

**3D**

# Stereographics

## Real time rendering of 3D stereo graphics

Stereo3D has gained increased use in the film and video industry with more and more films being created in 3D. Stereo3D has become so widespread in the film and video industry that it is emerging as the latest trend for television broadcasting.

As always, Orad is one of the first to develop a solution providing broadcasters with the ability to offer their home viewers the excitement of 3D in real time. Orad's Stereographics solution renders stereo graphics in real time and displays them over the stereo image. With Stereographics, content such as sports, weather channel branding, elections, etc can be updated in real time. The broadcaster has full control over the depth dimension of the graphics and the key stereo parameters - interaxial (eye separation) and convergence can be adjusted in real time.

### True, real-time stereovision

True stereovision is possible only if the graphics are in 3D, something that isn't possible with a standard character generator. Orad's Stereographics solution produces true stereo graphics, generating images for both left and right eyes in every video field. As the images are produced in real time and are not rendered in post production, Orad's Stereographics is an ideal solution for live events.

### Single-box solution

In order to ensure precise synchronization, both the left and right signals are generated by a single powerful Orad HDVG system that produces a 3G HD (1080P) signal. Two linear keyers allow overlaying graphics even on left/right independent video feeds.

### Future oriented

Stereographics is adaptable to all standards as the HDVG can generate signals for all stereo layouts including; separate left/right, side by side, etc, as well as layouts which are appropriate for 3G HD.

### Easy adjustments

Stereographics' user friendly interface enables the user to easily adjust key stereovision parameters, which control the depth and look, including; the interaxial (eye separation), which is the distance between viewpoints for left and right eye, and the convergence, which rotates the viewing axes away or towards each other in order to focus on the particular distance. Users may also flip the left / right eyes for the background and foreground signals separately.

In addition, special care was taken in order to retain the existing graphics workflow so that producing the graphics in stereo is transparent to the user. For example, when designing a stereo graphics scene with Orad's 3Designer authoring software, the designer continues to use the same familiar application and has a local stereo preview on his desktop. Additionally, all stereo parameters are exposed to the operator, who can modify them in real time, negating the need to go back to the design stage once the production is underway.

### Last minute 3D adjustments

In the event that the graphics template requires an adjustment in the depth or eye separation in order to fit to the video footage on which it is overlaid, there is no need for re-authoring; stereovision parameters can be applied even in the last moment as an on-air adjustment.

### Efficient reuse of existing graphics

3D graphics templates created by earlier versions of 3Designer can be used as Stereographics, by applying basic stereovision parameters. There is no need for reauthoring.

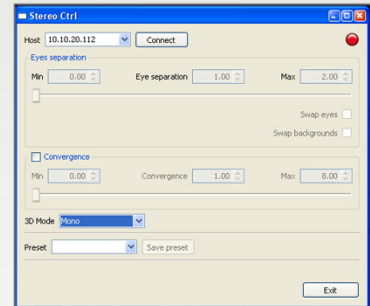




# Stereographics

## Features

- True, real-time stereovision - no post production needed
- Single box solution that can generate a side-by-side or separate left / right signals in either 720p or 1080i.
- Easy adjustment of graphics with real time controls over convergence and eye separation (interaxial)
- Existing 3D graphics can be used in the stereo environment without needing to reauthor
- Two linear keyers allow overlaying graphics on independent left / right signals
- Video clips and textures in Stereo can be played back without alteration
- 3DPlay, Maestro, and 3rd party controllers do not need to change their workflow
- Preview via 3Designer available during authoring using anaglyph or polarizing glasses (in particular, nVidia's 3D Vision™)
- Output of the HDVG can be previewed in 3D, without the need for 3D-capable professional video monitor



Graphic user interface

## Diagram

