



DL.3, DL.2 and Axon v2.0.5 Release Notes

June 25, 2012

Version 2.0.5 is a maintenance release for the DL.3, DL.2, and Axon Media Server.

There are two software upgrade components, the Content Management Application (CMA) Client and either the .dl2 upgrade package for the DL.3 and DL.2 Fixtures or the .axo upgrade package for the Axon Media Server. Installation of the latest CMA Client Software should always be done prior to initializing an upgrade of a server using the .dl2 or .axo package.

The current version of the **DL.3 User Manual** is available at:

http://www.highend.com/support/digital_lighting/dl3.asp

The current version of the **DL.2 User Manual** is available at:

http://www.highend.com/support/digital_lighting/dl2.asp

The current version of the **Axon User Manual** is available at:

http://www.highend.com/support/digital_lighting/axon.asp

The CMA Client Software and links to the CD image for upgrading the Digital Lighting products are available at:

http://www.highend.com/support/digital_lighting/DL2andAxonSoftwareUpgrades.asp

To automatically be notified of Digital Lighting Software Releases you may join the **Software Release Announce List** at:

http://www.highend.com/support/digital_lighting/DLmailinglist.asp

After updating, the DL.3/DL.2 Versions reported should be:

- *Software Version:* 2.0.5.2575
- *Firmware Version:* 2.0.5.165
- *Windows XPe:* 2.0.0, 2.1.0, 2.2.0, 2.3.2, 2.4.0, or 2.5.0

After updating, the Axon Versions reported should be:

- *Software Version:* 2.0.5.2575
- *Firmware Version:* 2.0.5.165
- *Windows XPe:* 3.0.0, 3.1.0, 3.2.0, 3.3.0, 3.4.0, or 3.5.0

Important Notes:

- Units must be running v1.4.0 or later before upgrading to v2.0.5. If your server is running a version prior to v1.4.0, then you must first download and re-image the O/S using the current Recovery Image from the Digital Lighting Software Downloads page.
- SDI Folder/File assignments changed slightly with v2.0.0. Please note that DL.3 fixtures with Standard definition SDI cards will use Media Folder 255 File 2 for their SDI capture, whereas DL.3 fixtures with High Definition SDI cards will use Media Folder 255 File 5.
- There is a known issue with re-imaging fixtures that are set to accept Art-Net as their control protocol. This can cause the fixture to not upgrade its firmware after the re-imaging process has completed. Upgrading the fixture back to the latest release after the imaging process fixes the issue.
- The SDI format options listed in the menu/CMA for the Decklink SDI (HD) card are currently all of the formats supported by the card. The documentation states that it supports various “i” formats (e.g. 60i), however the card cannot explicitly be set to these formats. A compatible format can be used (for example a 1080i 60 format can be captured on a DL/Axon server with the format set to 1080 30PsF).
- DL servers running an HD4800 series or older video card cannot currently be used with the new Hitachi LCD menu display. The HD5770 video card is the only supported card with that display.

New Features in v2.0.5:

- User Assignable Test Pattern – Added the ability to set any content file on the media server as a test pattern through the CMA or menu (on Digital Fixtures)
- Added Digital MSpeed, Global Effect 105, to compliment Digital MSpeed Effect 103. Effect 105 allows for digital smoothing of Keystone and Image Clip crossfades.
 - Modifier 1 – Keystone Smoothing: DMX value of 0 has no effect, DMX 1 = slowest crossfades, 255 = snap
 - Modifier 2 – Image Clip Smoothing: DMX value of 0 has no effect, DMX 1 = slowest crossfades, 255 = snap
- Added Motor Calibration checkbox to CMA for DL3/DL2 fixtures
- Added Motor Calibration status message to DL3/DL2 menu

Bugs Fixed in v2.0.5:

16686 DL motion jittery on extremely long crossfades

Previous Releases:

New Features in v2.0.4:

- Added support for the ATI HD5770 video card in conjunction with the v2.5.0, v3.5.0, and v4.0.0 images for DL.3/DL.3F/DL.2, Axon, and DML-1200 with Axon, respectively.
- Added support for the Hitachi D57VG display
- Added additional SDI formats
- Added support for the Black Magic Decklink Duo card in Axon

Bugs Fixed in v2.0.4:

14403 DL/Axon must recovery from invalid config values gracefully
15023 16 should not be allowed as an Art-Net Subnet/Universe value
15217 HUD overflowing vertically
15271 Menu tabs cut off display when booting fixture with display invert turned off
15498 Decklink card does not show up in menu as SDI capture device
15499 S-video box in INFO -> HARDWARE tab is shorter than the rest of the boxes
15548 Some versions of Windows 7 cannot discover servers on CMA
15560 Can't set start channel of 257 for 256 channel footprint fixture
15635 Extend Window Service start-up timeout

New Features in Axon XPe v3.5.0:

- Support added for ATI HD5770 Video card
- Support added for Black Magic Decklink Duo SDI card

New Features in DL.3/DL.3F/DL.2 XPe v2.5.0:

- Support added for ATI HD5770 Video card

New Features in DML-1200 w/Axon XPe v4.0.0:

- Support added for ATI HD5770 Video card

New Features in v2.0.3:

- Horizontal Corner Correction Away/Towards added to Curved Surface Support Effects
- Added support for ASUS P8P67 Pro motherboard in Axon in conjunction with XPe v3.4.0
- 16x9 Rectangle objects added to Stock Object Library

Bugs Fixed in v2.0.3:

- 14551 Alternate Blend Curve not initializing properly in Enhanced Collage Generator
- 14726 CMA cannot handle very small jpg files
- 14731 CMA File View showing 0 KB for small files
- 14942 Model check for DL.3F not checking hardware registry Svideo2
- 14952 DL.3F fixtures reporting camera comm error
- 14953 Decklink driver oddity interfering with capture device enumeration
- 15040 S-Video format will not switch while running on ArtNet
- 15046 Long throw lens motor homing is inconsistent
- 15189 Q6600 Processor showing up as E6600 in CMA hardware tab
- 15200 HUD text for Spherical Mapping overflowing display

New Features in Axon XPe v3.4.0:

- **Axon Utilities Menu**

A new Utilities Menu has been added to the Axon Recovery Image that allows users to recover from certain states that would otherwise require a new hard drive. Options included on the recovery menu are:

- Stock Content Repair – Repairs corrupt DMX address mapping of the stock content and restores factory address order
 - User Content Deletion – Deletes all User Content on the media server. Use of this option is only recommended when corrupt or incorrectly formatted content is present making it so the server cannot fully boot
- Support added for ASUS P8P67 Pro motherboard
 - Support added for Hauppauge WinTV-HVR1600 Model 1199 S-video Capture card
 - Support for booting the Restore Disk from a USB Flash Drive has been added. See instructions on High End's website for creating a bootable flash drive:
<http://www.flyingpig.com/phpscripts/BootableUSBFlashDrive-DL.pdf>

New Features in DL.3/DL.2 XPe v2.4.0:

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- Support added for Hauppauge WinTV-HVR1600 Model 1199 S-video Capture card

- Support for booting the Restore Disk from a USB Flash Drive has been added. See instructions on High End's website for creating a bootable flash drive: <http://www.flyingpig.com/phpscripts/BootableUSBFlashDrive-DL.pdf>

Bugs Fixed in v2.0.2:

- 13009 HES Webserver not starting under DHCP environment
- 14089 Rename "DLX-12" to "DML-1200"
- 14146 SDI drop down box in DL.3 menu lists formats we don't support
- 14324 Windows Event Logs all need to be set to "Overwrite events as needed"

Bugs Fixed in v2.0.1:

- 13824 Suppress CAMERA COMM error for DL.3F
- 13825 Hauppauge S-video Cards non-functional in DL2
- 13826 SDI Out does not work with Decklink SDI card on DL.3
- 13839 Fixture ID Box in menu only displays 2 digits
- 13840 DMX Address Box in menu only displays 2 digits
- 13843 Layer number selection outside of the valid range causes exception
- 13855 Graphics Engine crashes on boot-up with X850 video card
- 13858 Video capture source used on multiple layers causes jerky capture
- 13861 The numbers (1 and 2) are cutting off when selecting Test Pattern 1 or 2
- 13862 Incorrect text on deleting user content in the DLs menu
- 13879 Axon CMA not reporting Gas Gauge info if no network cable is plugged in

New Features in v2.0.0:

DMX Protocol

The DMX protocol has expanded in both effects and layers for v2.0 when running the fixture in the new v2 protocol. Users may select between Protocol Mode v1 and v2 in the fixture menu and CMA.

The following new features are available when running the fixture in v2 protocol mode:

Global

- 5 banks of Global Effects
- Framing Shutters feature added on the Global layer
- Viewpoint has been re-purposed by adding additional modes for Collage adjustments as needed using the 3 16-bit channels for X,Y,Z
- Spherical mapping control sets 2 and 3 now available globally.

Layers

- Up to 9 total layers of playback
- 3 banks of Layer Effects

Note: Additional layers are available with the following constraints:

- DL.2 fixtures will be capped at 4 layers total (Range 0-4).
- Early Axons (Intel Motherboards) will be capped at 4 layers.
- DL.3 and late Axons (Asus Motherboards) allow up to 9 layers (Range 0-9).

“Gas Gauge” Performance Indicators

Three “Gas Gauge” performance indicators have been added to the CMA and HUD screen to show the user the current load on the computer server and the available resources remaining. This allows users to intelligently use additional layers within the capabilities of the hardware available in their system.

The three Gas Gauge Indicators available are:

- CPU Usage
- System Memory Remaining
- Hard Drive Load

Log File Download

A method of downloading system log files from the servers has been added in the CMA. Users can now download log files by going into the All Servers view in the CMA and right-clicking and selecting “Download Log”. Logs are saved with a .dlf (digital log file) extension.

These log files can help High End Systems support technicians with troubleshooting any problems that may be encountered on the DL.3, DL.2, and Axons servers.

CMA and Fixture Menu Changes

Several changes have been made to the fixture menu system as well as the CMA to accommodate the new v2 protocol as well as new v2.0 features. These changes include new options in the server tab, a new I/O tab (under the set tab on DL.3), a new hardware information tab (under the info tab on DL.3), and other minor revisions to the menu system.

The following new Effects have been added:

- Film Burn
- Film Noise
- Particle Systems (1,2,3)
- Prism
- Guassian Halo
- Scence Change
- Yxy Luminance
- Prerotation Translation
- Digital Mspeed Control
- Edge Detect B&W2

Bugs Fixed in v2.0.0:

- 5937 Need Remote Fixture Identification via CMA
- 9335 Log File capture from CMA
- 10555 Attempting to copy an invalid file to a server stops the entire copy operation
- 10556 Display a list of unsupported files that weren't copied during a copy operation.
- 10790 Add control of Svideo switching (internal/external) to the menu and CMA
- 10992 Projector Type field should be removed from Axon on screen stats
- 11087 Overwriting Duplicate "No to All" doesn't behave properly
- 12176 64-bit Vista/XP Support
- 12183 ArtNet packets less than 512 Slots not recognized.
- 12744 Add a field where the user can select projector type for the Axon
- 12877 MacCMA will not upgrade DL.3 Fixtures
- 12880 Configure Columns choices are in no logical order
- 12881 Unhandled Exception while changing column selection in "All Configuration View"
- 12882 Extraneous column choices in Configure Columns window
- 13111 Slave servers do not allow for play speed changes when sync'ing
- 13253 Create installer to upgrade Hauppauge Drivers
- 13335 P5Q-E Motherboard is bringing down the network when shutdown by power switch
- 13380 Reboot Server in CMA apply button is not greying out after hitting apply
- 13451 Options are disappearing from the Configure Columns List after they are shown then hidden
- 13600 Add .NET check for CMA installer
- 13610 Changing the resolution to 320x200 8 bit color then rebooting the axon will produce an error
- 13636 Decklink SDI card output goes to wrong color space when set to HD format w/ATI s-video capture
- 13649 EULA is missing DL3 from the header
- 13657 Column Headers are not aligning correctly in the All Configurations window in the CMA

New Features in v1.5.4:

- Add Horizontal Cylinder Correction Global Effects at DMX Value 148 and 149 to allow for horizontal convex and concave cylinder surface adjustments.
 - Mod1: Adjusts correction.
 - Mod2: Sets horizontal center position.
 - Mod3: Not used.
- Added Collage Generator 3 at DMX Value 150 and Collage Generator 3 Wrap at DMX Value 151 to provide updated blend curves when dealing with large collage arrays.
- Split Collage Generator Effect modifier 3 0-127 range for all Collage Generator modes such that:
 - 0 - 63 decreases blend region intensity
 - 64 - 127 increases blend region intensity.

- Add variable collage blend width support under Global Viewpoint Mode DMX Value 127 to allow for on-the-fly adjustment of blend regions from 0% hard edge to a 50% blend region overlap. When Global Viewpoint mode is set to this value the Viewpoint position modifiers affect the following:

Viewpoint X Pos: Adjusts Left/Right width of blend region.

Viewpoint Y Pos: Adjusts Top/Bottom width of blend region.

Viewpoint Z Pos: Not used.

Bugs Fixed in v1.5.4:

- 13205 Geometry Correction Effects Broken
- 13193 Object 0 not detected at startup.
- 11098 Head fans fall to 5V immediately upon fixture shutdown

New Features in v1.5.3:

- Added Support for new DL.3F fixture model.

Bugs Fixed in v1.5.3:

- 13021 Hauppauge S-video Cards non-functional in DL2

New Features in v1.5.2:

- Support added to DL.3 for new Decklink SDI capture cards in conjunction with DL.3 XPe version 2.2.0
- Support added to DL.3 and the Axon Media Server for new Hauppauge WinTV HVR-1600 S-video capture cards in conjunction with DL.3 XPe version 2.2.0 and Axon XPe version 3.3.0
- Added Windows 7 support for Content Management Application

Bugs Fixed in v1.5.2:

- 12810 CMA crashes on Vista with active NIC that has no connection
- 12828 PNG transparency does not work properly
- 12952 Fixtures home to an inaccurate position when beginning home sequence from certain positions

New Features in v1.5.0:

- ***Frame Blending with slow motion playback.*** When slowing play speed down, frame blending is now used to provide smooth slow motion playback without the stuttering that previously existed.

- ***Content Encoding Scanning.*** When uploading new content from the Windows CMA, the content is scanned for proper encoding and format. Warnings will be presented for content that is not properly encoded but is still playable albeit with some possible issues. Errors will be given for content that is corrupted or that has serious enough issues that it would cause severe playback or reliability issues. Content that is flagged with errors is not allowed. **Note: existing user content will be scanned automatically after upgrading to v1.5.0. For users with lots of custom content, this may take some time to complete on the first boot after upgrading to v1.5.0.**
- ***Additional CMA content details added.*** The details view in the CMA now displays: Movie Length, Resolution, Frame Rate, Frame Count.
- ***SDI PAL capabilities added.*** DL.3 and Axon can now select between NTSC and PAL inputs.
- ***High Definition SDI Card support added for Axon.*** Users will now have the ability to add HD SDI cards to their Axon and have support for multiple SDI inputs.
- ***Segmented Collage*** New Collage mode added to allow for pre-sliced content for each fixture so that very high resolution Collages are available. More information on this is located in the Collage Generator chapter in the Manual.
- ***New Graphic Effects include:*** , UVtoTransparent, UVtoGray, HStoGray, HStoTransparent, Textureshift, LensGrid

Bugs Fixed in v1.5.0:

- 7170 Unable to overwrite file with same name
- 9713 Jumpy object rotation with network plugged in
- 9794 Cloning content doesn't properly clone DMX Value changes
- 9934 Multiple Global Clocks on same network.
- 10068 Cloning does not function on Axon that is booted with no network connection
- 10863 Add HD SDI Card Input support
- 11067 Add tile spacing control to tiling effect
- 11494 Memory leak associated with switching SDI capture
- 11852 SDI Capture Lag after running for an hour
- 11885 The original Collage Generator (effect 134) is not functioning
- 11915 Installer needs to add second 4x3 rectangle at the end of the stock content
- 12036 Play Once Forward Trigger Opacity does not function
- 12052 Highest Modifier 2 value allowed in Collage Generator is 64
- 12069 Cloning can result with no addresses for media files
- 12072 Add content filtering on CMA to prevent improperly encoded/corrupt content from being loaded on to a DL/Axon
- 12220 Dialing in the values for the SDI capture when no SDI card is present causes GE to pause every ~3 seconds
- 12254 Jerky SDI Out after extended period of running
- 12290 Add PAL SDI Input option

- 12302 Artifacts seen when switching between movies
- 12337 Movies do not rewind when set to Playmode Rewind depending on playspeed
- 12354 Change DL.3 PDF to launch DL.3 CHM file instead
- 12418 Axon CMA: Prohibited files can be copied to the Scratch folder if copied inside a child folder
- 12446 Add Total Run Time column to CMA files view
- 12448 SDI Out freezes after several hours of running
- 12451 Upgrade.log and Critical.txt are visible in DVD/CD Burning dialog
- 12485 Firmware randomly enters upload (boot) state
- 12489 Editing User Folder DMX values does not take effect until server has been rebooted
- 12495 FourToOne Viewer Causes Crash If Modifier Set Too High
- 12500 Fixture Upgrade HTA shows up on incorrect display with SDI card installed
- 12568 Add UVtoGray effect
- 12569 Add UVtoTransparent effect
- 12570 Add HStoGray Effect
- 12571 Add HStoTransparent effect
- 12572 Add TextureShift effect
- 12574 Add LensGrid Effect
- 12626 Possible memory leaks when rebuilding capture devices.
- 12632 SDI Output not restored when inverting menu
- 12717 DMX addresses not being set on some files while cloning
- 12754 Display Setting Groupboxes in Axon CMA config screens not labeled correctly

Bugs Fixed in v1.4.3:

- 10348 Fine Error Correction for Pan/Tilt needs to be enabled
- 10785 Motion slows before coming to a stop
- 12733 Improve accuracy/reduce time of motor calibration

New Features in v1.4.2:

- Support added to Axon for ATI HD4850 Video Card in conjunction with DL XPE image v2.1.0.
- Added support for Asus P5Q-EM motherboard.

Bugs Fixed in v1.4.2:

- 12624 Axon: Sync not working properly.
- 12625 SVideo Capture to SDI Output not restored when inverting display.

New Features in v1.4.1:

- Support added to Axon for ATI HD4850 Video Card in conjunction with Axon XPE image v3.1.0.

New Features in v1.4.0:

- Axon now has selectable display output resolutions.
- SDI Capture Card Support has been added to Axon. SDI Capture cards can be obtained by contacting HES.

- CMA Configuration User Interface has been completely re-designed into a much more user friendly experience.
- Network Media Sync is now fully functional.
- Major improvements made to In-Frame and Out-Frame seeking now making it highly accurate.
- Collage Generator now has the ability to blend a 360 degree image.
- Complete low-level rework of the Graphics Engine with updated DirectX components.
- CMA is now supported on Windows Vista using .Net 2.0 Framework.
- MacCMA is now supported on Mac Leopard O/S.

Custom Content Notice:

For network media sync and In-frame and Out-frame seeking to function properly it requires strictly following the encoding requirements on the HES Support web for custom content. In particular, encoding the movies as Elementary Streams with all I-frames is critical.

Bugs Fixed in v1.4.0:

- 6658 Memory leak when changing images (virtual Mem)
- 7373 Content folders in tree should be organized by DMX value
- 8563 Layer lock up on certain media files
- 8796 DMX values for folders should be in front of folder names,
- 9569 Implement VMR9 Support.
- 9570 Improve Camera Capture Quality
- 10021 Add common display resolutions to drop down list for Axon display parameters
- 10061 File copying can erroneously ask about overwriting duplicate files
- 10193 Mac CMA: Not all configuration values from Axon show up
- 10194 MacCMA: There is no drop down list for "Secondary Display Parameters" under Axon configuration values
- 10218 Need new Icons for use in Vista
- 10277 Display Axon Icon in CMA Views
- 10288 Pressing motor calibration twice will cause calibration to abort
- 10289 Fixture name/ID does not update in server list after being changed
- 10352 Self Test Video Patterns should only be one box in the menu
- 10353 Swap the self test video patterns
- 10360 Box Fans fall to 18v when dousing lamp, even in high ambient temperatures
- 10394 Implement selectable resolution on main GE window for Axon
- 10692 Occasional pause when changing movies in Pause and Rewind State
- 10725 Movies play very fast with both in frame and out frame set to 0
- 10727 Movies pause at the end without frame set slightly below default
- 10731 speed up movie changes
- 10743 The .NET Framework 2.0 needs to be installed for 1.4.0.
- 10757 Certain effects not working after flipping through a few media files
- 10759 Artifacts appearing at random over the entire GE output
- 10763 Attempting to reboot a server through CMA does nothing
- 10771 Scrubbing in frame or out frame can make loop forward stop working temporarily

- 10851 Add section to Axon manual concerning live video set-up
- 10894 Green bar shows on right side of camera capture
- 10949 Axon will not respond to DMX if booted with no DMX connected
- 10964 Motor Calibration button displays "Calibrat"
- 10968 Added video adapter type to menu.
- 11027 Shake and Bake visual mode does not function
- 11029 RGB to GBR and RGB to BRG effects are swapped
- 11082 ATI drivers need to be upgraded to at least version 7.8 for 1.4.0
- 11233 Changing in frame on the fly can cause playback to stop
- 11275 Mac CMA: Servers do not drop off the server list correctly after being rebooted/upgraded etc
- 11285 Mac CMA: Error during browsing of thumbnails - causes CMA to hang
- 11286 Mac CMA: The DL2 manual will not launch from CMA on Leopard
- 11296 Add fixture Update Status window to normal software upgrades
- 11355 Update MacCMA icon to new icon to match PC CMA
- 11617 Mac CMA: Dialog box that pops up after cloning won't go away
- 11642 MacCMA: Add Axon Icon to All server list view
- 11698 Not all servers show up in CMA on Windows Vista.

Bugs Fixed in v1.3.7:

- 11610 DL.3: Increased current on Projector Zoom motor to fix occasional mis-stepping issues seen.

New Features in v1.3.6:

- Added support for the Wide Angle lens option to the DL.3 fixture.

Bugs Fixed in v1.3.6:

- 11557 DL.3: Lens Shift can get out of sync if the fixture is power cycled with the lens shift on.
- 11583 DL.3: Implement persisting of lens shift.

New Features in v1.3.5:

- Added support for the DL.3 fixture to the family.

New Features in v1.3.4:

- Minor maintenance release, no new features added.

Bugs Fixed in v1.3.4:

- 10947 Running an upgrade in DHCP environment can cause DL.2 to not be seen in CMA under Auto-IP.
- 10870 Vertical Cylinder correction has definite 'peak' compared to v1.3.2.

Note: Horizontal Center control has been removed from the Vertical Cylinder Correction effect, for the time being, due to problems in the geometry.

11095 Added Support for HD2900 Video Card.

New Features in v1.3.3:

- Vertical Slats effect added at DMX Value 62 to allow slicing the image into alternating vertical slats that can be offset from each other.
- Horizontal Slats effect added at DMX Value 63 to allow slicing the image into alternating horizontal slats that can be offset from each other.

Mod1: Adjusts the number of slats.

Mod2: Adjusts the displacement of the slat position.

Mod3: Fades between the slatted image and original image.

- Downward Vertical Streak effect added at DMX Value 80 to allow streaking of the bottom part of an image together.

Mod1: Adjusts length of the streaks.

Mod2: Adjusts the rotation of the streaked edge.

Mod3: Fades between the streaked image and the original image.

- Gaussian Blur effect added at DMX Value 81 to create a more realistic blur effect.

Mod1: Adjusts sample distance.

Mod2: Adjusts filter pass number.

Mod3: Adjusts effect scale.

- Sharpen Filter effect added at DMX Value 82 to control sharpening of the image.

Mod1: Adjusts sample distance.

Mod2: Adjusts filter pass number.

Mod3: Adjusts sharpen scale.

Bugs Fixed in v1.3.3:

- 9462 Keystone protocol displays wrong in the protocol menu
- 8980 Zoom and Focus override values do not update in menu when set with CMA
- 9509 Turning Display to On or Off from Preview doesn't leave 'File' pane
- 7329 Set Display Dim value to a default in protocol
- 10455 Artifacts using layer profile for edge fading and selected layer stops rendering.
- 7338 Problems with GE after changing Fixture ID while GE is running.
- 7766 Lockup when rapidly changing still images.
- 10551 Add horizontal center control to Vertical Cylinder geometry correction.

Bugs Fixed in Axon v2.0 XPE Image:

- 10199 Random ATI permission error dialog.

Note: This requires installing the latest XPE Image for Axon available from:
<http://www.flyingpig.com/phpscripts/recovery.php>

New Features in v1.3.2:

- Sphere Mapping Effect. It is now possible to blend and map multiple units to blend and geometry correct onto large spherical surfaces. See Chapter 12 in the user manual for full details on using this new feature.
- Global Matte Effect. This effect allows you to superimpose up to 20 different pre-defined Mattes for layering images with multiple transparency and color options.
- Framing and Edge Fade profiles added. This effect expands on the functionality of the existing Edge Fade parameters to add different modes including stylized framing by using other layers as content for the edge fade and framing shutter emulation effects.
- Resolved multiple adapter network issue that previously required disabling wireless and other secondary network adapters with the CMA Client. The CMA will now properly work seamlessly with multiple network adapters all enabled and active.

Bugs Fixed in v1.3.2:

- 9278 Lamp restrikes itself after being told to douse from menu
- 10250 Lamp hours not tracking correctly with newly implemented Eco Mode
- 10263 Windows XPe version does not update in config info after partial restore
- 10361 The CMA crashes when no network interface exists.
- 8885 Allow DL.2/Axon to get multicast traffic on all network interfaces.
- 10383 CMA Upload Browse dialog should show both *.axo and *.dl2 file types together.
- 10419 The CMA's subsystem can incorrectly think it is a DL.2 on a standard PC.
- 10387 CMA gets in bad state with radio disabled
- 10129 Need to allow CMA Install on Vista O/S
- 10287 Differences in CircleSphere object.
- 10420 hes6CircleSphere.x erroneously installed, needs to be removed
- 10251 Projector Type not updating in menu or on screen stats
- 10205 Implement improved alignment grid
- 10207 Transparency in PNG files does not work.
- 10330 Optical pin-cushioning correction added.
- 10290 Tighten the tolerance on object snaps
- 10414 Filter graphs for some MPEG2 movies incorrect
- 10413 Filter graph dirty on graph build failure
- 10431 Memory leak associated with Click + Shift
- 10435 Graphics engine hangs up on corrupt jpgs.

New Features in v1.3.1:

- Major Improvements to CMA Networking and Sync performance. Routers can now be utilized in the network to speed up fixture discovery with the CMA.
- Collage Generator Effect expanded up to any configuration of up to 8x8 array sizes.
- Enhanced Collage Generator Effect added at DMX Value 141. This new enhanced version is optimized for arrays greater than 2x2, eliminating heavy aliasing of objects and dramatically increases the available image resolution.
- Lamp Eco mode added to automatically reduce the lamp power and increase lamp life whenever the mechanical iris is closed.
- Image Scale and Rotate effects added at DMX value 52 to manipulate the image texture within the object.

Mod1: Scales Image
Mod2: Rotation Angle
Mod3: Rotation Speed

- Film Roll effect added at DMX value 53 to scroll the image texture within the object.

Mod1: Horizontal Speed
Mod2: Vertical Speed
Mod3: Image Size Scale

- Pixelation effect added at DMX value 54.

Mod1: Amount of Pixelation
Mod2: Horizontal Scaler
Mod3: Vertical Scaler

- Faux LED and Faux Tile effects added at DMX values 55 and 56 to create a virtual LED and Tile walls.

Mod1: "LED" pixel size
Mod2: "LED" pitch spacing and border color
Mod3: "LED" color peaking adjustment

- Fuzzifier effect added at DMX value 57.

Mod1: Horizontal Blur adjustment
Mod2: Vertical Blur adjustment
Mod3: Decay level adjustment

- Drop Shadow effect added at DMX value 58 to create a frame effect for inserting other layers against a backdrop or for I-MAG inserts.

Mod1: Horizontal Shadow Size
Mod2: Vertical Shadow Size
Mod3: Shadow Opacity

- Zoom Blur Effect added at DMX value 59 to zoom in on an image and create a blurring effect.

Mod1: Horizontal Position center.
Mod2: Vertical Position center.
Mod3: Zoom In/Out.

- Chroma Shift Effect added at DMX value 60 to offset the RGB component colors of the image.

Mod1: Horizontal Shift.
Mod2: Vertical Shift.
Mod3: Scale.

- ShakeNBake Effect added at DMX value 61 to randomly vibrate the image.

Mod1: Horizontal Shake.
Mod2: Vertical Shake.
Mod3: Scale.

Bugs Fixed in v1.3.1:

- 5518 AutoSet DMX on large File Selection dies
- 7542 Negative image from camera loses detail through graphics engine
- 7709 Model type needs to report fixture type, DL2 or Axon
- 8099 Running a router (linksys) without WAN causes CMA connectivity issues
- 8503 CMA needs to handle multiple instances gracefully
- 8626 Layer not playing on boot up with DMX calling for media to play
- 9311 Keystone not centered in output
- 9314 Add Media Mode Pause to pause S-Video input
- 9349 Color mixing needs to be more saturate
- 9606 Connecting network after DL.2s, communication nonfunctional for 5-10 minutes.
- 9615 CMA Unnecessary Tree Collapse
- 9742 Default DMX values not copied to local buffer at startup.
- 9743 Selftest values don't clear properly when no DMX applied.
- 9744 DMX framerate not update upon loss of DMX data.
- 9753 Properly allow running multiple CMA instances
- 9773 Only one texture(material) can be used per 3d object(mesh)
- 9795 Occasional Random Z-ordering when all objects are 4x3 at 0pix Z-position
- 9832 Collage support increased from 4x4 to 6x6
- 9859 Water Drop effect not functioning properly on layers 2 & 3
- 9884 CMA connectivity stops working after changing from Auto-IP to DHCP network
- 9891 Refresh timer on DMX raw view gets turned off every time window is scrolled
- 9892 Right and Left values for edge fade display incorrectly in protocol view
- 9893 FX2 mode listed as FX1 mode in Protocol View for each layer

- 9931 Fixtures need to be intelligently expired from the CMA fixture tree.
- 9936 Client IP does not update when changing from IP address to another
- 9951 Iris opens prematurely when booting with heavy GE load
- 9955 Slim down the 1.3.0.X CMA installer.
- 7062 Crossfades not smooth (scaling)
- 9632 Links to launch the HES Web removed from Axon
- 9850 Menu does not fill the LCD screen when inverted using X1900XT Cards
- 9932 Global clock master/slave algorithm updated.
- 9941 Mac CMA allows drag/drop of folder with trailing space in folder name.
- 10013 Improved Collage Generator.
- 10060 Multiple Master global clocks showing up in the network
- 10080 Add IP information to status display
- 10088 Disable O/S Sleep/Hibernate ability on Axon.
- 10093 Global clock does not appear to work correctly with Auto-IP networks
- 10133 Axon thinks it is set to internal camera capture
- 10138 Client IP field needs to be added to the bottom of the CMA
- 10149 Menu does not fill the LCD screen correctly when booted in non-inverted state
- 10170 Extra async file source filter in movie graph – Memory Leak
- 10181 In the MulticastSocket implementation socket creation can fail.

New Features in v1.2.5:

- Special version to allow downgrading from v1.3.x releases to v1.2.4 and earlier releases. This build must be installed prior to downgrading from v1.3 or later to v1.2.4 and earlier.

Bugs Fixed in v1.2.5:

None.

New Features in v1.2.4:

- Added support for the ATI X1900XTX video card. Note this video card can only be used in new units with chassis modifications to properly support this video card. Windows XPe image v1.2.6 is also required to support this video card.

Bugs Fixed in v1.2.4:

None.

New Features in v1.2.3:

- Added Curved Surface Support for projecting onto not-flat surfaces. This is a huge advantage when using the Collage Feature on screens that are curved or have a curved portion to them to adjust the screen geometry beyond the normal keystone controls. Curved Surface Support includes a number of different surface types including: conical and spherical type curves, as well as corner surfaces. Full details on how this new feature operates are located at: http://www.highend.com/pub/products/digital_lighting/dl2/docs/Curved%20Surface%20Support.pdf

- Added support for the Christie Digital LX55 Projector.
- Color to Alpha effect added at DMX value 49 and Inverted Color to Alpha at DMX value 50 in Global and Graphic layers.
 - Mod1: Red to Alpha
 - Mod2: Green to Alpha
 - Mod3 Blue to Alpha
- Texture Mixing effect added at DMX value 51 on Global and Graphic Layers.
 - Mod1: Source Layer Select
 - Mod2: Source Effect/Visual Mode
 - Mod3: Crossfade from normal texture to other texture.
- Visual Mode Texture Mixing added at DMX value 12 on Graphic Layers.
 - Mod1: Source Layer
 - Mod2: Crossfade
 - Mod3: N/A
- Four-in-one display divides the display into quadrants showing each graphics layer and the final output image to aid in visualization while programming. This mode is accessed via the Global Control channel with a DMX value of 253.
 - Global Modifier: 4-in-one configuration. See current manual for all the configuration options.

Bugs Fixed in v1.2.3:

- 9639 Add Projector Type field in the Version tab.
- 9653 Opacity getting applied mutiple times in collage (i.e. not allowing for crossfades).
- 9448 Loading movies into a paused state does not always start movies on first frame.
- 9610 Turning self test video patterns on should open the iris.
- 9295 Self test modes do not work without DMX applied.
- 8551 Play Once Forward after Pause and Rewind does not always hit last frame.
- 8456 Play Forward Once does not hit last frame after looping.
- 9706 Media clip will not rewind if previously paused on the last frame.
- 9720 Add Projector Type field to CMA configuration screen.

New Features in v1.2.2:

- Added the Collage Feature which allows seamless blending between multiple fixtures acting as one, to create a single large image. Full details on how this new feature operates are located at:
 - http://www.highend.com/pub/products/digital_lighting/dl2/docs/Collage%20generator.pdf
- Raindrop effect added at DMX value 46 in the Effects Channel.
 - Mod1: Controls the size/speed of the rain drops.
 - Mod2: Seeds the random number generator so that the units sync together across a Collage.

Mod3: Controls the rate of rain drops.

Bugs Fixed in v1.2.2:

- 9553 Croaker when switching between S-video capture and content.
- 9510 Scrubbing In-Frame w/Statistics turned on shows the actual Frame spooling up.
- 9339 Head fans running high and unwarranted filter warnings.
- 8151 Play Control Rewind does not always rewind.
- 9505 Computer gets in a state of slow playback.
- 9492 Implement active box fan control.
- 9573 Media playback stops after setting opacity to 0 and then above 0 when using Trigger Opacity.
- 9500 High CPU utilization on Stop and Rewind with High Res media.
- 9136 Display off setting persists when units are put in shutdown then power cycled
- 9579 Media Clip starts over when switching from play mode loop forward to once forward
- 9532 Iris will never open after homing if unit is in a continuous movement effect
- 9591 Media clip starts over when going from pause to once forward
- 9588 Display set to off upon reboot
- 9403 IP address bouncing between 127.0.0.1 and 169.254.x.x, CMA non-functional
- 9293 DL-2 can sometimes home off by a step

New Features in v1.2.1:

- Added Support for 17 flavors of NTSC, PAL, and SECAM video standards for the External S-Video input.

Note: Currently, changing the video input requires a reboot of the Graphics Engine for the new setting to take effect. Also, when using the camera set to Internal mode, the video input setting must be set to NTSC_M.
- Speed of Pan/Tilt motion has been substantially increased over previous versions.

Bugs Fixed in v1.2.1:

- 9196 Enable the Windows CMA to use .NET Framework 2.0
- 9093 Pin hole leak in iris sometimes present
- 9092 Full Screen Error messages should override display off
- 9082 Pan operation is greatly slowed on some units after position home from 50/50
- 9148 Increase speed of accelation and maximum velocity without misstepping during can-can type movements.

New Features in v1.2.0:

- Additional Warning/Error messages added to the system for the Air Filter.
- The need to calibrate the Air Filter has been removed.

- Major re-work has been done to improve the motion performance and reliability. *For Optimal performance the Pan/Tilt motors should be recalibrated from the Menu.*
- New Visual Effects added: Color Swap(RGB to BGR, GRB, RBG), Iris and Edge Fade background colors, Background Color and Color Cycle, Glow Color Cycle, Colorize Grayscale, Exposure Control.

Bugs Fixed in v1.2.0:

- 8869 Lamp does not douse during dataloss shutdown when Lamp Mode set to ALWAYS
- 8146 Iris gets caught in loop constantly grinding Iris Open/Closed.
- 8388 DL2 motion gets worse the longer the unit runs.
- 8175 CPU utilization goes up significantly with no network connected.
- 8138 Projector Defaults Button no longer accessible
- 8622 Data Loss Time Out value can be out of sync between menu and motion.
- 7933 Iris grinds loudly when doing a Home All while in Shutdown
- 8453 Pan randomly slams into stops until encoders turn off
- 8485 Inconsistent pan homing
- 8629 Lamp Hours not counting correctly in menu
- 8053 Add Filter Status Messages (connect to firmware)
- 8059 Add Projector Warning/Error Messages (connect to firmware)
- 8139 Projector In By DMX doesn't show current state
- 8170 Spurious USB Comm Errors
- 8152 Play Once after being told to Rewind and Pause does not function
- 8171 Loss of output after pause and change of media file
- 8054 Need to remove forced button nag on Filter Life Warning
- 8145 Iris opens prematurely during global home from certain positions
- 8597 Oddities with coming out of home when using art-net
- 7915 Self Test Video Patterns not working
- 8214 Memory leak related to media mode pause
- 8242 Motor Calibration does not always run or will not finish
- 8790 Add new iris objects to DL2 installer
- 8148 Menu Edit box still active after navigating away
- 8823 Need to add Pan/Tilt Encod Firmware Versions to the Menu
- 8867 Remove Filter Calibrate Button from Menu.
- 8093 Irises Slightly Small
- 8094 Rasterization Errors (4x3 Rectangle)
- 8111 DL-2 needs swap RGB to BGR
- 8155 Tilt Jump at end of slow move
- 8592 Certain aspects of the graphics engine respond slowly on art-net
- 8619 Glow Color Cycle Effect Added
- 8708 New Visual Mode and Global Effects Added.
- 8150 Display Off via DMX doesn't take effect immediately

Bugs Fixed in v1.1.0:

- 8077 Display will not come back on from menu action when display is set to "Off"
- 7937 Factory Defaults followed by Home All initiates a Firmware upgrade
- 7935 SuperObject::CreateFilterGraph: caught unhandled exception crashing individual Graphics Layers, on startup.
- 7695 FailureCGraphicsEngineCore::Render(): caught unhandled exception.
- 7454 Movies pause when inframe has previously been adjusted.
- 7758 Computer takes over 2 minutes to reboot remotely.
- 7653 Global Clock Negotiation Non-existent for synchronization.
- 7930 IR Illuminator not shutting off during fixture shutdown.
- 6789 Info tab: Hours Resets not working properly.
- 7328 Need Menu brightness/contrast control from CMA.
- 7864 Firmware Upload File Handling needs overhaul to verify matching firmware versions in cards.
- 7888 Firmware upload fails on first attempt after freshly imaged hard drive.
- 8058 Keystone Channels do not show up correctly in protocol menu.
- 7831 Values changed by the CMA are not reflected in the DL menu in real time.
- 8051 Added USB Security Error Messages.
- 7802 Iris can briefly prematurely open before GE is ready.
- 7916 LCD needs to become a blank screen in shutdown.
- 7961 Mask Strobe with "Cloud Iris" does not function properly.
- 7615 Loop Once Forward acts as pause.
- 7390 Media mode Stop acts as loop once forward, not pause.
- 7385 Opacity issue with overlaying 2 layers w/ same center point.
- 7548 Some objects tear when rotating one image through another.
- 8022 Glitch in output when changing between Index and Rotate.
- 7815 Shadow of object when wobulation used on 2nd effect mode.
- 7711 Clockwise object rotation should stop on a dime.
- 7734 Raster line on side of rectangle objects when Z position is pushed out.
- 7644 Global Intensity should behave as intensity.
- 8048 Unneeded tiling calculations.
- 7643 Projector Control Menu: OnScreenDisplay functions not active
- 7845 Control functions don't work under Art-Net properly.
- 7834 Menu: Projector input selection by DMX [Off] does not function.
- 7617 Loop Once Forward stops on the 11th frame.
- 6762 Sync modes not working correctly
- 7902 Actual/Expected Firmware version should be compared and uploaded on boot.
- 7245 Sync seems to be broken.
- 7847 Large latency and choppy playback of camera feedback with Preview mode on.
- 7911 GE becomes sluggish and goes to incorrect images
- 8039 Rasterization Errors As Effects Applied
- 7925 Need 'Select All' and 'Clear All' buttons in CMA Clone dialog.
- 7611 Reset Fixture Defaults not all active.

Bugs Fixed in v1.0.1:

- 7857 Fixed Motion Home All from causing Pan/Tilt to slam into stops occasionally.
- 7904 Client Installer now defaults to 'Program Files' location
- 7867 Security failure message added to display.
- 7912 Setting Fixture ID to 0 from CMA causes fixture not to boot
- 7859 CMA/Menu Setting inconsistencies fixed.
- 7910 Tilt motors misstepping fixed.
- 7913 Raw Data in DMX Menu Display now shows first entry for 'channel 0' as '--'
- 7614 Fixed occasional Menu lock ups
- 7822 Fixed Tilt Switch Auto not functioning and/or conflicts w/ registry
- 7868 Iris closes on loss of USB Comm
- 7920 Projector Defaults Menu Lockup fixed.
- 7923 Added 'Select All' and 'Clear All' buttons in CMA Upgrade Wizard
- 7917 DL-2 would not boot with video test pattern to "2"
- 7843 Added 30 second wait after menu keypress before enabling Preview on display.
- 7866 Fixed Security false triggering
- 7927 Data Loss Timeout: 'Off' option removed
- 7890 Projector Defaults sent to Projector
- 7655 Display Default: Left/Right Nav buttons improved
- 7900 Menu w/Invert On was partially off top of screen
- 7621 Fixture Shutdown' behaviour improved
- 6776 Fixed DL-2 position loss after being bumped
- 7566 projector input gets lost, must hard reset to rectify resolved.
- 7772 iris remains closed even when GE running fixed.
- 7862 Fixture should wake up on connecting DMX data after dataloss timeout
- 7532 Lamp/Projector Startup Modes implemented
- 7905 CMA Client Installer needs a EULA
- 6816 Pan and tilt slow just before hitting destination
- 7907 DL-2 loses position after homing
- 7787 Display Auto-invert occasionally not auto inverting
- 7799 iris slightly open upon bootup fixed
- 7932 Menu Button hits/Tilt Switch delays Data Loss Shutdown from happening
- 7560 Pan/Tilt Encoder On/Off setting in menu does nothing
- 7924 Iris closing for loss of USB comm to trimmed to 2 to 4 seconds
- 7914 CMA allows for invalid value for Self Test Video Pattern
- 7903 Chroma effects go away when image pos is not default