



VERSION 8.0.1XXX - 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!

Output Page

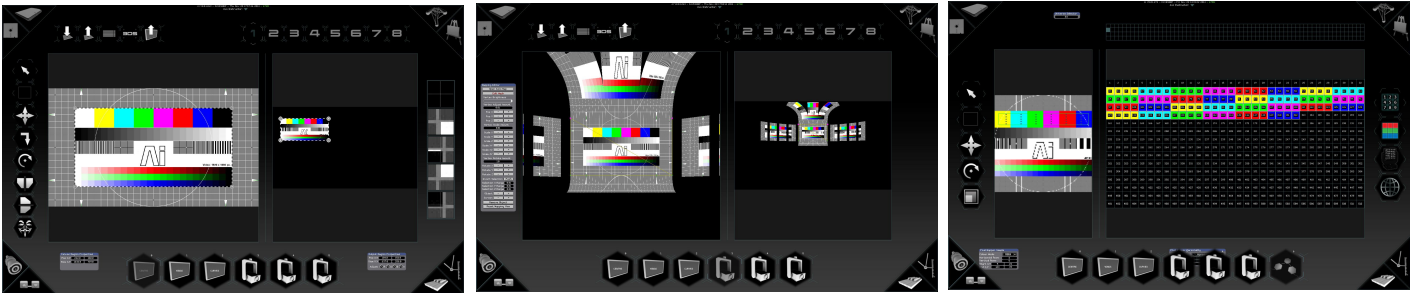
VERSION 8.X

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with Additions by Dave Green & Ciaran Abrams

Output Page

Configure your outputs



The output page in version 8 of Ai gives you an easy but powerful way to address your outputs regardless of the fixture type chosen. Depending on the selected fixture type, a different set of options will be made available to you giving you quick and easy access to the relevant tools for that fixture type.

Whether working with Screens, Projectors or Modular LED fixtures, the interface has some basic similarities. The main window is split into two sections – the left side always shows your source canvas and the right hand side shows your output, allowing you to easily keep track of every stage of your working process. This can be resized if required by dragging the middle bar left or right and can then be reset by simply right clicking on that bar.

Along the bottom of the screen we can see all fixture types that can be edited and controlled from the Output Page and in the top right we can see our output assignment section which varies a little depending on whether you are outputting video or Modular LED data over ArtNet (or similar) but essentially allows you a simple way to assign to the required system video output or ArtNet universe with simple a to understand system of visual feedback.

When using the screen or projector fixture the numbers near the top right of the screen represent the system outputs – simply select the fixture of choice, then select the output number – for the screen fixture you can then just start drawing regions on the source canvas and then onto your selected output.

For the projector fixture you must click within the output area once you have selected the projector you wish to route to the chosen output.

The following pages will discuss the functionality of each of the fixture types on the output page in more detail.

Output Page – Screen Fixture

Lets look a little closer at those fixture types and which tools are available to each of them. Firstly we will look at using the Screen Fixture. Working directly with this fixture type is like using many of the more traditional video systems – the geometry of the 3d model is not used on the output, instead you work directly with the 2d texture itself – its the same as working with the green ports within the Salvation patching environment.



On the left we can see the main set of tools for using with this fixture. Starting from the top we have the selection tool, the region mapper, translate selected regions, rotate region 90 degrees, free rotate region, flip horizontally, flip vertically and masking. Most of these make are self explanatory, but a couple of these options are worth looking at a little more.

Region mapper tool

In its basic form, the region tool allows you take rectangular sections from anywhere within your texture and place them anywhere on your outputs. These regions can be manually drawn using the region tool and if needed they can then be adjusted using the info box below the left section to adjust the sampled section or the info box below the right section to adjust the output section. This operates much like the Livemap module does within Salvation. If you right click the region mapper tool icon, it changes from a rectangular image to a multi sided shape – this will now allow you to individually specify each point of your region and use as many points as you require to create any shaped region. Once a region has been created, it is possible to adjust its position in the output as well as alter which part of the texture is being sampled – simply select the translation tool, then click on one of the corner points which will turn green when selected, and drag it to its new position or using either the canvas properties or region properties data box. If you wish to change a

rectangular region into a more flexible triangle based region, you just need to hold down shift and then left click on one of the corner points for the region.

Once you have set-up your regions, duplicating them becomes very easy by using the standard key commands for copy (ctrl + c) paste horizontally (ctrl + v) and paste vertically (shift + ctrl + v) the regions can then be manually adjusted using the tool, the data box or by using a combination of the following keys:

- Arrow keys moves the region on the right 1 pixel.
- Arrow keys + shift moves the region on the right 10 pixels.
- Arrow keys + ctrl key moves the left region 1 pixel.
- Arrow keys + shift + ctrl moves the region on the left 10 pixels.

Masking tool

There is often a need to mask led screens to give the feel of a non square panel. For this reason we have included a selection of mask shapes which can be individually applied to each square region you make use of. Currently we offer triangles, pentagons, hexagons, octagons and circles in different orientations where applicable.

Save & Load regions

Once you get yourself into a position that you are happy with your regions and their positions within your output and any masking, you can save the layout to use in any project by using the icon at the top with the downwards pointing arrow. The next icon with the upwards pointing arrow allows you to load a previously saved set of regions. The third icon opens up the Region File Selector which allows you to have multiple region layouts available and dynamically switch between them in real time by either pressing the button for the layout you require or even assigning ArtNet or MIDI to trigger your choice. When entering the name for a region file, it is important to remember to enter the name followed by the extension .air (Ai regions)

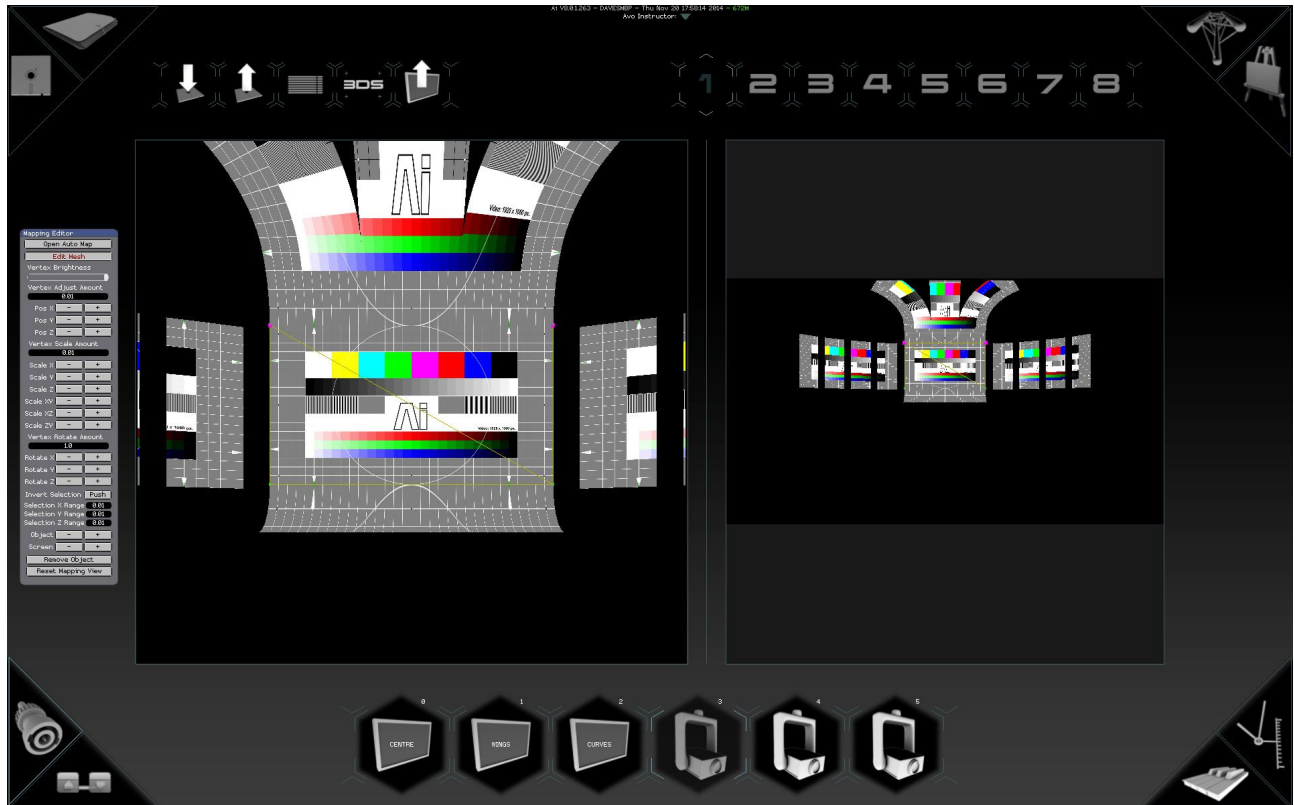
3d import options

The fourth icon on this upper strip allows you perform a special task with a prepared 3ds or obj file. Using your preferred 3d modelling package it is possible to create geometry where 1 unit in x & y = 1 pixel with respect to your output. Each pixel can then be uv mapped with an appropriate uv coordinate or range or coordinates. This is a very powerful feature, especially useful when pixel mapping very complex structures. Scripting languages can also be used within your 3d package of choice in order to create the uv mapped geometry in an automated manner.

The fifth and final button which looks like a Screen Fixture icon, allows you to import your model directly from the fixture itself and automatically convert the separate pieces of geometry into individual regions which can then be manipulated and adjusted as required – this can be a great time saver.

Output Page Projector Fixture

Next we shall take a look at how the output page is laid out for the the Projector Fixture. The first and most obvious thing is that we are presented with a different set of tools – by choosing a projector fixture, Ai has given us the most relevant tools for tasks associated with projectors – on the left there is the Mapping Editor and Automap and in our right hand window we have easy access to soft edge blending.



Mapping editor

The editor itself is the standard mapping editor included with the build, but using it in conjunction with the output page allows you to make use of a separately navigable mapping editor window on the left side of the Output Page. Using the standard navigation controls in the left window – shift + left drag to rotate, alt + left drag to pan and the mouse wheel to zoom – it becomes simple and trouble free to view your 3d model from precisely the angle that you want making it very easy to select exactly the vertices you wish to edit. In order to adjust your model with the mapping editor, you must remember to first press the button marked Edit Mesh which can be found at the top of the editor module itself.

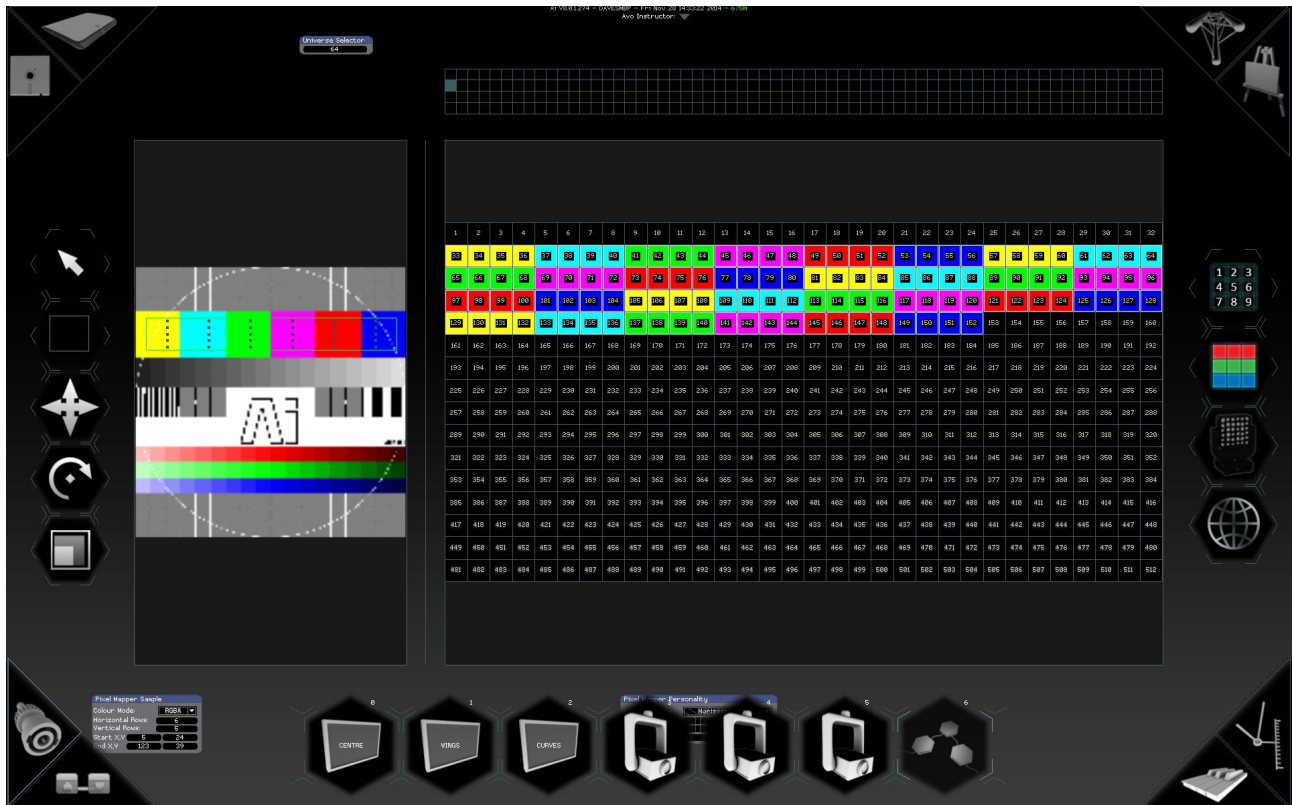
In situations where you have an accurate 3d model which represents your projection target, it can be possible to make use of Auto Map to accurately align and dramatically reduce your set-up time. To make use of Automap, press the relevant button at the top of the mapping editor and you can now see the familiar interface, allowing you to choose 4 points from your model and specify where you would like them to be placed within your output.

Soft edge blending

Within the output page windows that are shown for the projector fixture it is now possible to control soft edge blending. The window gives you two sets of adjustable borders – the green is the inside of your blend and the red is the outside and the falloff of the gamma curve on each edge can be adjusted by dragging within the small square window next to the edge.

Output Page Modular LED Fixture

Working with Modular LED Fixtures in version 8 has is a much simplified and more visual approach compared to previous Ai releases. No longer do you need to work with a complicated set of external models and CSV sheets, now you can completely work out of the Ai interface using a simple system of drag and click placement.



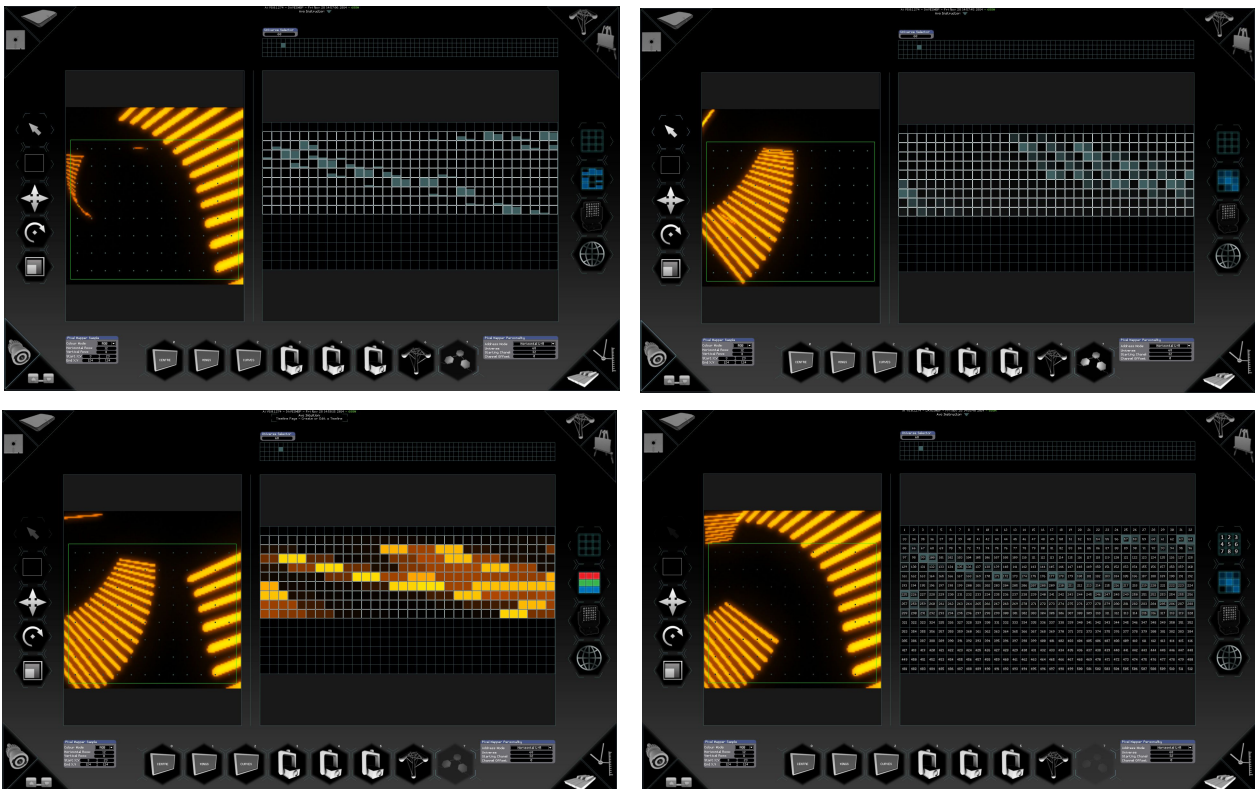
The available tools are the same as those provided for the screen fixture, with the region tool being the most commonly used one with the led mapper. Dragging a region across the canvas side of the output page determines the area you wish to sample and convert to ArtNet. The amount of sampling point within that region is specified by adjusting the value in the horizontal rows and vertical rows section of the PixelMapper Sample info box below the left panel. Using this box you can also fine tune the position and size of the sampling area as well as specify the fixture type you wish to address such as Mono, RGB, RGBA, CMY or RGBW and based on this selection, Ai will determine how many channels are used to send the data for each sampling point. Once these values have been chosen, you can then select the universe you wish to output to in the grid at the top right and then left click in the channel grid to choose a starting channel – again, these values can be fine tuned using the Pixel Mapper Personality box below the right pane of the output page. This box also allows you to set the order in which the sampling points are read by Ai such as Horizontal left right, Vertical top to bottom, Snake left right and several other configurations. The universe that this selection will go to is determined by what universe is selected in the top right hand corner. Here there are 256 boxes that relate to the available universes. Alternatively there is a text box that you can enter the number in automatically. The current universe that you are in will make the associated box a solid colour, whereas universes with data in will pulse to let you know they are active. If you find yourself with many selections on one universe, it can be difficult to know which selections go to which channels. You can shift + click on the artnet channels, and this will automatically select the

corresponding placements.

It is important to note that Ai does not support wrapping of multiple universes for one selection. If your selection would take up more than 512 channels then on the channel visualisation page it will flash red and will not output.

The data itself can be displayed in several ways in the LED Mapper with the options for these display methods being found in the right hand tool section. The first option allows us to show or hide the channel numbers on the individual squares, the second option lets you choose between 3 different ways to display the data – vertical bars which represent the value with a high bar being a high value, solid squares with a brighter square representing a high value and coloured squares. The first two options individually display each of the values being sent to each channel where as the coloured squares show the resulting colour being sent by the combined channels, so in the case of an RGB fixture each of the 3 boxes will show the same colour.

The following image shows the different display methods seen when using the LED Mapper output page – we can see individual levels, solid squares, colour samples and channels legend overlays:



the last 2 options in the right hand tools menu are to help with viewing multiple universes and fixtures to make it easier to prevent any channel clashes or double assignments. The third icon that looks like a lighting fixture allows you to view multiple fixtures at the same time – you can do this by dragging across both fixtures and clicking this icon so that it shows three fixtures instead of one – and the fourth icon allows you to show all regions in all universes at the same time within the canvas area of the page with one globe showing the current universe and three globes showing all universes.