



# Mbox® v5

Mbox® v5 is the newest version of PRG's Mbox media server software. The Mbox software delivers a powerful and flexible toolset for combining video, still images, and 3D elements to create stunning visual imagery. Starting with the core component of real-time, frame-accurate playback, each independent layer in Mbox provides a full package of features for displaying and manipulating imagery. Layers can be displayed as individual elements or overlaid and blended in a unified composition.

## COMPATIBILITY AND PERFORMANCE

The Mbox v5 application has been extensively rewritten to run natively on both Apple Silicon and Intel Mac computers. Mbox v5 is compatible with all recent versions of macOS, starting with Mojave and including Ventura. Changes to modern graphical APIs provide increased performance across all supported hardware.

## LICENSING

The Mbox v5 application is a single, unified application with four license levels: Mini, Studio, Studio+, and Designer. These subscription-based licenses are available using soft-license activation or USB activation keys.

## POWERFUL FEATURES

Mbox handles playback and output up to and beyond 4K resolutions. Independently mastered video outputs, with output and mix setup options make for incredible flexibility. Support for NDI® and Blackmagic Design devices expands options for both video input and output. Playback of embedded and stand-alone multi-channel audio files makes Mbox a complete delivery system for all sorts of events.

Mbox's pixel mapping output converts visual imagery to common protocols for control of lighting fixtures. Pixel mapping is a key element for control of environmental lighting in TV/film and is used for creative lighting with live-events. Mbox's pixel mapping allows for custom fixture creation with numerous color modes, mastering, and merging.

## VERSATILE CONTROL

The Mbox software can be controlled by lighting consoles or by the Mbox Director application. Whether controlled by a console or Director, Mbox can be used both to create either pre-programmed sequences or to apply live manipulations to media. Mbox's ease of use and speed of programming make it a favorite with both designers and programmers.

## FLEXIBILITY

Mbox can be used in a wide variety of applications:

- TV/Film - lighting for enhanced environment
- Live Events - music, theatre
- Immersive Exhibitions - projection mapping
- Tradeshows - large-scale media display
- Corporate Events - background texture



## Features

- INTERACTIVE 2D/3D LAYERS FOR THE PLAYBACK AND COMPOSITION OF VISUAL AND AUDIO ELEMENTS
- PLAYBACK OF STILL IMAGES, IMAGE SEQUENCES, MOVIES, AND AUDIO FILES
- MOVIE PLAYBACK USING INDUSTRY STANDARD CODECS - APPLE ProRes, HAP, P-JPEG, & H.264/MP4
- IMAGE SEQUENCE PLAYBACK (8/16-BIT TIFF OR PNG)
- DISPLAY OF 3D OBJECT AND VECTOR GRAPHICS FILES
- FULLY CUSTOMIZABLE VIDEO OUTPUT SETUP WITH MULTIPLE OUTPUTS\* AND SUB-OUTPUTS PER SERVER
- INDEPENDENT OUTPUT/SUB-OUTPUT MASTERS WITH OVERALL DIMMING, COLOR, EFFECTS, GEOMETRY, KEYSTONE, SHUTTER, AND OPTIONAL 3D PERSPECTIVE CAMERA
- VIDEO OUTPUT VIA BUILT-IN COMPUTER VIDEO OUTPUTS (DISPLAYPORT/HDMI/DVI), NDI®, AND BLACKMAGIC DESIGN DECKLINK AND ULTRASTUDIO DEVICES\*
- VIDEO CAPTURE\* - BLACKMAGIC DESIGN DECKLINK AND ULTRASTUDIO DEVICES, AVFOUNDATION COMPATIBLE DEVICES
- NDI® INPUT AND OUTPUT - HIGH-QUALITY, LOW-LATENCY VIDEO-OVER-IP STREAMS
- SYPHON INPUT AND OUTPUT
- PIXEL MAPPING WITH CUSTOM FIXTURE CREATION, GROUP MASTERING, AND BUILT-IN MERGE FUNCTIONALITY
- IMAGE REMAPPING - FOR CONFIGURING PIXEL PLACEMENT, SCALE, ROTATION, AND COLOR ON A PER-LAYER BASIS. WITH REAL-TIME ADJUSTMENT FOR EFFECTS OR SCENIC TRACKING
- PLAYBACK SYNCHRONIZATION BETWEEN SERVERS USING MBOX MASTER CLOCK SYNC
- REAL-TIME CROSSFADES AND TRANSITIONS BETWEEN IMAGERY ON THE SAME LAYER WITH 60+ STOCK AND CUSTOM TRANSITIONS
- 150+ BUILT-IN EFFECTS WITH FOUR EFFECTS PER LAYER AND TWO EFFECTS PER OUTPUT MASTER - COLOR MANIPULATION, BLUR, CROP, DISTORTION, KEYING, AND MORE
- 35+ MOVIE PLAYBACK MODES INCLUDING LOOP, SYNC TO MASTER, SYNC TO TIMECODE, AND XFADE ON LOOP
- STEREO AND MULTI-CHANNEL AUDIO PLAYBACK WITH GLOBAL AND PER-LAYER VOLUME CONTROL
- INTEGRATED CITP/MSEX FUNCTIONALITY FOR THUMBNAILS AND STREAMING VIDEO COMPATIBILITY WITH CONTROL CONSOLES AND VISUALIZERS (SUPPORTS STREAMS FROM OUTPUTS, LAYERS, AND MIXES)
- REMOTE MONITORING, CONFIGURATION, AND MEDIA SYNCHRONIZATION THROUGH MBOX REMOTE
- CONTROL VIA ART-NET, SACN, DMX\*, OR BY MBOX DIRECTOR, WHICH ALLOWS ON-SCREEN PROGRAMMING AND MANUAL, TIMELINE, OR REMOTE TRIGGERING USING MIDI, OSC, SACN, OR ART-NET
- MAPPING OF TEXTURES (STILL IMAGES OR VIDEOS) TO 3D OBJECTS AND DIGITAL GOBOS
- INTERACTIVE SCENIC TRACKING FOR 2D SYSTEMS
- 3D PROJECTION MAPPING - 3D ENVIRONMENT WITH POSITIONABLE VIEWPOINT (PER OUTPUT OR OBJECT), OBJECTS, AND LIGHTING FOR 3D PROJECTION

\*REQUIRES ADDITIONAL USER-SUPPLIED HARDWARE



# Mbox® v5

## Mbox v5 License Levels

The Mbox v5 software offers four tiered license levels - Mini, Studio, Studio+, and Designer. All four levels operate in the same manner, with additional or expanded functionality being available as the license level increases.

- **MINI** - The Mini license level enables users to get the same great results as with other levels of Mbox license while keeping the expense to a minimum. Mini includes 6 playback layers, video output up to 2x 2K, and 5000 pixel mapping pixels.
- **STUDIO** - The Studio license level is the most popular in the Mbox family. It offers substantial power, versatility, and all the tools necessary for medium to large live events. Studio includes 12 playback layers, video output up to 4K, and 10,000 pixel mapping pixels.
- **STUDIO+** - The Studio+ license level expands on the capabilities of the Studio license level, able to handle larger output and more. Studio+ includes 12 playback layers, video output up to 2x 4K, and 20,000 pixel mapping pixels.
- **DESIGNER** - The Designer license level is the most fully-featured level of the Mbox software, and adds 3D projection mapping capabilities with adjustable perspective cameras. Designer includes 24 playback layers, unlimited video output, and unlimited pixel mapping pixels.

	Mini v5	Studio v5	Studio+ v5	Designer v5
<b>Layers</b>	6	12	12	24
<b>Max File Resolution</b>	16K	16K	16K	16K
<b>Effects Per Layer</b>	1	2	2	4
<b>Single-Layer Xfade</b>	YES	YES	YES	YES
<b>Output Masters</b>	6	8	8	32
<b>Max Output Size</b>	4.6 Million Pixels	9.2 Million Pixels	18.4 Million Pixels	Unlimited
<b>Effects Per Master</b>	1	1	1	2
<b>Pixel Mapping</b>	5000 Pixels	10000 Pixels	20000 Pixels	Unlimited
<b>Image Remapping</b>	4 Configurations	8 Configurations	16 Configurations	255 Configurations
<b>Max 2D Content</b>	65535	65535	65535	65535
<b>Max 3D Content</b>	255	255	255	65535
<b>Output With Blackmagic Decklink &amp; UltraStudio</b>	YES	YES	YES	YES
<b>Blackmagic Inputs</b>	2	4	4	8
<b>NDI® In/Out</b>	4/YES	8/YES	8/YES	12/YES
<b>Syphon In/Out</b>	2/Outputs Only	4/Outputs Only	4 In/Layers & Outputs	12/Layers & Outputs
<b>Keystone/Warp/Shutter</b>	YES	YES	YES	YES
<b>Overlap/Blend</b>	YES	YES	YES	YES
<b>3D Projection Mapping</b>	NO	With limitations	With limitations	YES
<b>OBJ &amp; SVG Import</b>	YES	YES	YES	YES
<b>3D Lighting</b>	Fixed position and intensity, no color	Adjustable position, spread, intensity, and color	Adjustable position, spread, intensity, and color	Adjustable position, spread, intensity, and color
<b>CITP</b>	YES	YES	YES	YES
<b>Content Management</b>	26 Collections	26 Collections	26 Collections	26 Collections
<b>Audio Volume Control</b>	Master & Per-layer	Master & Per-layer	Master & Per-layer	Master & Per-layer

### Software & Hardware Requirements

The Mbox v5 software is a “universal” application, and is fully compatible with both Apple Silicon and Intel Mac computers. Performance and input/output capabilities may be limited depending on the hardware used. The Mbox v5 software requires the use of macOS 10.14.6 Mojave or newer.

### Questions and Support

Please contact [MboxSupport@PRG.com](mailto:MboxSupport@PRG.com) with any questions or support requests for the Mbox media server software and other products in the Mbox family.

## Mbox Director

The Mbox Director™ application has been written specifically for use with the Mbox media server software, and can configure and control all aspects of Mbox playback, composition, and output, eliminating the need for a lighting console. Director allows for simple and fast control of Mbox through its user-friendly GUI while still giving access to the complete range of control parameters and providing powerful features like presets, palettes, and timeline-based sequencing.

## Controllable Elements

### GLOBAL MASTER:

- Intensity
- Pixel Mapping Intensity
- Audio Volume

### OUTPUT MASTERING:

- Intensity, Color, Brightness & Contrast
- Effects
- 3D Camera
- Geometry
- Keystone
- Shuttering

### LAYER:

- Opacity, Color, Brightness & Contrast
- Texture w/ Crossfade
- Object
- Play Mode
- Play Speed
- In/Out Frame
- Sync
- Aspect
- Frame Blending
- XYZ Position
- XYZ Scale
- XYZ Rotation and Spin
- Mix Select and Mode
- Blend Mode
- Image Remapping
- Effects
- Audio Volume
- Layer Timecode

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