

Mbox EXtreme™ media server

ADVANCED INTEGRATION

The Mbox Extreme™ Media Server from PRG takes digital lighting to the next level with its advanced integration of video and automated lighting. Powerful real time rendering, built-in effects, and a true 3D environment provide the ultimate tools for combining pre-recorded video and still images to create stunning visual imagery that can be displayed by any projector, LED wall, plasma screen or low-res LED lighting fixture.

SUPERIOR IMAGING

Mbox Extreme guarantees superior image quality with its pixel-for-pixel resolution. Designers can manipulate and play back content without affecting the source material, making frame loss or distortion in video playback virtually nonexistent. To ensure smooth output and professional results, each Mbox Extreme is packaged with a hardware dimmer module that suppresses the stage output during system startup and shutdown.



VERSATILE CONTROL

The Mbox Extreme server can be programmed and operated directly from DMX512-based moving light consoles, allowing ease of coordination between video/image effects and lighting cues. Intricate Mbox Extreme sequences can be generated instantly on site without the need for offline video processing, rendering or editing. A stock library gets the system up and running quickly with a wide variety of video clips, still images and 3D objects. All of these items can be recalled instantly. In addition, designers can easily add their own video, images or objects and see the results immediately.

FLEXIBLE APPLICATION

Mbox Extreme can be used in a variety of applications from displaying custom logos at tradeshows to incorporating subtle backgrounds for broadcast television or high intensity cueing for live performances. Mbox Extreme can also be configured to output video information as DMX-over-Ethernet to control low-resolution LED fixtures, allowing designers to create broad strokes of color and realistic video effects.



Features

- Real time rendering.
- Movable camera viewpoint.
- Keystone correction.
- Ambient and directional light sources.
- Five interactive, scalable layers that can be configured as backgrounds or 3D geometric objects.
- Digital gobos that can be used as backgrounds, masks or for advanced layer blending effects.
- Image tiling and edge-blending.
- Pixel mapping.
- Layer break-out view.
- Mapping of textures (videos or still images) to 3D objects and digital gobos.
- Real time crossfades and transitions between videos and images on the same layer.
- Effects including blur, pixelate, LED Wall, twirl, color, exposure and alpha adjustment can be applied individually or in combination.
- Accepts live video input – SDI, Composite and FireWire® (DV).
- Advanced video playback with direction, speed and in-point/out-point control.
- User-configurable aspect ratio and output resolution control.
- High resolution (16-bit) control of most parameters.
- Control by DMX512 or Art-Net.
- Stores up to 65,535 videos and still images.
- Stores up to 65,535 3D objects.
- Starter media library and objects.
- Hardware I/O module with built in DMX - Art-Net converter and Ethernet switch. Analog (RGBHV), DVI, SDI and HD-SDI video outputs.
- Live video inputs can be shared between multiple servers using Ethernet.



One Source. Unlimited Resources.™

HOW IT WORKS

The process is simple: Original source material is loaded onto the server in advance of programming. (Designers also have access to a library of stock videos and images that come standard on the server.) The designer or programmer manipulates the media using a DMX512-based console, leaving the actual source material unaltered. When the desired playback looks are achieved, the designer either records them into the cue list on the console or applies them on the fly during the show. It's that easy.

SOFTWARE/HARDWARE

The Mbox Extreme software runs on a rack-mounted Apple® Macintosh® G5 computer controlled by DMX512 or Art-Net. All video, still images and 3D objects are stored on directly on the Mbox Extreme hard drive, allowing instant access to any file. Mbox Extreme is available in either a single or dual-server rack and each server is equipped with one video output that can be used to drive a projector, LED wall or plasma screen. The included I/O module provides analog (RGBHV), DVI, SDI and HD-SDI outputs for video.

Sample Composition



Scenic environment composed with three objects and one background (4 layers):

- Background - movie loop of cloudscape
- Object One - flat, linear plane with media clip of water
- Objects Two and Three - abstract 3D rock formations built in Maya®

Controllable Elements

Light (4 directional, 1 ambient)

- Intensity
- Color

Camera (1)

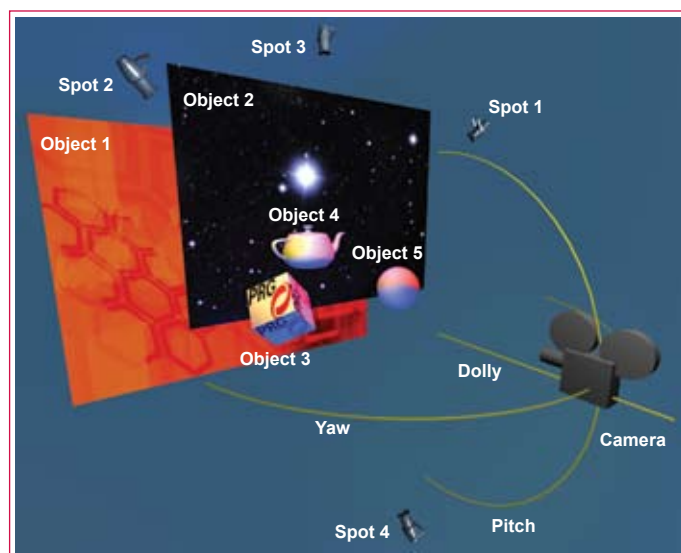
- Orbit X and Y
- Dolly
- Camera Roll (Spin)
- Field of View
- Theatrical Framing Shutters (four modes)
- Shutter X and Y
- Shutter Scale
- Shutter Edge
- Keystone X and Y
- Keystone Scale
- Keystone Skew
- Edge Blending
- Tiling
- Master Effect (2)
- Master Color

Object: Background/Shape (5)

- Transparency
- Shape
- Texture
- Texture Effect (2 per object)
- Color
- Playmode
- Playspeed
- Transitions (Type and Timing)
- X, Y, Z Position
- X, Y, Z Rotation (Spin)
- X, Y, Z Scale

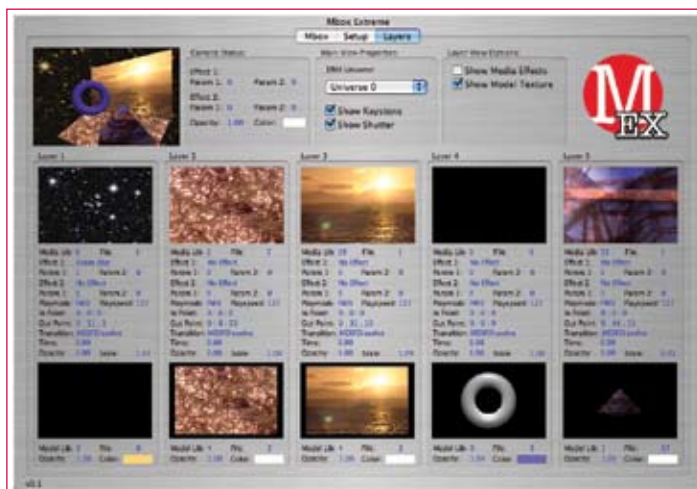
3D Environment

The Mbox Extreme 3D environment provides designers with advanced tools for creating multidimensional scenery and effects in real time. Lighting, camera positioning, and five layers of shapes and backgrounds, all work together to create endless possibilities.



Layer Break-Out View

The Mbox Extreme layer break-out view shows the final image output and each layer's applied texture and 3D model. Further information about playback settings, effects and transitions is also provided for easy reference during programming.



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