

Magic 3D Easy View

English

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1.Preface

Preface

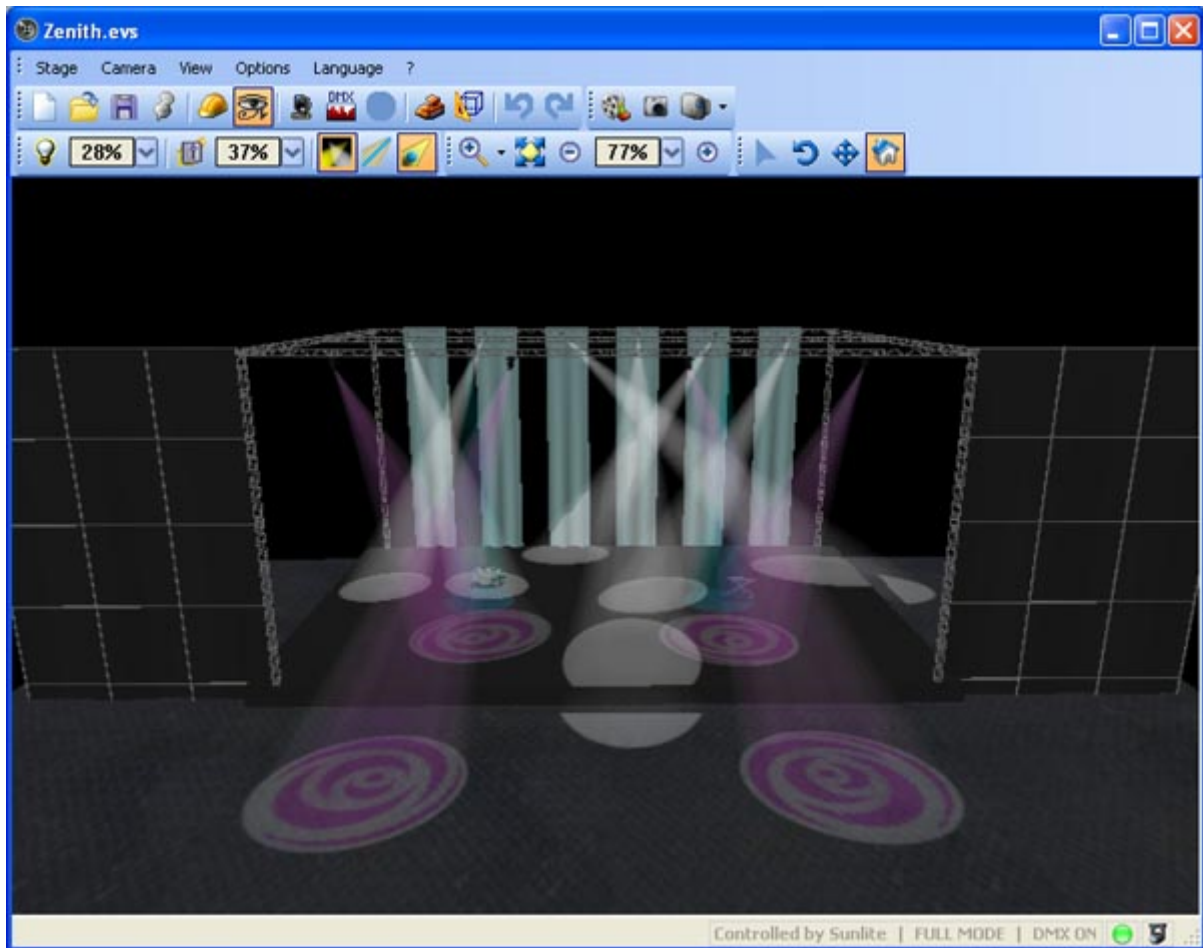
Our visualizer provides a real-time 3D rendering of your stage. It allows you to preview light movement, colors, and every other effect available in robotic/intelligent lighting (iris, strobe, dimmer, shutter, etc). Light beams from conventional lighting (PAR) can be visualized as well.

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.



2.First steps

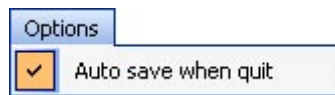
First steps

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.

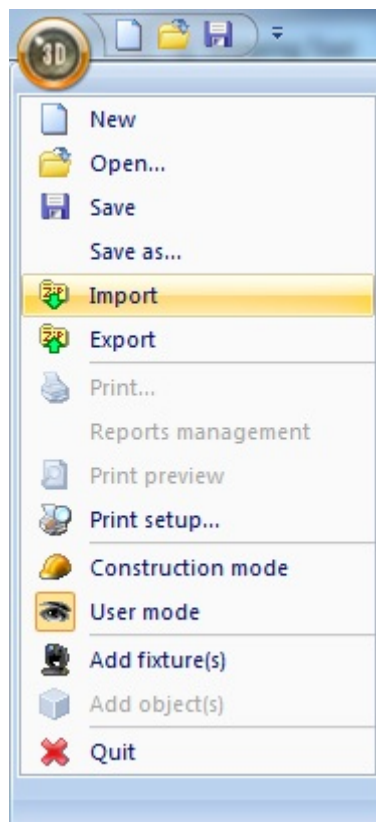
2.1.3D stage

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.

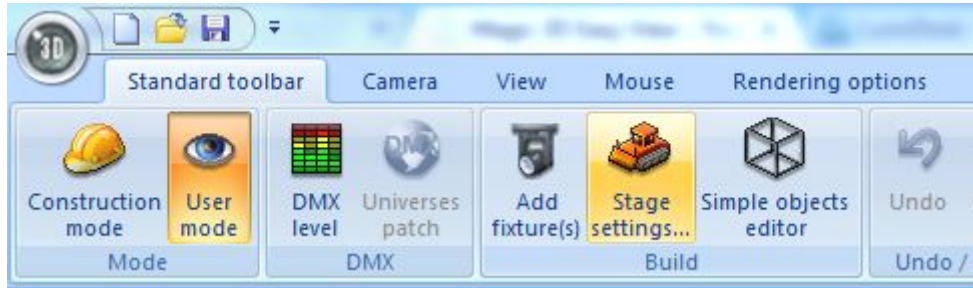


2.2.Your first stage

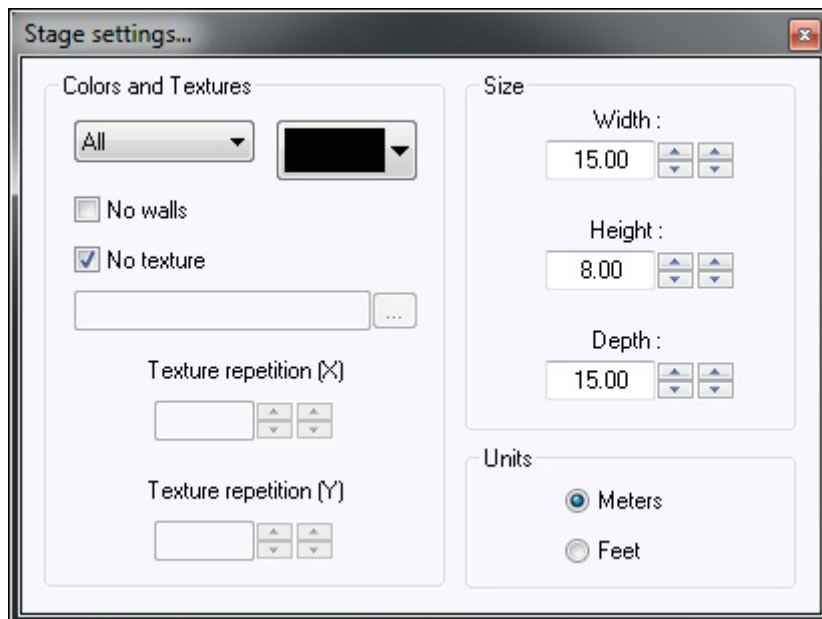
Your first stage

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.

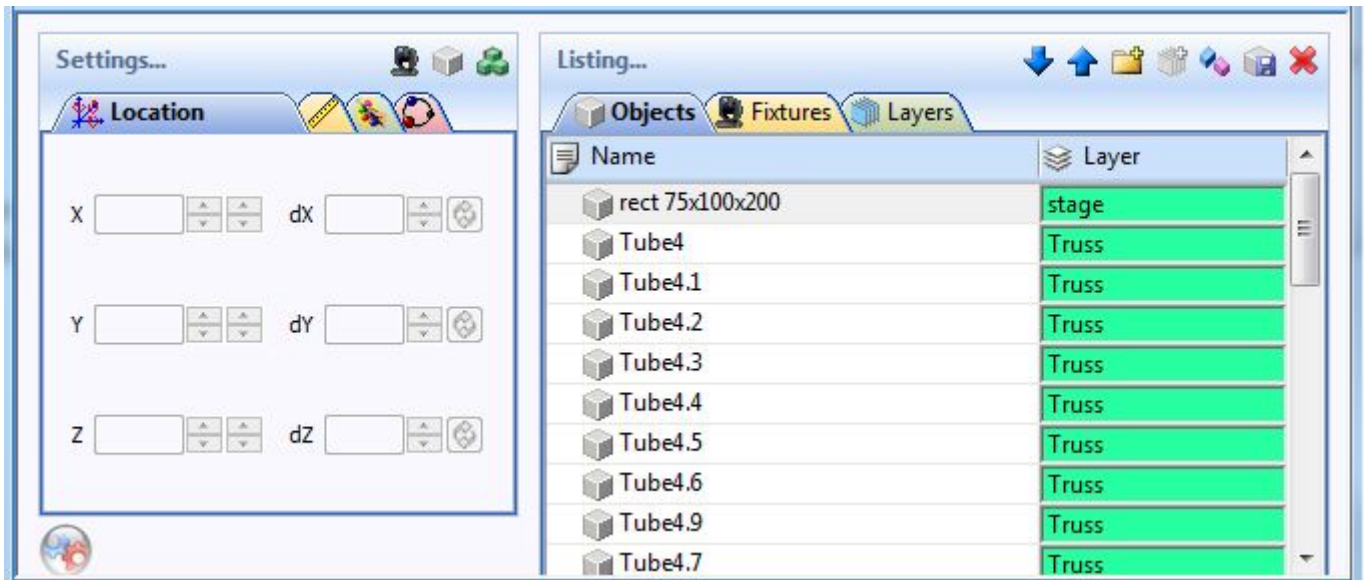
Your First Stage



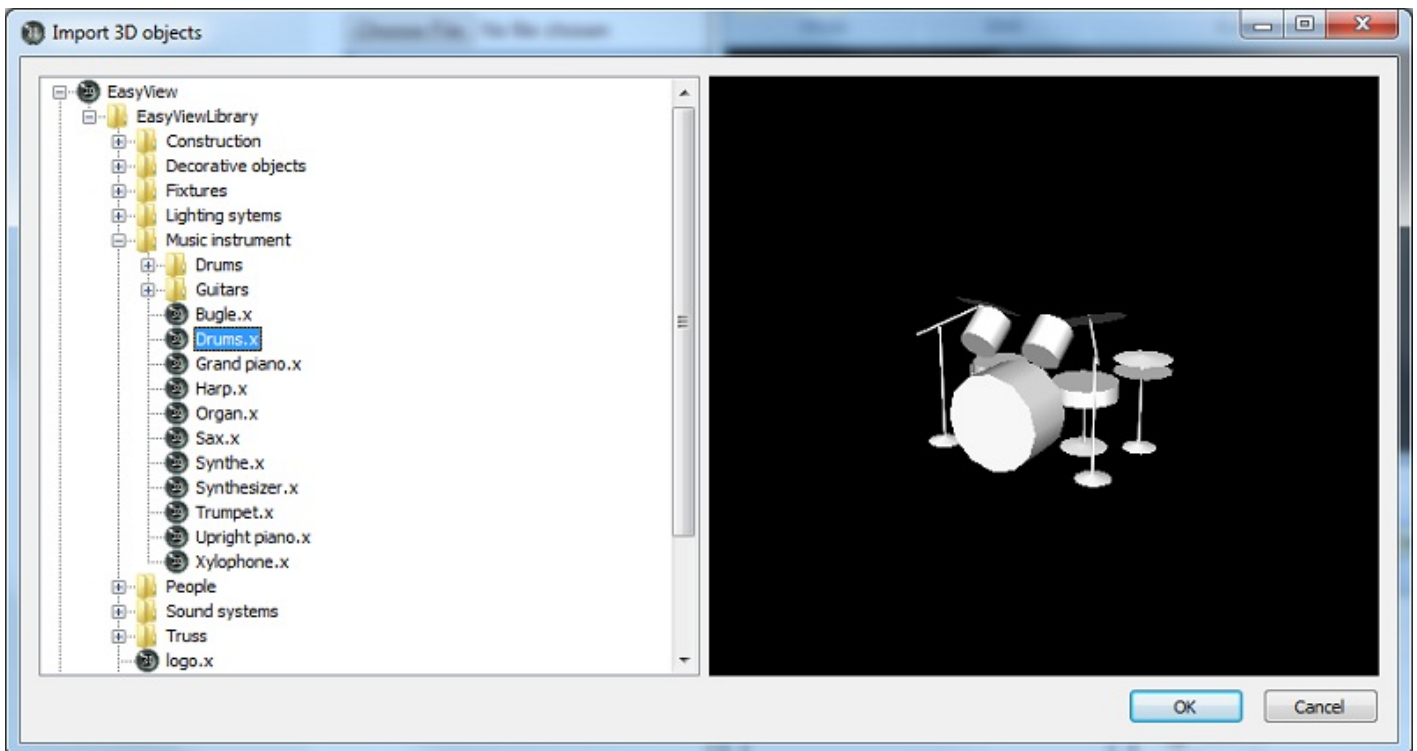
- From the standard toolbar, select [Stage settings]. A window will open, where you can adjust the size and color/texture for each of the walls on your stage. Notice the options available to select individual walls, show or hide walls, repeat textures in both the X and Y axis, and change units between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

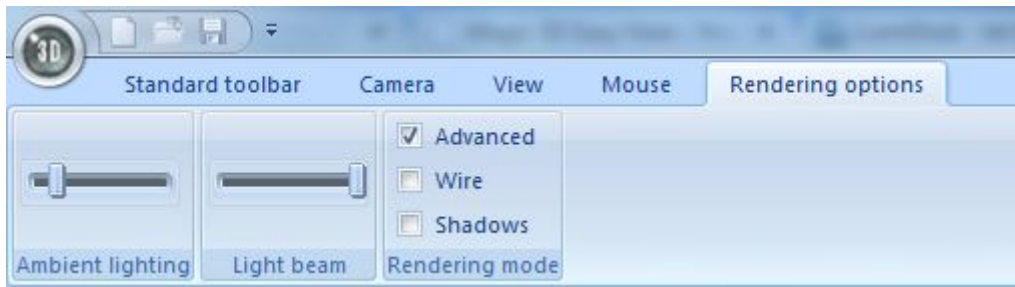
It is possible to switch between "Normal" and "Advanced" rendering mode. The software starts automatically in "Advanced" mode if your graphic card is compatible. However you can switch to the "Normal" mode if you think that it runs too slowly by unchecking the "Advanced" checkbox on the Rendering Options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

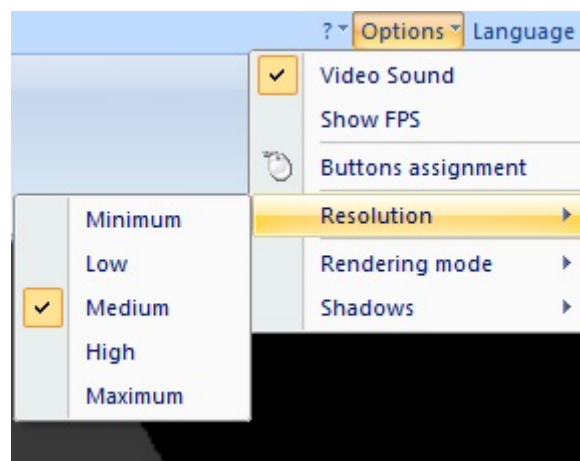
It is possible to switch between having the rendering of shadows enabled or disabled. Having shadows enabled will give a more realistic appearance to the 3D view, but disabling shadows may provide greater performance. To enable or disable shadow rendering, click on the "Shadows" checkbox on the rendering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

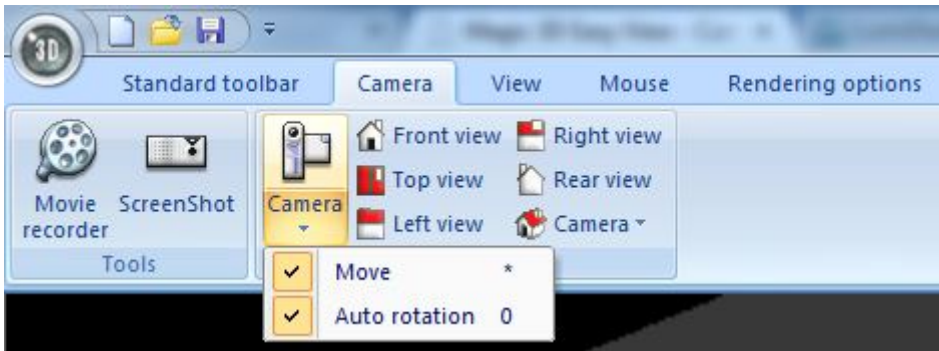
Up to 4 different views can be created in addition to the default ones, using the "Save" option from the menu. The current view (position and orientation) will then be saved. Those views can be called from the menu or with the 6 to 9 keyboard keys.

Auto rotation

An auto rotation option is available from the "Camera" menu or the 0 keyboard 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

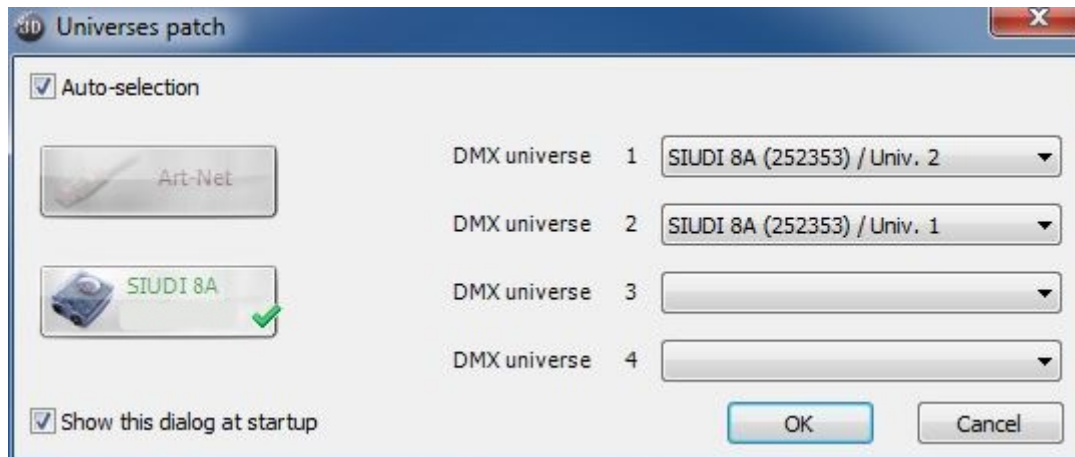
It is possible to visualize the DMX levels of the 4 universes by opening the following window from the "Standard" toolbar.

DMX level			
DMX univers 1	DMX univers 2	DMX univers 3	DMX univers 4
158	188	122	15
127	15	181	121
331	341	351	361
651	661	671	681
971	981	991	1001
1291	1301	1311	1321
1611	1621	1631	1641
1931	1941	1951	1961
2251	2261	2271	2281
2571	2581	2591	2601
2891	2901	2911	2921
3211	3221	3231	3241
3531	3541	3551	3561
3851	3861	3871	3881
4171	4181	4191	4201
4491	4501	4511	4521
4811	4821	4831	4841
5131	5141	5151	5161
5451	5461	5471	5481
5771	5781	5791	5801
6091	6101	6111	6121
6411	6421	6431	6441
6731	6741	6751	6761
7051	7061	7071	7081
7371	7381	7391	7401
7691	7701	7711	7721
8011	8021	8031	8041
8331	8341	8351	8361
8651	8661	8671	8681
8971	8981	8991	9001
9291	9301	9311	9321
9611	9621	9631	9641
9931	9941	9951	9961
10251	10261	10271	10281
10571	10581	10591	10601
10891	10901	10911	10921
11211	11221	11231	11241
11531	11541	11551	11561
11851	11861	11871	11881
12171	12181	12191	12201
12491	12501	12511	12521
12811	12821	12831	12841
13131	13141	13151	13161
13451	13461	13471	13481
13771	13781	13791	13801
14091	14101	14111	14121
14411	14421	14431	14441
14731	14741	14751	14761
15051	15061	15071	15081
15371	15381	15391	15401
15691	15701	15711	15721
16011	16021	16031	16041
16331	16341	16351	16361
16651	16661	16671	16681
16971	16981	16991	17001
17291	17301	17311	17321
17611	17621	17631	17641
17931	17941	17951	17961
18251	18261	18271	18281
18571	18581	18591	18601
18891	18901	18911	18921
19211	19221	19231	19241
19531	19541	19551	19561
19851	19861	19871	19881
20171	20181	20191	20201
20491	20501	20511	20521
20811	20821	20831	20841
21131	21141	21151	21161
21451	21461	21471	21481
21771	21781	21791	21801
22091	22101	22111	22121
22411	22421	22431	22441
22731	22741	22751	22761
23051	23061	23071	23081
23371	23381	23391	23401
23691	23701	23711	23721
24011	24021	24031	24041
24331	24341	24351	24361
24651	24661	24671	24681
24971	24981	24991	25001
25291	25301	25311	25321
25611	25621	25631	25641
25931	25941	25951	25961
26251	26261	26271	26281
26571	26581	26591	26601
26891	26901	26911	26921
27211	27221	27231	27241
27531	27541	27551	27561
27851	27861	27871	27881
28171	28181	28191	28201
28491	28501	28511	28521
28811	28821	28831	28841
29131	29141	29151	29161
29451	29461	29471	29481
29771	29781	29791	29801
30091	30101	30111	30121
30411	30421	30431	30441
30731	30741	30751	30761
31051	31061	31071	31081
31371	31381	31391	31401
31691	31701	31711	31721
32011	32021	32031	32041
32331	32341	32351	32361
32651	32661	32671	32681
32971	32981	32991	33001
33291	33301	33311	33321
33611	33621	33631	33641
33931	33941	33951	33961
34251	34261	34271	34281
34571	34581	34591	34601
34891	34901	34911	34921
35211	35221	35231	35241
35531	35541	35551	35561
35851	35861	35871	35881
36171	36181	36191	36201
36491	36501	36511	36521
36811	36821	36831	36841
37131	37141	37151	37161
37451	37461	37471	37481
37771	37781	37791	37801
38091	38101	38111	38121
38411	38421	38431	38441
38731	38741	38751	38761
39051	39061	39071	39081
39371	39381	39391	39401
39691	39701	39711	39721
40011	40021	40031	40041
40331	40341	40351	40361
40651	40661	40671	40681
40971	40981	40991	41001
41291	41301	41311	41321
41611	41621	41631	41641
41931	41941	41951	41961
42251	42261	42271	42281
42571	42581	42591	42601
42891	42901	42911	42921
43211	43221	43231	43241
43531	43541	43551	43561
43851	43861	43871	43881
44171	44181	44191	44201
44491	44501	44511	44521
44811	44821	44831	44841
45131	45141	45151	45161
45451	45461	45471	45481
45771	45781	45791	45801
46091	46101	46111	46121
46411	46421	46431	46441
46731	46741	46751	46761
47051	47061	47071	47081
47371	47381	47391	47401
47691	47701	47711	47721
48011	48021	48031	48041
48331	48341	48351	48361
48651	48661	48671	48681
48971	48981	48991	49001
49291	49301	49311	49321
49611	49621	49631	49641
49931	49941	49951	49961
50251	50261	50271	50281
50571	50581	50591	50601
50891	50901	50911	50921
51211	51221	51231	51241
51531	51541	51551	51561
51851	51861	51871	51881
52171	52181	52191	52201
52491	52501	52511	52521
52811	52821	52831	52841
53131	53141	53151	53161
53451	53461	53471	53481
53771	53781	53791	53801
54091	54101	54111	54121
54411	54421	54431	54441
54731	54741	54751	54761
55051	55061	55071	55081
55371	55381	55391	55401
55691	55701	55711	55721
56011	56021	56031	56041
56331	56341	56351	56361
56651	56661	56671	56681
56971	56981	56991	57001
57291	57301	57311	57321
57611	57621	57631	57641
57931	57941	57951	57961
58251	58261	58271	58281
58571	58581	58591	58601
58891	58901	58911	58921
59211	59221	59231	59241
59531	59541	59551	59561
59851	59861	59871	59881
60171	60181	60191	60201
60491	60501	60511	60521
60811	60821	60831	60841
61131	61141	61151	61161
61451	61461	61471	61481
61771	61781	61791	61801
62091	62101	62111	62121
62411	62421	62431	62441
62731	62741	62751	62761
63051	63061	63071	63081
63371	63381	63391	63401
63691	63701	63711	63721
64011	64021	64031	64041
64331	64341	64351	64361
64651	64661	64671	64681
64971	64981	64991	65001
65291	65301	65311	65321
65611	65621	65631	65641
65931	65941	65951	65961
66251	66261	66271	66281
66571	66581	66591	66601
66891	66901	66911	66921
67211	67221	67231	67241
67531	67541	67551	67561
67851	67861	67871	67881
68171	68181	68191	68201
68491	68501	68511	68521
68811	68821	68831	68841
69131	69141	69151	69161
69451	69461	69471	69481
69771	69781	69791	69801
70091	70101	70111	70121
70411	70421	70431	70441
70731	70741	70751	70761
71051	71061	71071	71081
71371	71381	71391	71401
71691	71701	71711	71721
72011	72021	72031	72041
72331	72341	72351	72361
72651	72661	72671	72681
72971	72981	72991	73001
73291	73301	73311	73321
73611	73621	73631	73641
73931	73941	73951	73961
74251	74261	74271	74281
74571	74581	74591	74601
74891	74901	74911	74921
75211	75221	75231	75241
75531	75541	75551	75561
75851	75861	75871	75881
76171	76181	76191	76201
76491	76501	76511	76521
76811	76821	76831	76841
77131	77141	77151	77161
77451	77461	77471	77481
77771	77781	77791	77801
78091	78101	78111	78121
78411	78421	78431	78441
78731	78741	78751	78761
79051	79061	79071	79081
79371	79381	79391	79401
79691	79701	79711	79721
80011	80021	80031	80041
80331	80341	80351	80361
80651	80661	80671	80681
80971	80981	80991	81001
81291	81301	81311	81321
81611	81621	81631	81641
81931	81941	81951	81961
82251	82261	82271	82281
82571	82581	82591	82601
82891	82901	82911	82921
83211	83221	83231	

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

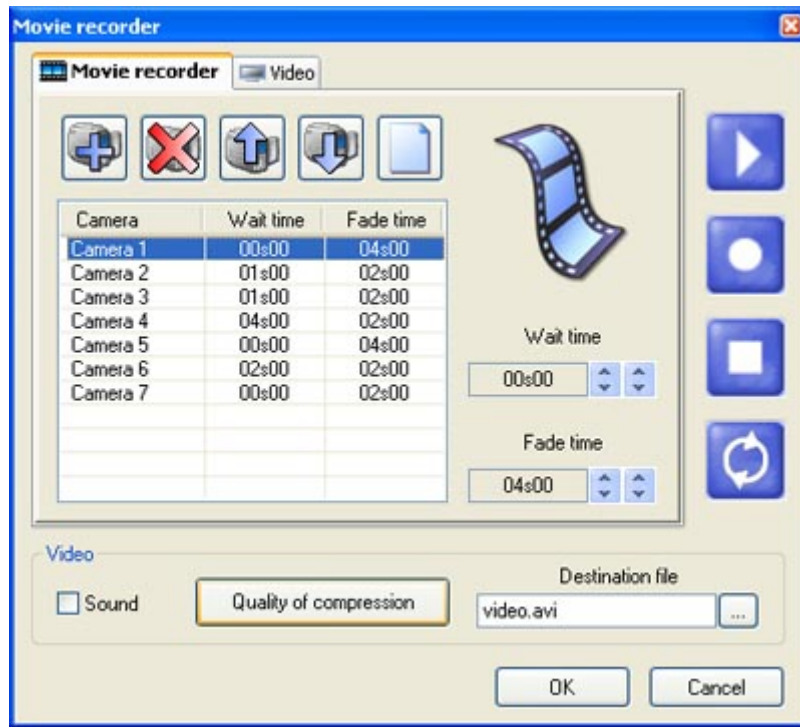
Movie recorder

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).

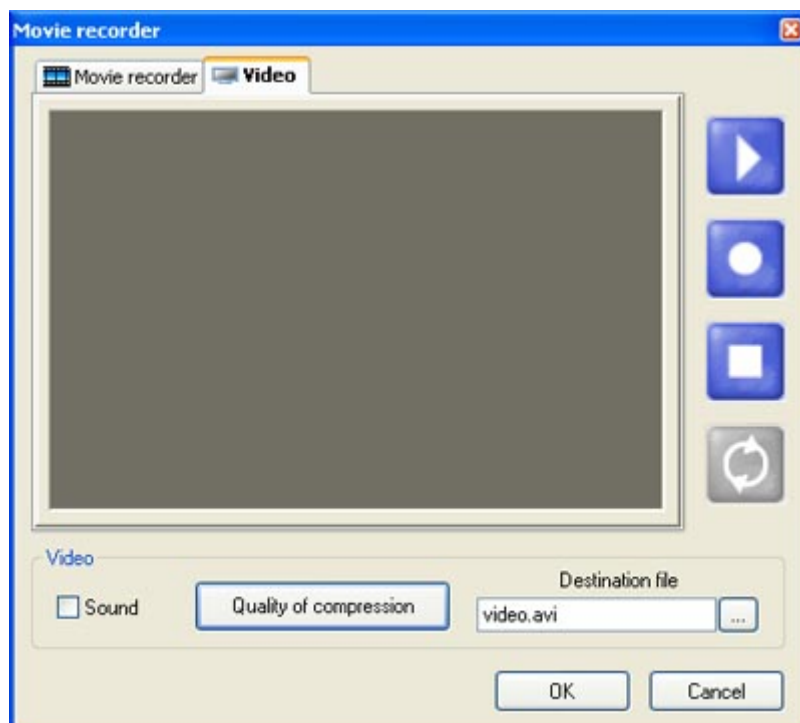
A destination file and a compression quality have to be selected before you can start recording. Once this is done, press the record button to start recording.

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

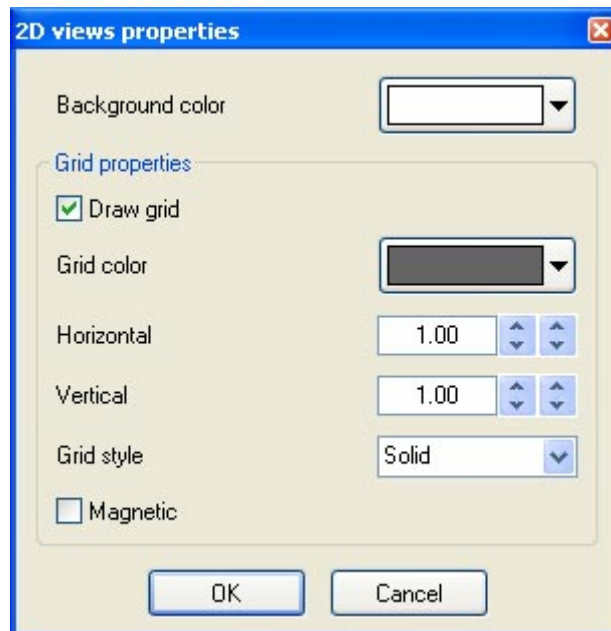
2D views

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

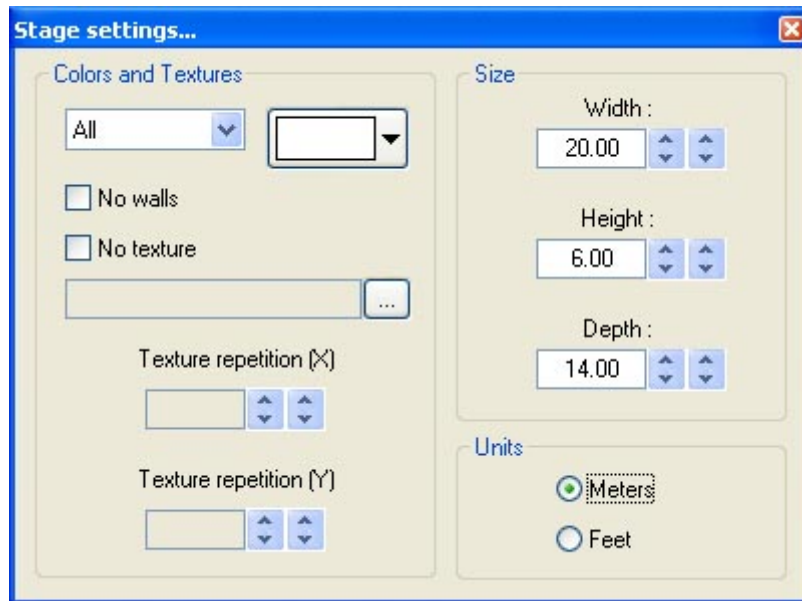
Colour and dimensions of stage (width, height and depth) can be defined within this window (available from the "Stage" menu or from the standard toolbar).

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.

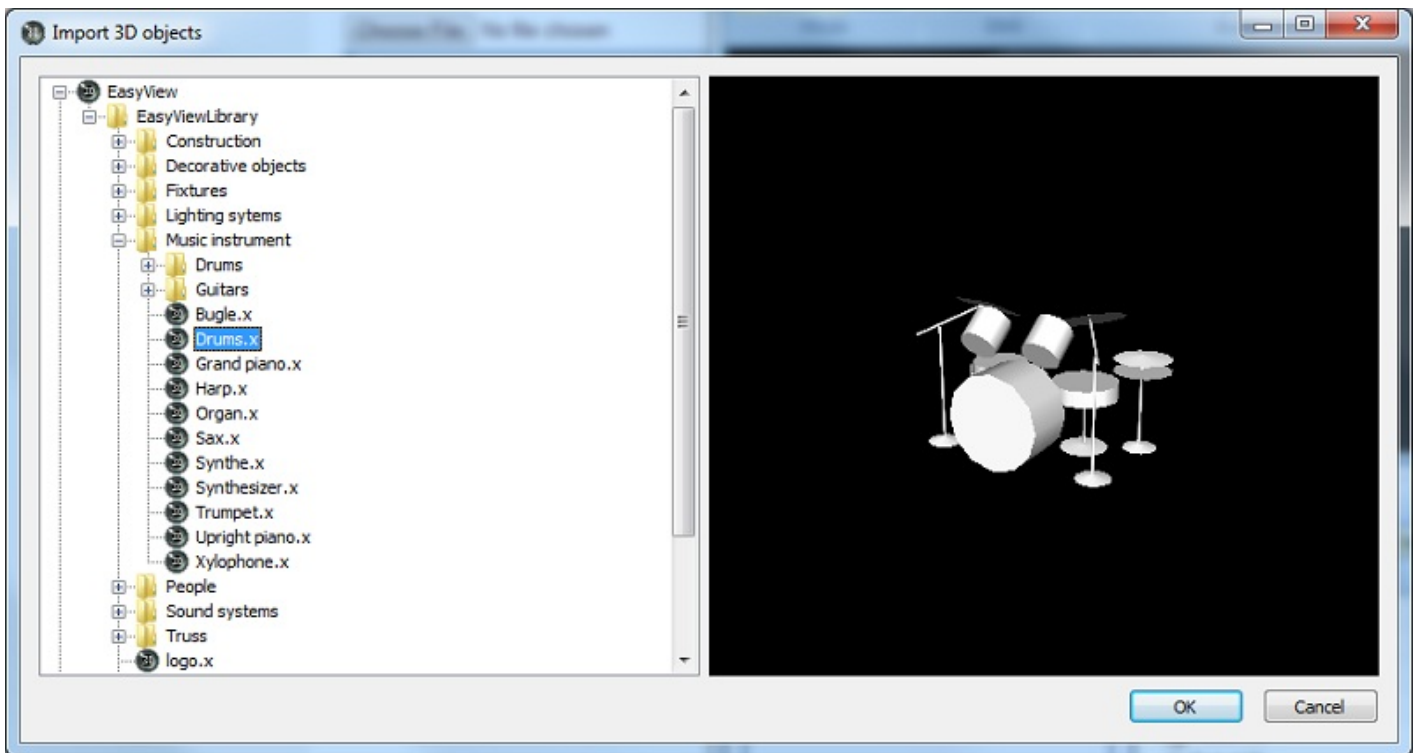
Units



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.

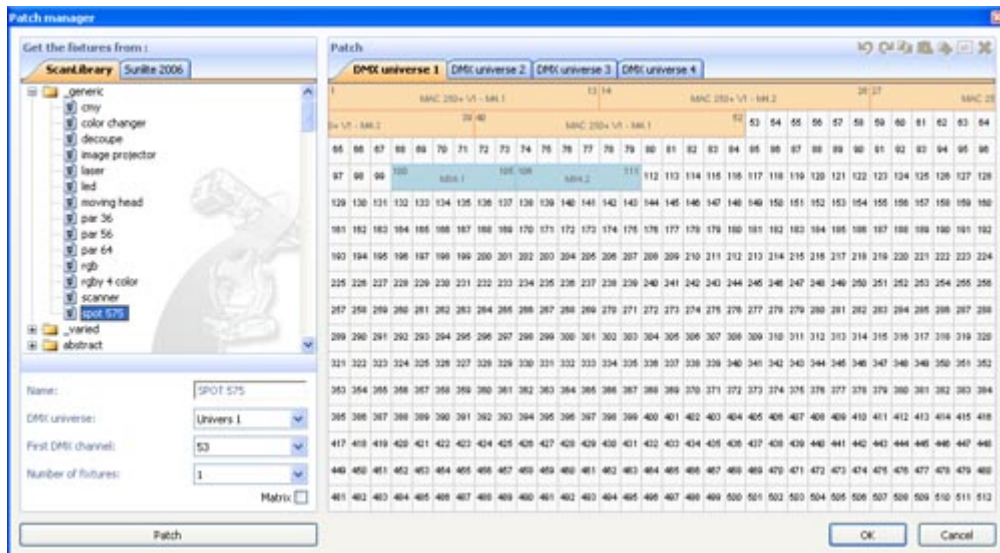
If you want to insert objects coming from another library, you will have to choose whether you want to copy the object in the library.



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 software, 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.

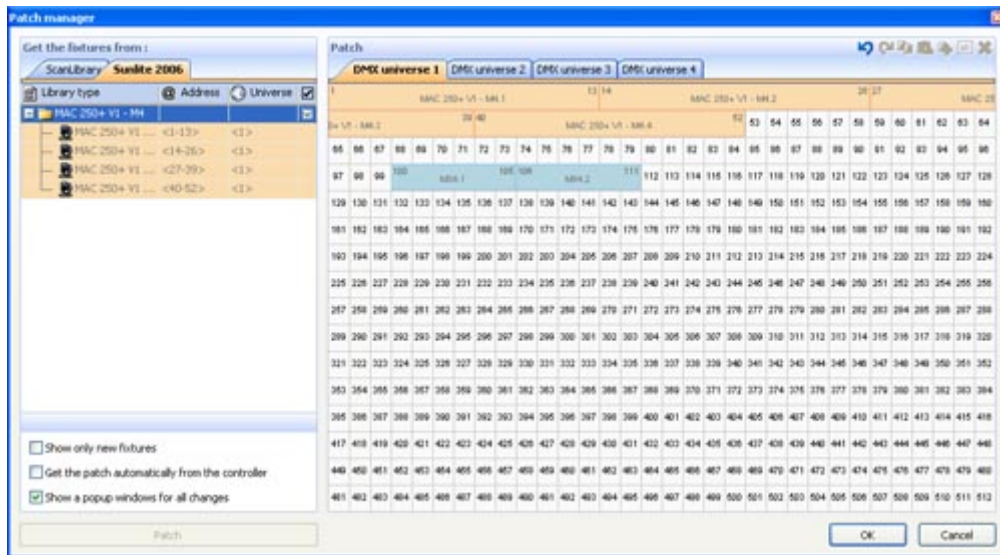
- The "Manual" mode, allows you to patch any fixture coming from the controller or not (several fixtures can be patched to the same DMX address)



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 :

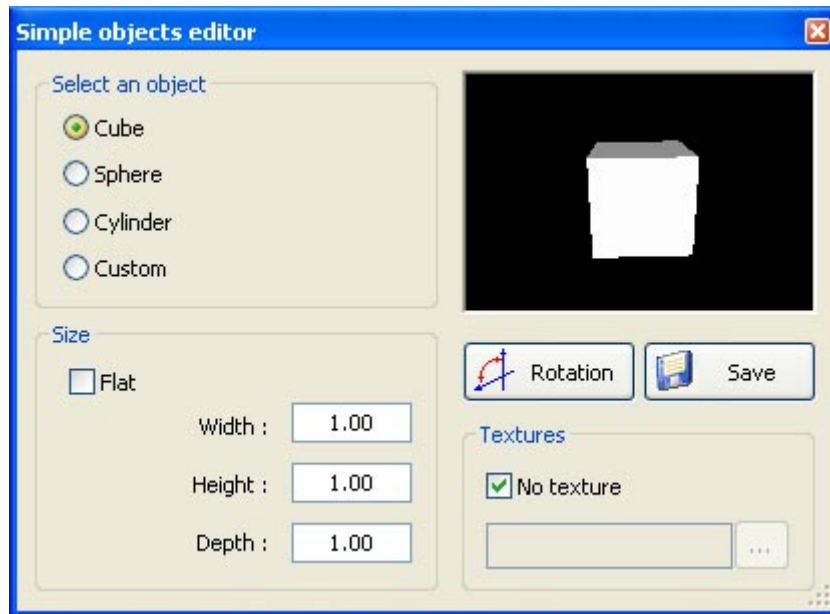
- to show only the fixtures available in the controller and not patched in the 3D visualizer or the entire patch
- "automatic" or "manual" patch
- whether or not to display the popup window when the patch has changed



4.5.Simple objects editor

Simple objects editor

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



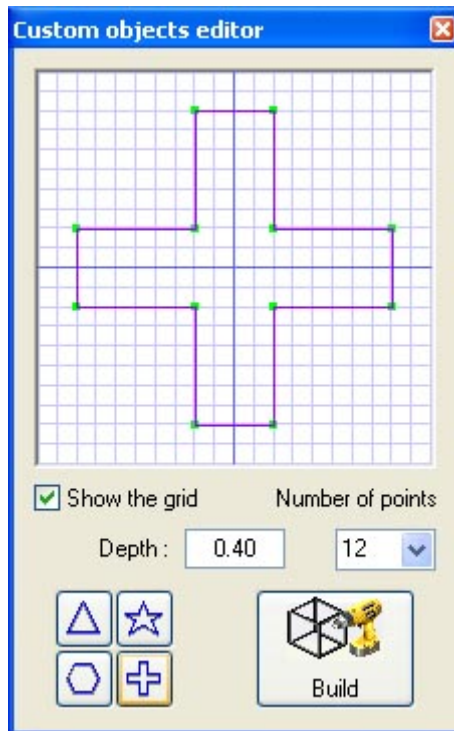
3 different types of objects can be created:

- 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.

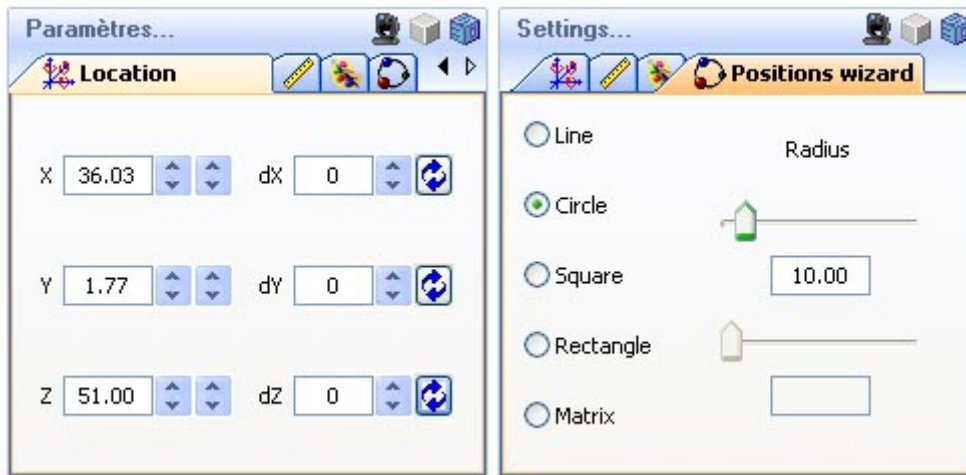


4.6. Objects settings

Objects settings

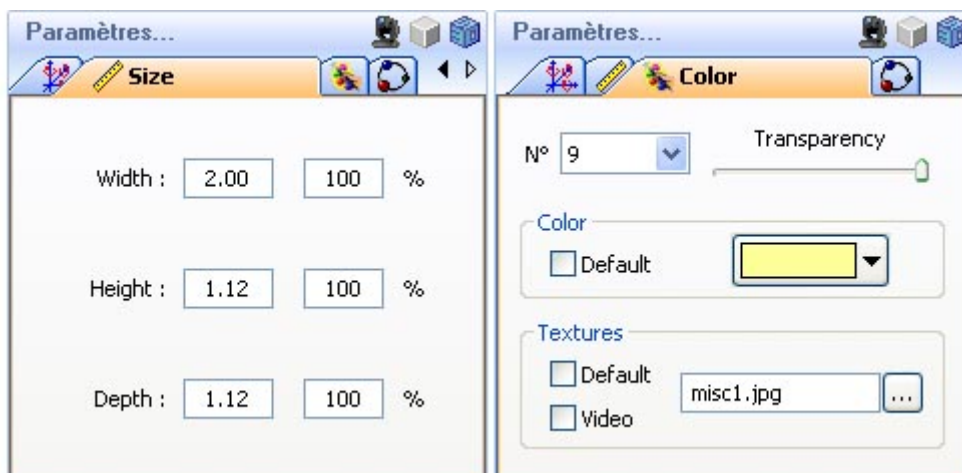
Moving objects or fixtures

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

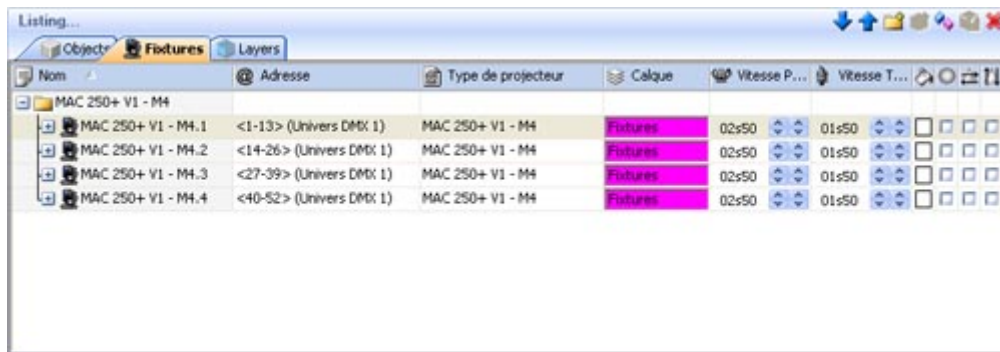
The list is located in the "Objects" tab of the "Objects settings" window. All fixtures are listed and folders can be created to simply classify them. The drag & drop is used to move the fixtures within the list. To add a new folder, click on the "New folder" button from the toolbar. The up and down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

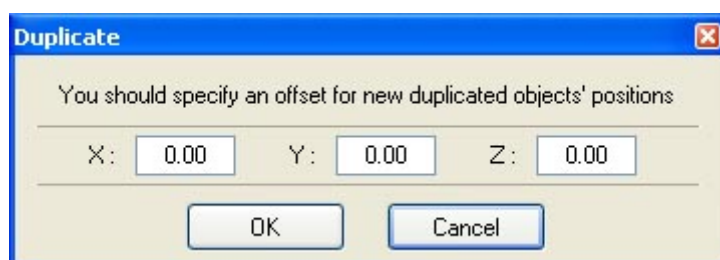
The 4 last columns are :

- 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.

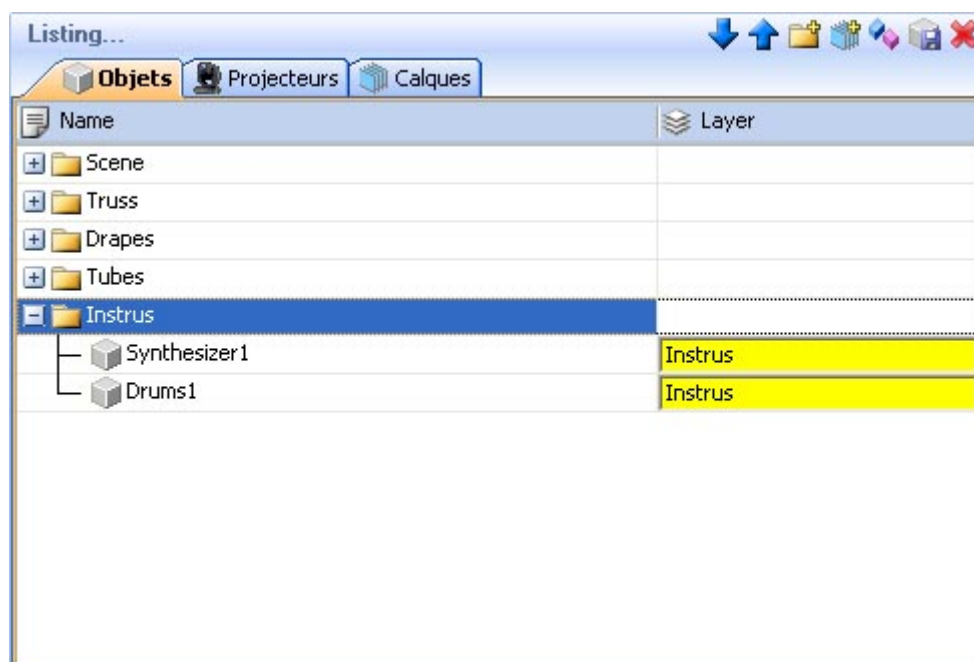


Objects list

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

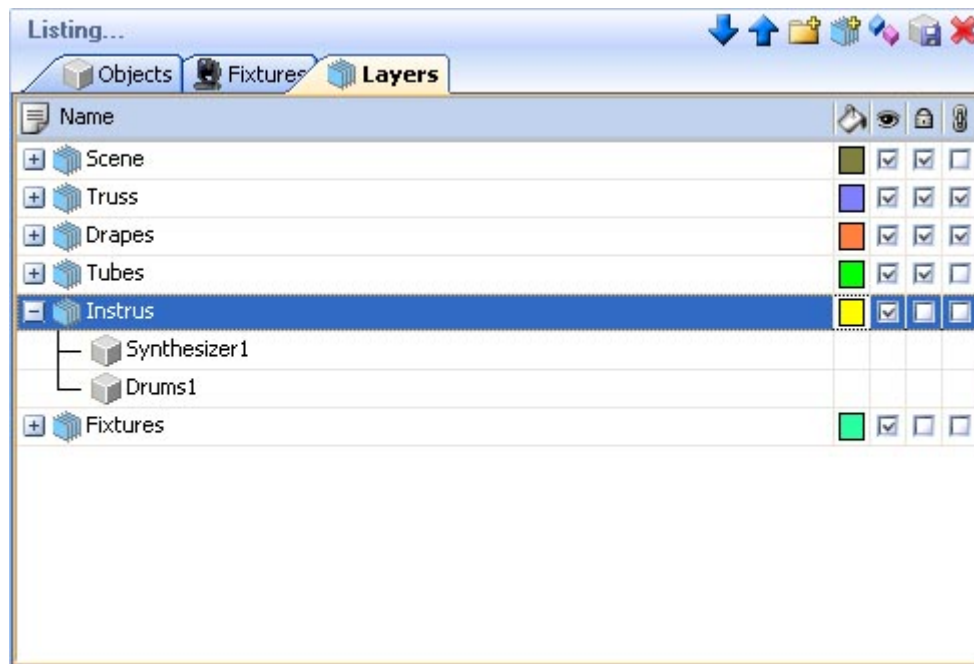
Like picture editing software, the 3D visualizer works with layers. All fixtures and objects are included in one or several layers. By default, all inserted objects are placed in the "Objects" layer and the fixtures in the "Fixtures" layer. However, the user can create their own layers and move objects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



5. Appendix

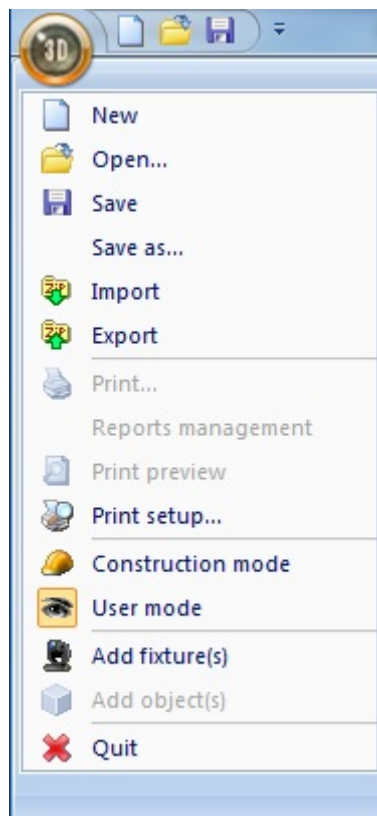
This chapter introduces all the menus, toolbars and shortcuts of the software. The last section shows what to check/do in case of problem with the software.

5.1. Menus

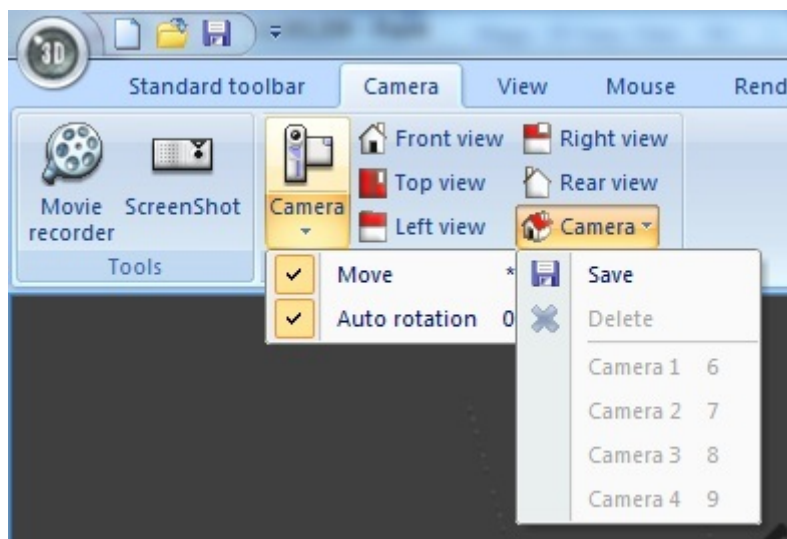
Menus

Menus summary

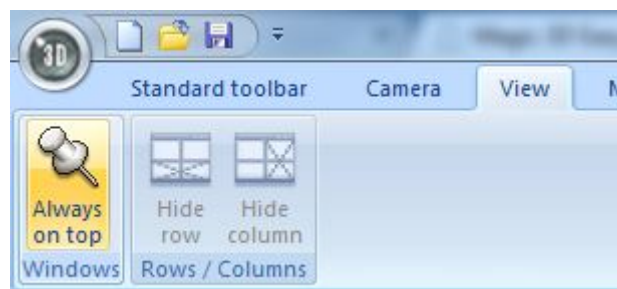
- Create a new 3D stage
- Open a 3D stage
- Save the 3D stage
- Save the 3D stage with another name
- Import a 3D stage
- Export a 3D stage
- Print
- Open the reports management
- Print preview
- Print properties
- Open the Construction mode
- Open the User mode
- Add fixtures
- Add objects
- Exit the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



- 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 software
- 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 software 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

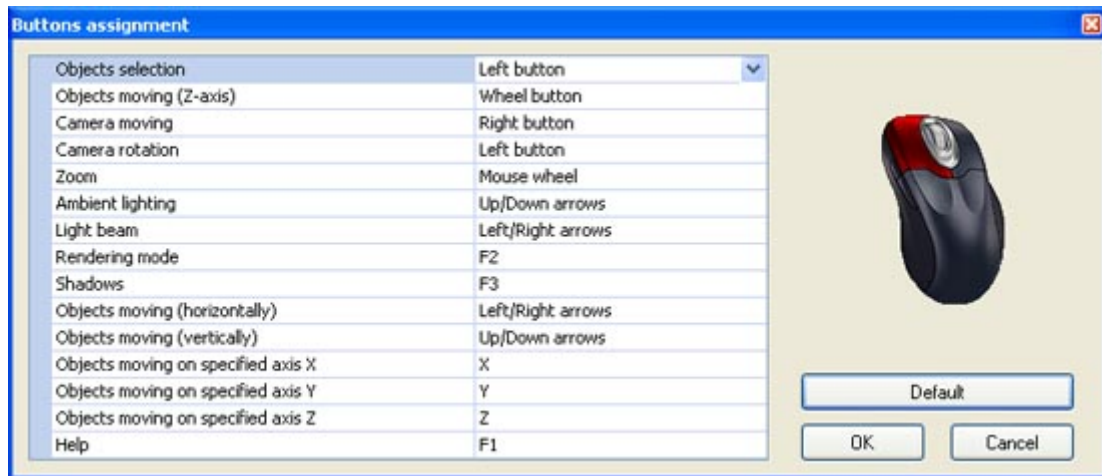
Esc Quit the software

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