



VERSION 8.0.1.XXX - DEVELOPED BY: AVOLITES MEDIA LTD. POWERED BY: SALVATION (TM)
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GREG, ADAM, OLIE, ALL AT AVOLITES AND YOU. SPECIAL THANKS MARK CALVERT. LETS ROCK!

Stage Construction Page

VERSION 8.X

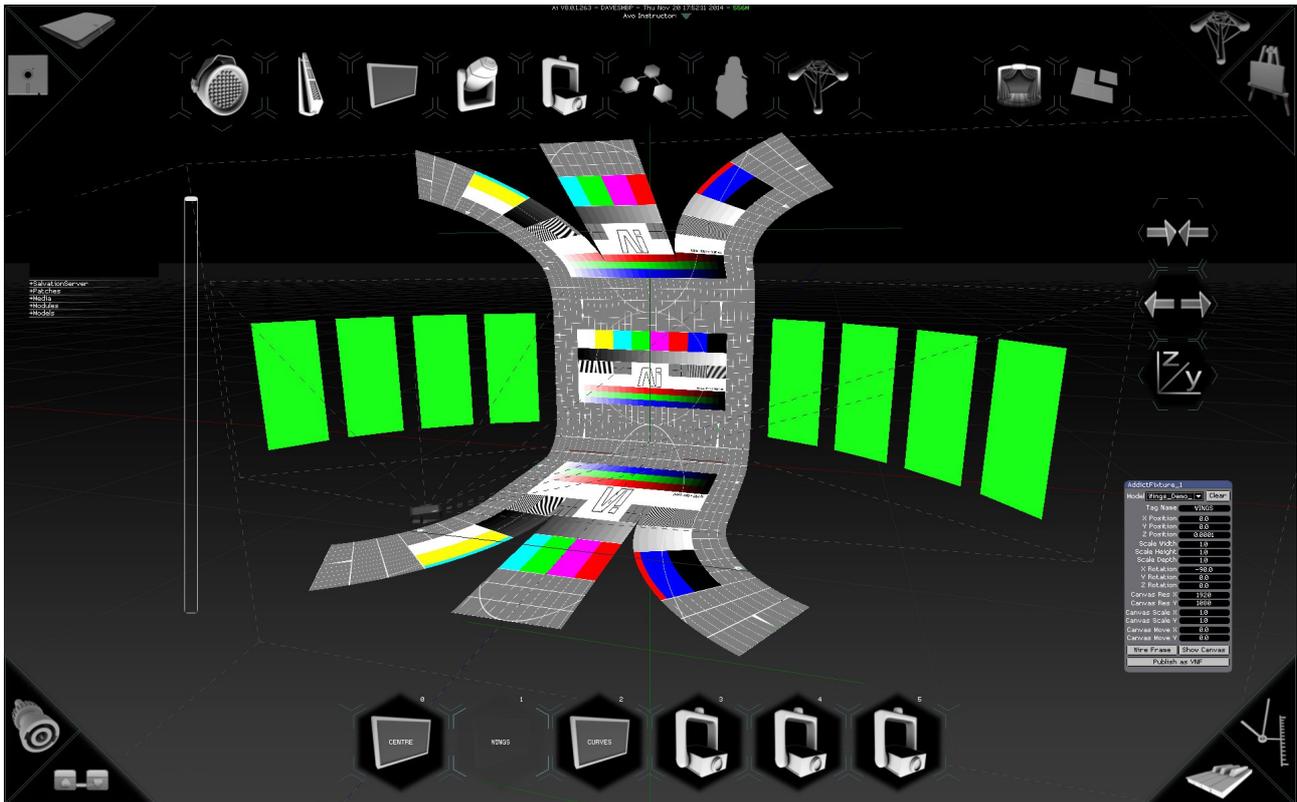
By Arran Rothwell-Eyre December 2014

with Additions by Dave Green & Ciaran Abrams

Stage Construction Page

Build your Stage

On this page we can choose the fixture types to use in the project. We can also enter the correct positions and relationships for each fixture to create a representation of the real world installation.

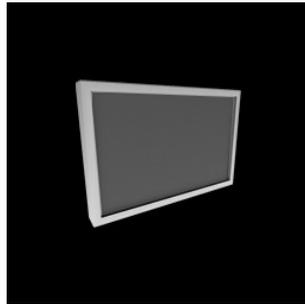


Along the top of the screen we can see the icons which give us our different fixture types. From the left to the right we have: LED lighting, LED battens, Screen fixture, Moving Head lights, Projector fixture, the Modular LED fixture used for pixel mapping, a human character to give an idea of scale and a stage model to put the components in context.

Regardless of the model type used, the fixture itself offers options to independently adjust the position, scale and rotation of the used model on all three axes as well as being able to set the texture resolution, the texture scale and the texture position and also gives options to display the screen in wireframe mode and the option to always show the fixtures texture when selected.

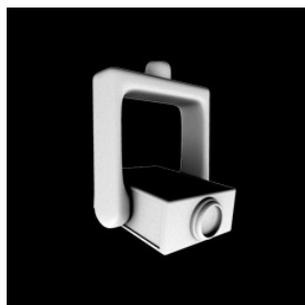
Whilst the majority of the functionality is shared across the fixture types, there are some properties which are specific to certain fixtures.

Screen Fixture



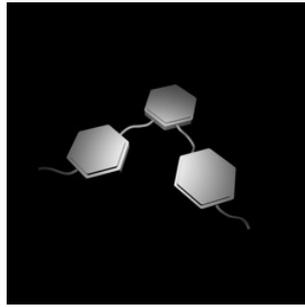
This is the most commonly used fixture type and is used as the starting point for projection mapping, led screens and more traditional video output. You can either use the default screen model and deform it as needed, which for most jobs is fine, or you can import a 3d model simply by dragging it onto the fixture icon at the bottom, allowing you to work with highly complex projection targets such as cars, buildings and very organic curved surfaces which would be otherwise very difficult to work with using more traditional methods. The benefits of this approach are many fold, but primarily the use of 3d models allows for very flexible and editable screen designs and the use of UV maps ensures reliability in terms of accurate reproduction of video content onto stage technology. Currently Ai supports the use of several 3d model formats: 3ds, obj, blend, lwo, lws, lxo. Of these 3ds and obj are the most regularly used as they are supported by the majority of 3d software's regardless of the platform in use.

Projector Fixture



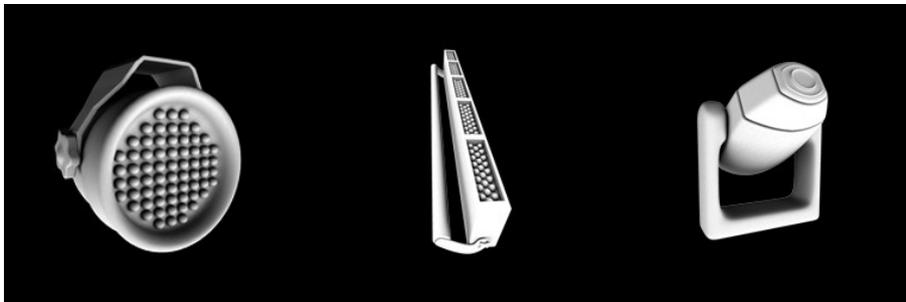
This fixture should be used when you want to do video mapping or vertex editing using a 3d model. In order for Ai to produce something that is as close to the real world as possible, it is very important to enter the real world projector values such as aspect ratio and lens ratio to ensure that the images generated from Ai have the correct amount of distortion that will be seen on the real world lenses used for the project. When your real world and virtual settings match up, everything can fall into place very easily for you.

Modular LED Fixture



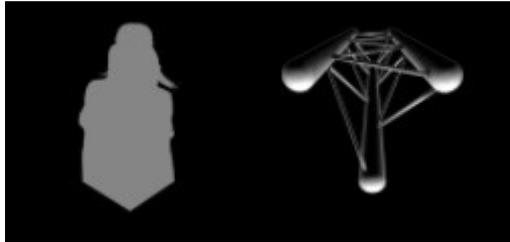
The Modular LED fixture allows you to perform pixel mapping within Ai. In previous versions of Ai it has been necessary to import both a 3d model and a CSV sheet to make full use of Ai's pixel mapping facilities. Whilst this functionality still exists for the more advanced users who require the ultimate precision given by this approach, it is now possible to work with this fixture purely inside Ai without the need for the accompanying files by just using the Output page's new LED mapper options. As well as the standard attributes available to all fixtures, the Modular Led fixture also has options to offset the starting universe and channel.

Led Lighting Fixtures



The Light fixture, LED Batten and Moving Head fixture all share a very similar working method. Essentially, by using the fixture quantity and fixture spacing options you can create a grid of fixtures, then you can specify how many channels the device has by using the channel per fixture option and if required you can offset the colour channels, base universe and base channels. Once you have set the ranges for a single fixture, pressing the Auto Assign DMX button will then apply these ranges to all fixtures by giving them sequential addresses. If you need to alter any of the position or rotation amounts you can either use the group options to affect all or the fixture options to alter just the selected fixture. When using these fixtures it is better to run at a resolution close to reality otherwise Ai will be performing a lot of unnecessary work – if for instance you specify a 1920 x 1080 canvas , then Ai will have to convert 2073600 pixels to ArtNet every single frame, but in reality you are exceptionally unlikely to see an array of 2 million physical fixtures. Ai will downscale your image to fit the resolution that you specify, so you don't need to worry about a resolution mismatch between the media and the fixture values.

Human and Structure Fixtures



Both of these fixture types are used for visualisation purposes – the human character is great for putting things into an understandable scale and the structure fixture allows you to load a model of your stage or venue to give a greater concept of how the project will look in situ – both are very helpful when trying to get a client to understand how the show will look. The real benefit to both of these is that they don't carry the usual facilities to playback media which means that they have much less strain on the system.