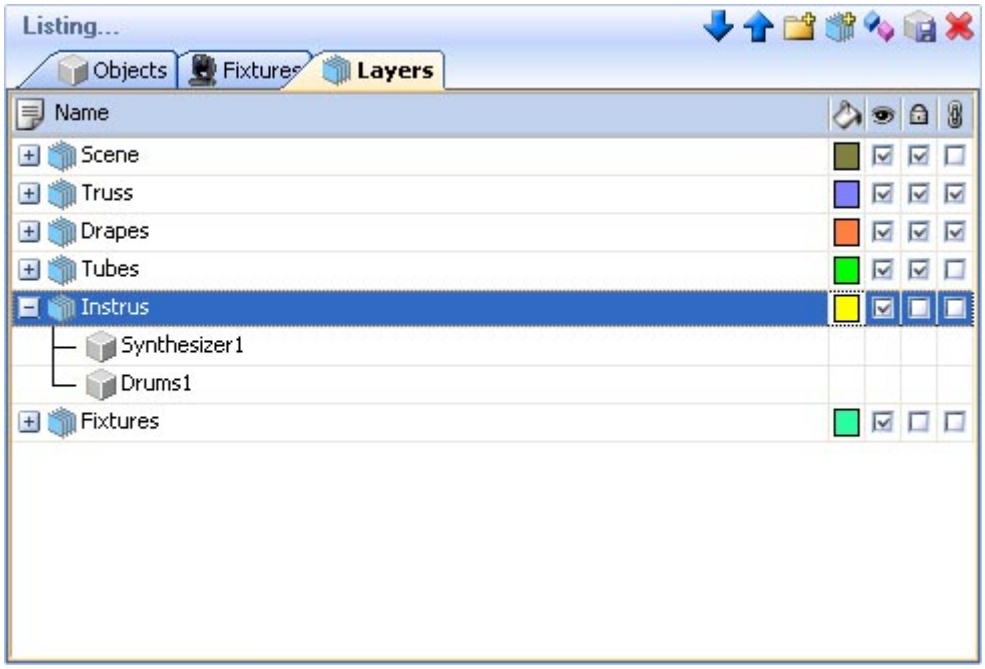
· Visible or not: A layer can be visible or not, this changes the object/fixture visibility in the 2D and 3D views.

· Lock or not: A layer can be locked and therefore all included objects and fixtures cannot be moved. The objects of a locked layer are shown in green when they are selected.

· Group: This option can be very useful when several objects have to be moved together. This feature allows you to move all the layer like a single object.

For instance: Place several fixtures and the truss in the same layer and group it. Now, when a fixture is selected, the entire layer can be moved or rotate like a single object.

Note: Once a layer is grouped, adding a new object is not possible anymore. The layer must be ungrouped to add or remove an object.


Listing...
Objects
Fixtures
Layers
Name
Scene
Truss
Drapes
Tubes
Instrus
Synthesizer1
Drums1
Fixtures

5.Appendix

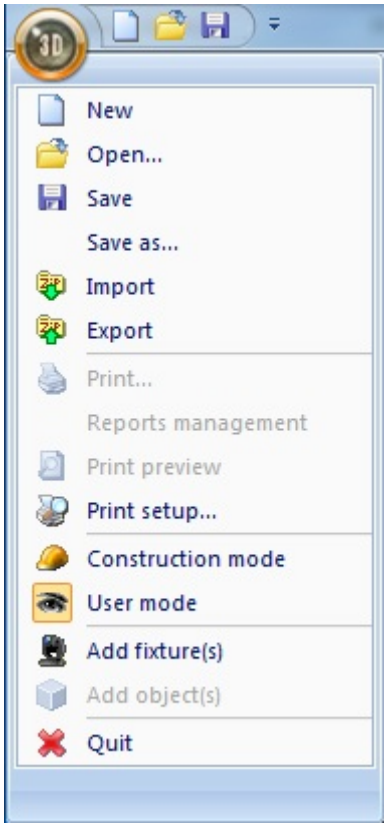
This chapter introduces all the menus, toolbars and shortcuts of the software. The last section shows what to check/do in case of problem with the software.

5.1.Menus

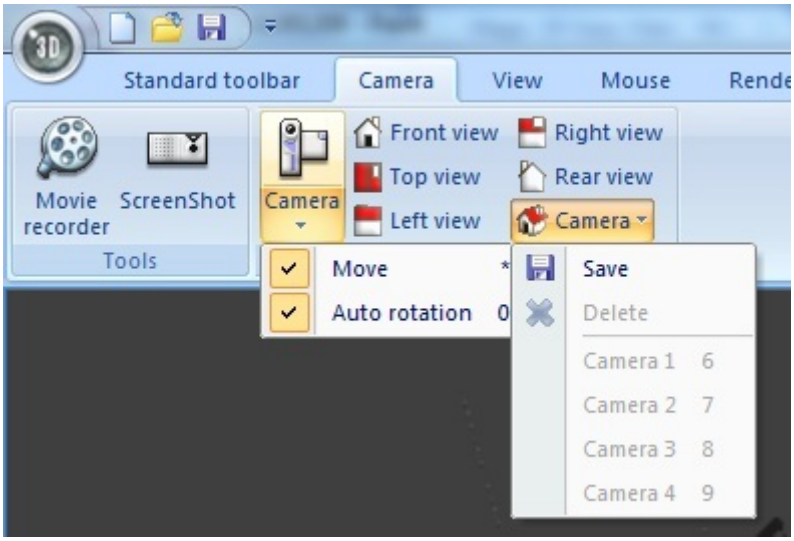
Menus

Menus summary

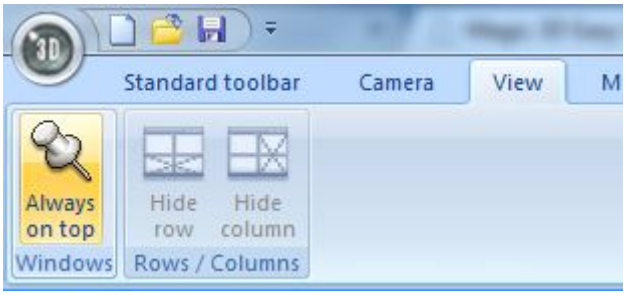
· Create a new 3D stage
· Open a 3D stage
· Save the 3D stage
· Save the 3D stage with another name
· Import a 3D stage
· Export a 3D stage
· Print
· Open the reports management
· Print preview
· Print properties
· Open the Construction mode
· Open the User mode
· Add fixtures
· Add objects
· Exit the sofware



· Open the "Movie recorder" window
· Create a screenshot
· Move the camera
· Auto rotation
· Front view
· Right view
· Left view
· Top view
· Rear view
· Save the current position of the camera
· Delete the selected camera
· Custom camera 1
· Custom camera 2
· Custom camera 3
· Custom camera 4



· Always visible option
· Display or not the the lower half of the screen
· Display or not the the right half of the screen



· Option to save automatically when exiting the sofware
· Enable/disable the sound for any video played in the 3D stage
· Open the buttons assignment window
· Change the screen resolution
· Change the rendering mode
· Enable/Disable shadows

· Change the sofware language...
· Open the "About" window
· Start the online help

5.2.Toolbars

Toolbars summary (left to right)

Standard toolbar

· Create a new stage
· Open a stage
· Save the stage
· Always visible option
· Open Construction mode
· Open User mode
· Add new fixture(s)
· Open the DMX input window
· Open the universes patch
· Open the stage settings window
· Open the simple objects editor
· Undo
· Redo

Options toolbar

· Adjust ambient lighting
· Adjust the fog intensity

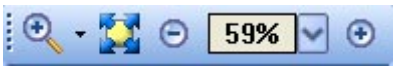
· Change the rendering level
· Enable/disable the "laser" rendering
· Enable/disable shadows

Camera toolbar

· Open the movie maker window
· Create a screen shot
· Camera menu

Zoom toolbar

· Zoom menu (assign a zoom function to the left button of the mouse)
· Fit
· Zoom OUT
· Zoom fader
· Zoom IN



5.3.Shortcuts

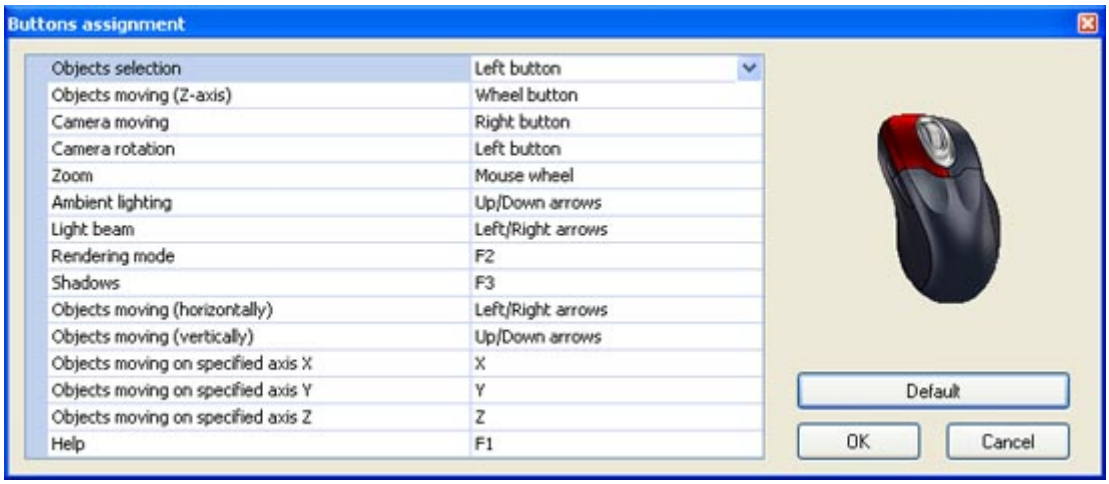
Shortcut keys

0 Automatic rotation
1 Front view
2 Right view
3 Left view
4 Top view
5 Rear view
6 Camera 1 (personal)
7 Camera 2 (personal)
8 Camera 3 (personal)
9 Camera 4 (personal)
* Move camera

Esc Quit the sofware

Delete Delete selected layers, fixtures or objects
Ctrl+'N' Create a new 3D stage

Ctrl+'O' Open an existing 3D stage
Ctrl+'Z' Undo
Ctrl+'Y' Redo



5.4.Troubleshooting

Here is a list of first things to be checked in case of problem with the software

· Please check that Microsoft DirectX 9b or any up to date version is installed on the computer

· Make sure that graphic cards drivers are correctly installed

. Under Windows XP, please check that the hardware acceleration is at full in the "Troubleshoot" tab of the graphic card advanced properties window.

· If DirectX is correctly installed, enter "DXDIAG" in the "Run..." section of the "Start" menu. In the "Display" tab, please check that the following features are enabled

- DirectDraw acceleration

- Direct3D acceleration