SOFTWARE RELEASE NOTES

Product: Mbox Media Server
Manufacturer: PRG
Subject: Software Version 4.3
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INTRODUCTION

Mbox Media Server Software Version 4.3

Software version 4.3 is now available for all Mbox media server-related applications including Mbox Designer, Mbox Studio, Mbox Mini, Mbox Director, Mbox Daemon, and Mbox Remote. There are also new v4.3 versions of the Mbox Launcher and Mbox File Converter applications.

Software version 4.3 is recommended for all users based on the new functionality and the issues that are resolved. Please note that due to the changes in the playback engine (see below) we recommend testing with the new software before switching any ongoing shows from v4.2 to v4.3.

WARNING!! Mbox v4.3 is not fully compatible with macOS 10.14 Mojave. <u>DO NOT UPGRADE TO MOJAVE</u> until notified that Mbox is compatible. This will happen in an upcoming release.

Overview

Software version 4.3 adds many new features and also provides bug fixes for issues in Mbox, Mbox Remote, and Mbox Director. A list of new features and corrected issues can be found below.

New Features/Enhancements

Mbox:

+ Enhanced Frame Blending

    - Mbox's playback engine has been modified to enhance frame blending when the content framerate does not match (or does not divide evenly into) the primary output's refresh frequency. Prior versions delivered the most-recent frame and would drop or repeat frames to match the framerate to the frequency. Mbox v4.3 provides the two adjacent frames and proportionally blends them. The enhanced blending activates automatically for content when the playspeed parameter is reduced or sped up by more than 10%. For content using default playspeed, a preference must be enabled. At which point if the content's framerate is more than 5% different from the output refresh (or 1/2 the refresh) the enhanced blending will be enabled automatically. To force the enhanced blending to be on for content with a mismatch of less than 5%, set the frame blending parameter to a value of 254.

+ NDI® Input

    - Mbox v4.3 uses NewTek Inc's NDI® Video-over-IP functionality for the reception of high quality, high framerate video streams over an Ethernet network. NDI® inputs are configured in a manner similar to Syphon inputs, and can be found in Media folder 255 with the other built-in media items. Note 1: Avoid using the same NDI® input source on more than one layer, use the Layer Copy functionality instead. Note 2: NDI® output is not yet implemented in Mbox, but will be added in a future version.

+ Studio+ (or "Studio Plus")

    - Mbox v4.3 introduces a new upgrade path for users with an Mbox Studio USB key license as an alternative to upgrading to Mbox Designer. For a fee, users can purchase the Studio+ upgrade to receive: an additional 4K output for video, 8000 additional pixel mapping pixels, Syphon output from layers, 8 additional image remapping configurations. Note 1: Users with an Mbox Studio soft-license <u>must</u> upgrade to a USB key (dongle) license in order to purchase the Studio+ upgrade.

+ New/Enhanced Effects

  - #22 Gradient: Creates a 1920x1080 gradient with adjustable start and end ramp and adjustable RGB color.

  - #23 Cube LUT (AKA Cubemaps): Mbox now supports the use of .cube LUT (Look Up Tables) files for color correction/tinting/effects. Cubemaps are indexed (0-255), stored in the /Mbox/plugins/cubemaps folder, and must use the ".cube" file extension. Cubemaps can be created by many applications including Blackmagic Design's DaVinci Resolve. Note: Cubemaps can be up to 32x32x32 in size.

  - #72-77 Slitscan Effects: These effects have an added parameter for softedge.

  - #78 Crop Softedge LRTB: Similar to the existing Crop Ortho Shutter effect, but swaps the mixer parameter for a softedge parameter.

  - #81-84 Shutters: These effects have an added parameter for angle.

  - #192 Chromatic Aberration: Distortion effect with color separation and blur.

  - #193 MetaImage 2: Uses the layer's own image to create the metaimage, rather than a plugin image.

  - #194 Cartoon 2: Revised/enhanced version of the Cartoon effect.

+ New Transitions

  - #59 Dissolve with Pixels

  - #60 & 61 Circular Wipe CW & CCW

  - #121-144 From Layer Dark First: uses another layer (1-24) as a luma matte for a dissolve, dark first.

  - #151-174 From Layer Light First: uses another layer (1-24) as a luma matte for a dissolve, light first.

+ Pixel Mapping

  - New Types for RGBW and RGB + Amber: These new pixel mapping pixel types (RGBW_2 and RGBA) recalculate the RGB levels based on the amount of white or amber respectively. The RGBA type has a preference to adjust the relative white point for the RGBA calculations.

  - Output Refresh now remains at 30Hz even when playback engine is in "Divide by 2" mode and the output refresh is 30Hz.

  - The idle refresh has been increased from 1Hz to 10Hz to provide more updates even when Mbox is not actively rendering.

+ Image Remapping file (MultiScreenData.plist) can now be synced using content management.

+ Added Blackmagic input setup items for 2K and 4K input formats.

+ Added support for Blackmagic RGB (instead of YUV) input colorspace.

+ Multi-mixes allow combinations of more than one mix to be used at the same time on the same layer.

+ Audio playback without a sidecar movie for stand-alone audio playback or audio playback with a still image.

+ Add pcentre and tcentre parameters to Image Remapping.

+ Add Path tab parameter group naming/organization.

+ Add "Save All Settings to Archive" to allow all Mbox settings to be saved to a folder for transport and backup.

+ Add ".command" file extension for scripts (in addition to .sh and .scpt).

Director:

+ sACN output priority, and sACN input priority for pass through functionality.
+ Increase submasters from 5 to 8.
+ OSC command to turn on/off the auto-follow on the scene list.
+ Add optional labeling for browser items: Layers, Masters, etc.
+ Scene thumb image export to spreadsheet.

Remote:

+ Remote is now a 64-bit application.

Launcher:

+ Launcher is now a 64-bit application.

File Convertor:

+ The Mbox File Convertor can now convert from (but not to) mp4 movies to other codecs.

Corrected Issues

Mbox:

+ Fix for fade from layer and custom wipe transitions to fix issue with mask image being different size
+ Fix UI issues with incorrect text/highlight color in High Sierra
+ Fix to allow Object Dissolve transition to work with Multi-Mixes
+ Don't change audio volume while media swap in progress
+ Fix license box sizing issue
+ Abort audio load if media changes before audio is ready (stop incorrect audio playing)
+ Fix in/out frame value issues
+ Add more delay to AppleScript for Remote Management/File Sharing
+ Edit restart and shutdown AppleScripts to handle user connected alert
+ Global Surface render timing improvements
+ Fixes for output screen rendering process
+ Audio files and stills w/ sidecar show audio codec in stats
+ Uses 4 channel audio graph even when 2 channel selected, allows first 2 channels of >2 channel audio to play no matter what
+ Fix crash when movie playback terminated from other thread
+ Fixes for updating Image Remapping configuration from remote session with Triangle-based objects, fix for tabbing down in triangle-based objects applying edit to wrong row
+ Fix Crash in Matte From Layer and Mask from Image in High Sierra
+ Modify evaluation of scale factor when remote updating Image Remapping to avoid constant openGL view redraw in the other application when making configuration changes
+ Fix crash, memory leak with Hap codec
+ UI fixes for Patch tab and Outputs tab - fit IP address
+ Fix alias file resolution in Sierra: if Finder alias, it wasn't being detected as a link
+ Fix Hap codec .audio output
+ Fixes for the Performance HUD

+ Fix for Art-Net/sACN universes out of possible range - e.g. when using 5 universes, but starting at universe 253

+ Fix for issue when no MultiScreenData.plist exists, application launched, file edited, application quits but does save file edits

+ Fix opacity snap out bug on Mac Mini w/ High Sierra: Draw GS with transparent black if no layers being rendered

+ Fix rendering of subsequent outputs when prior output has effect applied

+ Fix tabbing between fields on Outputs/Mixes tabs

+ Fix crash when adding/deleting mixes rapidly

+ Fix for confusion between Blackmagic ins/outs on same device

+ Fix image remap edit when offline, to use display width/height not world rectangle

+ Fix for RGB sources/format on Blackmagic inputs

+ More fixes for Image Remapping copy & paste

+ Fix issue with reducing sACN priority, and universe not being used

+ BM device auto switch UI improvements for clarity

+ Fix issues with device index confusion when unplug/replug UltraStudio devices

+ More fixes for video input diagnostic image (eliminated) and sub image (double duty)

+ Fix for bug when video input texture changes size

+ Fix layer stats for video inputs

+ Fix H.264 jitter when playspeed reduced

+ Fix for exception when image sequence slave layer loops

+ Fix for issue when swapping to mp4, movie does not start at in frame

+ Fix Blackmagic setup fail, retry three times

+ Change "window mode at launch' keyboard short cut from [cmd] to [cmd ctrl shift] for Screen Sharing

+ Adjust transition fade times for late start

+ Fix issue with Blackmagic manufacturer ID

+ Fix Image Remap UI issues with commas

+ Fix H.264/mp4 playback issues when refresh rate is near movie framerate

+ Fix Image Sequence playback with new frame map

+ Fix image accumulator issues with textures not divisible by 8 (Freeze, Decay, Cartoon2)

Remote:

+ Rescan all servers button now refreshes the Content Management UI also

+ Fix for Screen Share menu command, tries default PRG user/pass first, if that fails, lets user enter user/pass

+ Modify remote command syntax for file sharing and screen sharing - use SMB (not AFP) for file share, both file share and screen share try default rental user/pass 1st but handle failure allowing user entry

+ Warning with duplicate IP addresses on same network

+ Edit file share mount alert for clarity when /Mbox folder not on root

+ Eliminate 2nd attempt at AFP connection when starting pixmap live session, go straight to SMB

+ Fix range-checking when readdressing fixtures and/or merge, tracking renumbering, to allow use of address 512 and not show "513 out of range" when it's actually 512

+ Fixes for updating Image Remapping configuration from remote session with triangle-based objects, fix for tabbing down in triangle-based objects applying edit to wrong row

+ Fix issue where computers with same share name are shown as same computer in 'edit servers' window and in overall status view column - toggles to and fro

+ Modify evaluation of scale factor when remote updating Image Remapping to avoid constant openGL view redraw in the other application when making configuration changes

- + Fix alias file resolution in Sierra: if Finder alias, it wasn't being detected as a link sometimes
- + Fix image remap edit when offline, to use display width/height not world rectangle
- + More fixes for Image Remapping copy & paste

Director:
- + Fix UI issues with incorrect text/highlight color in High Sierra
- + Fix for preset references getting blown away when storing multiple scenes
- + Fix issue where timing and delay values not swapped when layer data swapped
- + Fixes for checking active Enet interfaces
- + Fix clipped text alert on Patch window
- + Fix scrolling and hitTest issues
- + Don't send serial output commands when in Blind mode
- + Modify remote command syntax for file sharing and screen sharing - use SMB (not AFP) for file share, both file share and screen share try default rental user/pass first, but handle failure allowing user entry
- + Fix issue where OSC feedback is not sent unless a parameter value is received
- + Fix redraw (coloring) of pass-through parameters/groups when pass-through turned on/off
- + Fix update of scene w/ internal OSC when a submaster is enabled, fix limited loops in submasters
- + Fix issues with links and finite loops in submasters pt2
- + Add warning when making a scene with both timecode value and an AF loop
- + Fix in/out frame bumper buttons
- + Fix UI update of in/out frame textfield on layer

Daemon:
- + Fix spinning if second copy of MboxSettings.plist file found in /Mbox folder
- + Fix issue with messaging where Dir browser Output Master stream not initialized after Output Master added in Mbox
- + Additional fix for conflicting MboxSettings.plist file
- + Fix intermittent crash with corrupt database