DL.3, DL.2 and Axon v2.1.0 Release Notes
November 6, 2012

Version 2.1.0 is a feature update 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*:   2.1.0.2626
- *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*:   2.1.0.2626
- *Firmware Version*:   2.0.5.165
- *Windows XPe*:   3.0.0, 3.1.0, 3.2.0, 3.3.0, 3.4.0, or 3.5.1

Important Notes:

- Units must be running v1.4.0 or later before upgrading to v2.1.0. 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 v2.1.0:

- CITP Protocol Support – DL.3, DL.3F, and DL.2 fixtures along with Axon Media Server now support Media Server Extension version 1.2 of the CITP protocol allowing for communication of server information, library information, media thumbnails, and live status with CITP enabled lighting consoles and visualizers.

Bugs Fixed in v2.1.0:

17248 Frame blending not working when render order is not 0,1,2,3,…

Previous Releases:

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.
  - o Modifier 1 – Keystone Smoothing: DMX value of 0 has no effect, DMX 1 = slowest crossfades, 255 = snap
  - o 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

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 overfilling 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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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 keystoning 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	Rasterizaton 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