

# Imagestore 750 V3.1 Release Notes

**\$Date: 2010-02-16 12:29:56 \$**

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## Software Upgrade via Imagestore 750 Web Page

### Overview

- This is the preferred mechanism for upgrading software
- It requires Imagestore 750 software version 2.x or later to be running
- The software upgrade CPIO file is called: **is750-3.1-021.cpio**

### Procedure

- Open a web browser and type in the IP address of the Imagestore 750
  - Log into the Imagestore 750 web page using the password "miranda"
  - Select the "Software Upgrade" link in the left-hand menu
  - Select the "Browse" button in the Software Upgrade section, and then select the CPIO file
  - Check the "Are you sure?" checkbox and then select the "Software Upgrade" button
  - Monitor progress on the Imagestore 750 front panel. This will run through several parts ending with the message "DONE!"
  - After the software upgrade is complete, the Imagestore 750 will automatically power cycle and restart running the new software
  - **WARNING:** Do not power off the device during an upgrade since doing so may render the unit inoperable. Upgrades can take up to 15 minutes depending on hardware options
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## Software Upgrade via Bootable USB Key

### Overview

- This mechanism should be used for upgrading Imagestore 750 running software earlier than version 2.x
- This mechanism may also be used for recovery should the Imagestore 750 fail to start up or the web page fail to open
- The software upgrade CPIO file is called: **is750-3.1-021.cpio**
- The ZIP file for creating a bootable USB key is called: **is750-update-v30.4.zip**

### Procedure: Format USB key

- The USB key must contain a partition table and primary partition greater than 2MB. If this is already the case then move to the next section; otherwise format the USB key as follows...
- Insert the USB key into a PC running Windows XP
- Open the Control Panel and select: Administrative Tools > Computer Management > Disk

### Management

- **NOTE:** Do not right-click anywhere within the Disk Management window since this will cause the Delete icon to disappear.
- Left-click on the USB volume (top right panel) and then left-click on the "Delete" icon in the toolbar
- When prompted, confirm that the USB partition should be deleted
- Left-click on the unallocated USB volume (bottom right panel), and from the menu select: Action > All Tasks > New Partition...
- Accept all defaults in the New Partition Wizard to create a new primary partition on the USB key

### Procedure: Create Bootable USB Key from Update ZIP File

- Insert the USB key into the Imagestore 750
- Open a web browser and type in the IP address of the Imagestore 750
- Log into the Imagestore 750 web page using the password "miranda"
- Select the "Software Upgrade" link in the left-hand menu
- Select the "Browse" button in the Create Bootable USB Key section, and then select the ZIP file
- Check the "Media Inserted?" checkbox and then select the "Create" button
- Monitor progress on the Imagestore 750 front panel until it shows "DONE! Press Any Key"
- The Imagestore 750 now will boot off the USB key when it is restarted

### Procedure: Software Upgrade via a Bootable USB key

- The bootable USB key contains an HTTP server which is used for upgrading the Imagestore 750 software
- Insert the bootable USB key and then restart the Imagestore 750
- Wait for the front panel to display the message "Goto HTTP Server xxx.xxx.xxx.xxx"
- Remove the bootable USB key from the Imagestore 750
- Open a web browser and type in the IP address of the Imagestore 750. **NOTE:** It may be necessary to clear the browser cache
- Select the "Browse" button, and then select the CPIO file
- Check the "Are you sure?" checkbox and then select the "Software Upgrade" button
- Monitor progress on the Imagestore 750 front panel. This will run through several parts ending with the message "DONE!"
- After the software upgrade is complete, the Imagestore 750 will automatically power cycle and restart running the new software
- **WARNING:** Do not power off the device during an upgrade since doing so may render the unit inoperable. Upgrades can take up to 15 minutes depending on hardware options

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## Software Release Notes

### v3.1-021 - FINAL RELEASE - 2010-02-16

- No changes.

### v3.1-020 RELEASE CANDIDATE - 2010-02-09

- [Bug #5906] imsttest will not accept an IP address as a parameter.

- [Bug #5862/2] 'Compression' and 'Dynamic Range' setting in Metadata file not respected.

### **v3.1-019 RELEASE CANDIDATE - 2010-02-05**

- [Bug #5878] There is no audio passthrough when no audio or EAS is licenced.
- [Bug #5888] Previous log file (messages.old) is not being generated
- [Bug #5902] Add downmix outputs to the upmix module.
- [Bug #5893/2] PGM and PVW will occasionally flash green continuously on start up (single-rank delay memory).
- [Bug #5903] 'jp4' Set bus master gain command does not limit to -100db and +28db value range.
- [Bug #5868] Upmix output has poor quality.
- [Bug #5895] Moving between some shuffle presets fails.
- [Bug #5905] EAS audio voiceover does not work if route manager is turned off.

### **v3.1-018 RELEASE CANDIDATE - 2010-02-02**

- [Bug #5873] Automation commands incorrectly compared against system features.
- [Bug #5880] AES alarm is not triggered correctly when changing audio type or signal presence.
- [Bug #5861] 'oQ' command not respected by the Dolby Encoder card (Firmware v01.01.03.03).
- [Bug #5862] 'Compression' and 'Dynamic Range' setting in Metadata file not respected.
- [Bug #5875] Loading a mixfile with with syntax error makes the unit crash.
- [Bug #5869] Default Upmix value of 'Center\_width' should be set to 33.
- [Bug #5834/2] Easyplay banks will not replay if they were previously interrupted by another bank in the same stream.
- [Bug #5893/1] PGM and PVW will occasionally flash green continuously on start up (single-rank delay memory).
- [Bug #5892] Audio trim value range check not working properly.
- [Bug #5885] Downloaded 'Default Mix Files' looks to be empty and display '0 bytes' saved.

### **v3.1-017 RELEASE CANDIDATE - 2010-01-29**

- [Bug #5672/3] EAS audio does not work without an audio licence.
- [Bug #5831] imstReferenceExternalFormatMismatch SNMP response looks incorrect and alarm not triggered.
- [Bug #5846] Wakeup packet (Y7) is missing during a software restart.
- [Bug #5844] Log spammed with 'Resource temporarily unavailable messages' when saving an image.
- [Bug #5851] UE mixer select tally is sent even when no change has been made.
- [Bug #5807] Delay Mode in Metadata processor not working properly.
- [Bug #5852] Implement support for 'hold last metadata' mode on metadata processor.
- [Bug #5840/2] Implement a log rotation scheme for the alarms log.
- [Bug #5858] Spelling error in out of range log messages for jp and j0 4.
- [Bug #5866] Program compression profile 'oS' enquire response is missing a parameter.
- [Bug #5865] The front panel does not show the current metadata preset.
- [Bug #5867] Setting a keyer fader angle with '@' does not restart the animation/scroll.
- [Bug #5870] Logs spammed with audio\_get\_multiplexor\_select\_control messages.
- [Bug #5871] Incorrect response of unlicensed multiplexor commands.

### **v3.1-016 RELEASE CANDIDATE - 2010-01-18**

- [Bug #5819] Message logs for Xv command should show 1-based channels.
- [Bug #5825] Datasource semaphore not released.
- [Bug #5798] Add Densite enquires of the audio feed and AES input status.
- [Bug #2443/1] Text cuts down before strap completes on auto cut down.
- [Bug #5823] Backplane loss alarm should be based on system features.
- [Bug #5696] PREVIEW\_INPUT unsolicited messages may be incorrect.
- [Bug #5772] 'Metadata Processor' can not generate proper metadata without 'Metadata Input' connected.
- [Bug #5809/2] Add PST option to Setup > Audio Setup > Easyplay > Stream x > Follow DSK.
- [Bug #5800/2] Shuffling input channels using 'jo 0' automation command does not work correctly.
- [Bug #5832] Numbering in 'Show GPI IPs' and 'Show GPI OPs' should be 0-based.
- [Bug #5834/1] Easyplay banks will not replay if they were previously interrupted by another bank in the same stream.
- [Bug #5836] Temperature probe datasource names should be 'CELSIUS'.
- [Bug #5840/1] Implement a log rotation scheme for the alarms log.
- [Bug #5841] Default system AB mix rate reported as zero.
- [Bug #5843] DVE save sequence command rejected when PGM + PVW mode is used.

### v3.1-015 BETA - 2010-01-11

- [Bug #5814] 'system value persists' should be removed for the audio type setting in the Configurator.
- [Bug #5812] Configuration templates create error messages on opening in the Configurator.
- [Bug #5603] Configuration with DVE mode = 'None (Delay)' does not frame-delay the background video at start up.
- [Bug #5815] Correct GPI output options on the front panel.
- [Bug #5817] Message log text is incorrect for UG command.
- [Bug #5806] '#J1' Start non-interactive tests command does not work correctly.
- [Bug #5818] Add AB mix fade rate to Configurator Tool.
- [Bug #5809/1] Add PST option to Setup > Audio Setup > Easyplay > Stream x > Follow DSK.

### v3.1-014 BETA - 2010-01-07

- [Bug #5747] Extra error logging for stores and easytext.
- [Bug #5764] Make the automation output method more robust.
- [Bug #5781] Move and clean-up unit tests directory, run within valgrind where appropriate.
- **Integrated latest firmware for SID (1V14) FPGA**
  - [Bug #5759] Dolby E signal in the Fill-1, Key-1 or D input can not pass properly.
- [Bug #5748] Correct the behaviour of Densite commands compared to previous releases.
- [Bug #5783] Metadata element 'Copyright' can not be overridden in Modification mode.
- [Bug #5784] Metadata element 'Surround Attenuation' can not be overridden in Modification mode.
- [Bug #5792] Prevent hda IDE warnings during diagnostics archive creation.
- [Bug #5794] Fix highly unsafe use of invalid memory in comms.cpp.
- [Bug #5797] Make commands and tally message names more sensible.
- [Bug #5796] Add audio module information to the diagnostics archive.
- [Bug #5768] Set Text Background to Gradient (Z7) command does not draw 'Source Colour' and 'Dest Colour' correctly.
- [Bug #5801] Tally and reply sending slightly unsafe.
- [Bug #5780] 'Unexpected segment ID' reported when using the XVP/DAP cards generated signal.
- [Bug #5803] Caption for the stream number on the Dolby Decoder missing a word.

- [Bug #5555] A GPI configuration load or save is not re-tried if it fails.
- [Bug #5800/1] Shuffling input channels using 'jo 0' automation command does not work correctly.
- [Bug #5782] Enquire Densite Card Slot Number (#L) automation command should cause an error to be logged.
- [Bug #5790] Software fails to start if imstmain triggers restart on config load.
- [Bug #5678] Update the initial page seen on an upgrade from USB stick.
- [Bug #5683] Audio fade rates in the Configurator Tool, front panel and automation are inconsistent.
- [Bug #5412] Improve initialisation of state\_t.
- [Bug #5808] ALM\_METER\_CONFIG not working for Fill-2 and Key-2 alarms.

### v3.1-013 BETA - 2009-12-21

- [Bug #5726] Add verbose logging mode for OxSox messages.
- [Bug #5713] Serial protocol automation command parameters are incorrectly interpreted.
- [Bug #5745] AES alarms have not been added to the Densite commands.
- [Bug #5736] Enquiring Easyplay audio when Easyplay is not licenced crashes the unit.
- [Bug #5754] Front panel inconsistencies between 'Input Status Feed N' and 'Input Status AES'.
- [Bug #5749] GPI Out events incorrectly include 'B Video' options.
- [Bug #5718] Logs spammed with 'Resource temporarily unavailable' messages when sending R1 'Save Image' command.
- [Bug #5758] Message logs for Xv command should show audio feed 1/2/3/4, not A/B/C/D.
- [Bug #5732] Add descriptions for the audio configuration templates.
- **Integrated latest firmware for SOD (1V18) FPGA**
  - [Bug #5769] 'S291 marked for deletion' not implemented properly.

### v3.1-012 BETA - 2009-12-11

- [Bug #5734] Easyplay filenames with spaces are not correctly shown on the front panel.
- [Bug #5737] Set Decode Mode (q3) command missing the mode in auto2text.
- [Bug #5600/2] Easyplay files that fail to load are reported to be successful.
- [Bug #4659/2] Add support for shuffle crosspoint tallies.
- [Bug #5721] Use libedit for CLIs that require history/autocompletion and upgrade to new distro v2.03.
- [Bug #5731] Lots of "Failed to send messages to audiomod" in logging.
- [Bug #5735] Setting Upmix module into passthrough mode does not work if the module is in AutoMAX mode.
- [Bug #5436] Shuffle and gain presets saved with jo2 or jp6 are created with the wrong file ownership.
- [Bug #5672/2] EAS audio does not work without an audio licence.
- [Bug #5738] Easyplay follow video k9 command should be rejected for un-configured streams.
- [Bug #5741] 'System value persists' does not work for reversion\_preset.
- [Bug #5743] Easyplay tallies are sent even when the stream is not configured.

### v3.1-011 BETA - 2009-12-08

- **Integrated latest firmware for AUDIO\_HD (20091124\_1) FPGA**
  - [Bug #5676/2] Audio Description (AD) performs a 'cut' instead of a 'fade' on a CRC error.
  - [Bug #5677/2] Audio Description (AD) fails to fade back to default on loss of AD control track.

- [Bug #5640/2] Correct internal set text crawl count automation command behaviour.
- [Bug #5652/2] Incorrect usage of imsttest gives a segmentation fault.
- [Bug #5725] Rename assert.h header file to avoid conflict with standard library.
- [Bug #2567] Add unit tests where possible.
- [Bug #5723] 'S' commands not being forwarded to Intuition correctly.

### v3.1-010 BETA - 2009-12-02

- **Integrated latest firmware for AUDIO\_SD (20091118\_1) and AUDIO\_HD (20091118\_1) FPGAs.**
  - [Bug #5663] Implement support for Downmix output.
- [Bug #5662] Add support for downmix output.
- [Bug #5667] Disable the broken Lt/Rt downmix on the Dolby decoder.
- [Bug #5668] Dolby digital stream numbers have the wrong range.
- [Bug #5669] Implement pin groups on 'Audio Modules'.
- [Bug #5670] Automation system never recovers if non-terminated command is left in 'mbuf'.
- [Bug #5664] Full state is not always saved after loading a new configuration preset.
- [Bug #4749/2] Remove legacy configuration templates.
- [Bug #5672/1] EAS audio does not work without an audio licence.
- [Bug #3909/2] Add support for configurable audio feeds.
- [Bug #5334/4] Densite automation library should use action handlers rather than translating to Oxtel.
- [Bug #5679] The config tool suggests that each AES input has 16 channels.
- [Bug #5034/2] Add alarm for AES presence.
- [Bug #5330] Delayed replies should use messages like the tallies.
- [Bug #5687] DVE channels being suddenly swapped at the end of a sequence playback.
- [Bug #3646/2] Ensure that all malloc/realloc errors are logged.
- [Bug #5640/1] Correct internal set text crawl count automation command behaviour.
- [Bug #4859/3] Select Mixfile menu and command should show the current mixfile or 'Route Manager'.
- [Bug #5652/1] Incorrect usage of imsttest gives a segmentation fault.
- [Bug #5642] Remove dead code for forwarding "F" enquire to Intuition.
- [Bug #5548] Basic swap preview commands can not be added into GPI macros.
- [Bug #5639/2] Correct the colour parameter for Easytext commands in the log messages.
- [Bug #5700] Audio feed source configuration can be confusing when shared between 'AB mixer' and 'Logo' units.
- [Bug #4942/2] Add support for GPIO SNMP attributes/traps.
- [Bug #5703] Rename Premote\_ to auto\_connection\_t.
- [Bug #5627] Can not change the Preview input selection when there is no 'ABMIX' licence.
- **Integrated latest firmware for AUDIO\_SD (20091125\_2) FPGA**
  - [Bug #5690] Corrupted audio on SD-SDI PGM and CLN outputs.
  - [Bug #5676] Audio Description (AD) performs a 'cut' instead of a 'fade' on a CRC error.
  - [Bug #5677] Audio Description (AD) fails to fade back to default on loss of AD control track.
- [Bug #5698] Misspelled words in codebase.

### v3.1-009 BETA - 2009-11-18

- [Bug #3468] Include set of common Route Manager templates.
- [Bug #5530] Black monitor and cleanfeed outputs for PGM DSK for certain DVE configurations.
- [Bug #5634] j2 2 tallies are not working correctly.

- [Bug #5334/3] Densite automation library should use action handlers rather than translating to Oxtel.
- [Bug #5632] j0 commands tally regardless of change and do not react to new commands.
- [Bug #5643] Add fader positions to voiceover and AB mixer fader tallies.
- [Bug #5601/2] Legacy j7 audio tallies no longer work correctly.
- [Bug #5645] Front panel popup for shuffle/gain preset export is not centre justified.
- [Bug #5644] Shuffle and gain presents always save with 48 channels.
- [Bug #5635] Add command to force the use of backup audio on Dolby decoder.
- [Bug #5648] Cannot upgrade using a USB stick.
- [Bug #5619/2] Y8 tallies are not enabled in passive mode.
- [Bug #5182/2] Audio A and B preview blocks labelled differently and some blocks contain duplicated words in the pin names.
- [Bug #4859/2] Select Mixfile should show the current mixfile or 'Route Manager'.
- [Bug #5658] Input group 'collapsed' pingroup attribute is lost during configuration import/export.
- [Bug #5657] Y7 response should use STX2 for consistency.
- [Bug #5646] Log messages get spammed when using a mixfile.
- [Bug #5653] Easyplay start/stop tallies are not received reliably.
- [Bug #5582] Add boot time check for determining loss of comms to P236 board.
- [Bug #5639/1] Correct the colour parameter for Easytext commands in the log messages.
- [Bug #5659] Saving an Animation through the front panel inserts green into odd fields.
- [Bug #5651] Add front panel control of input multiplexors.
- [Bug #5036/2] Add support for audio meter multiplexor.

### **v3.1-008 BETA - 2009-11-11**

- [Bug #5494] Animations with 'None' keyer source sometimes generate one black field when cutting up.
- [Bug #5589] Error messages at startup due to voice-over default values.
- [Bug #5596] Include latest CAT552 firmware (1.2.3.2).
- [Bug #4749/1] Remove legacy configuration templates.
- [Bug #5597] Change default voiceover duck level to -20dB.
- [Bug #5468] Voice over errors shown in logs when YC1 enabled.
- [Bug #5332/2] Add const qualifiers to state (and everywhere) where appropriate.
- [Bug #5601/1] Legacy j7 audio tallies no longer work correctly.
- [Bug #5600/1] Easyplay files that fail to load are reported to be successful.
- [Bug #5605] Easyplay will not work with certain Easyplay configurations.
- [Bug #5606] Easyplay will not work with mixfiles.
- [Bug #5607] Include latest CAT559E firmware (1.1.3.3).
- [Bug #5182/1] Audio A and B preview blocks labelled differently.
- [Bug #5106/2] Log messages spammed when config imported with unsupported audio modules.
- [Bug #5610] Bulk Easyplay tallies show all streams as both started and stopped.
- [Bug #5608] Easyplay tallies should not appear enabled when there is no licence.
- [Bug #5469] OXI animation files will not transfer from Animation Builder.
- [Bug #5334/2] Densite automation library should use action handlers rather than translating to Oxtel.
- [Bug #4726/2] Express gain block "gain\_level" attribute as a float.
- [Bug #5616] Testing the METER\_SOURCE\_NAME with GDE converting the hex.
- [Bug #5428] Voice-over duck and preset values set via Configurator Tool do not update correctly.
- [Bug #5619/1] Y8 tallies are not enabled in passive mode.
- [Bug #5492] imstdisk 'Tainted Kernel' message.
- [Bug #5615] Audio tallies are sent when you AB mix to the current mixer input.

- [Bug #5617] Easytext template does not display any text when playout type is set to 'Single Shot'.
- [Bug #5618] The Mixfile Route Manager configuration parameter should use lower case.
- [Bug #5620] The voiceover configuration parameter fade\_position is ignored if an Easyplay is associated with that voiceover.
- [Bug #5575] Implement support for UpMAX 2.
- [Bug #5626] Command deferral does not work.
- [Bug #5625] Field swap detection code is failing.
- [Bug #5623] Stopped animations (via S1) are often field-swapped when restarted (via S0).
- [Bug #5629] The configuration block 'Audio Legacy AB mixer' should be 'Audio Legacy AB Mixer'.
- [Bug #5628] The oxtel\_to\_text output is wrong for 'j1 1' command.

### v3.1-007 BETA - 2009-11-05

- [Bug #5523] Add STOPWATCH and COUNTDOWN internal datasources.
- [Bug #5577] Front panel voice-overs 2 to 8 do not follow current voice over state.
- [Bug #5334/1] Densite automation library should use action handlers rather than translating to Oxtel.
- [Bug #5570] R0 command should return "> Empty <" for any keyers without a store.
- [Bug #4319] Review TODOs in software code base, remove them and log bugs appropriately.
- **Integrated latest firmware for KID (1v16) FPGA.**
  - [Bug #5526] DVE background has picture breakup.
- [Bug #5579] Correct bus channel trim jp1 and level jp3 tallies and limits.
- [Bug #5583] Add sign for the jp3 tally.
- [Bug #5584] The Easyplay Load menu does not show the currently loaded file.
- [Bug #5585] The front panel does not scroll Easyplay filenames that are 15 characters long.
- [Bug #5529/2] Add command to set/query voiceover-easyplay associations.
- [Bug #5332/1] Add const qualifiers to state (and everywhere) where appropriate.
- [Bug #5544/2] Add multi-stream replacements for k0, k1, k2, k3 and k4.
- [Bug #5587] Tally responses are not being correctly broadcast.
- [Bug #5576] Easyplay message queues fail to be created.
- [Bug #5558/2] Add tally support for ka, kb and kc commands.
- [Bug #5591] Log file contains 'SIOCDELRT: No such process' on startup.
- [Bug #5508] System performance has worsened between 2.0.1.1 and 3.1-003a.
- [Bug #5595] Easyplay load failures when 'video layer follow' used.
- [Bug #5514] Decrease performance impact of audio metering tallies.
- [Bug #5592] Add command to query whether an Easyplay stream is available.

### v3.1-006 BETA - 2009-11-02

- [Bug #5539] Add command to query number of Easyplay streams.
- [Bug #5541] File lists retrieved from imstdisk contain duplicates across adjacent sequences.
- [Bug #5542] Increase disk read-ahead size to improve store load times.
- [Bug #5529/1] Add command to set/query voiceover-easyplay associations.
- [Bug #5486] Add feature to view last 20 and 40 lines of messages file to webpage.
- [Bug #5544/1] Add multi-stream replacements for k0, k1, k2, k3 and k4.
- [Bug #5187] Add a mode to imsttest which shows ACKs, NAKs and STXs of responses.
- [Bug #5547] Add support for 16 channel Easyplay.
- [Bug #5552] Add multi-stream support for Easyplay.
- [Bug #5554] All Easyplay streams stop if any Easyplay stream finishes.
- [Bug #5550] All Easyplay2 channels should be enabled by any EPLY licence.

- [Bug #5546] Remove source code for Easyplay1.
- [Bug #5535] Add function to clear protocol specific state to the protocol handlers.
- [Bug #5558/1] Add tally support for ka, kb and kc commands.
- [Bug #5559] Use the exact size of the largest tally message for creating message queue.
- [Bug #5560] Implement prefix support for Easyplay video layer associations.
- [Bug #5566] Configuration changes cause high CPU usage.
- [Bug #5567] Add multi-stream Easyplay support to front panel.
- [Bug #5568] Restructure audio menu.
- [Bug #5562] Removing all audio-related licences causes log spamming.
- [Bug #5571] Use Miranda logo with white surround for web pages.
- [Bug #5572] Remove thumb\_image\_load load failure message for unsupported Audio Icon.png thumbnail.
- [Bug #5574] Log spammed with 'Invalid multiplexer source' errors on start-up.
- [Bug #5513] Software version information on the front panel should use shortened string.

### v3.1-005 ALPHA - 2009-10-28

- **Integrated latest firmware for CPU (MK33) FPGA.**
  - [Bug #5524] Easyplay 2 fails after a forced reboot.
- [Bug #5455] User presets are exported with wrong owner/group identifier.
- [Bug #5515] Front panel reports incorrect store memory figures.
- [Bug #5485] Store memory allocation failure message seen during DSK self test.
- [Bug #5329/2] Remove multiple message queues - cleanup.
- [Bug #5516] Front panel menu dump from the webpage does not work.
- [Bug #5519] 'Invalid free' message on software restart.
- [Bug #5525] Unused driver 'i2c-isa' is spamming logs on startup.
- [Bug #5521] 'j2' voice over command log messages are incorrect.
- [Bug #5528] Start log is not cleared on each reboot.
- [Bug #5396] Ensure Easyplay underruns are logged.
- [Bug #5531 WIP] Switch from using pointers to connections to connection descriptors.
- [Bug #5482/2] Inconsistent behaviour reading and writing unsigned int in Oxtel.
- [Bug #5536] Remove dead code for handling intuition response for "F" command.
- [Bug #5534] Move easyplay follow and voiceover association configurations into easyplay block.
- [Bug #5518] Invalid automation commands being received at start up from Densite connection.
- [Bug #5449/2] Improve the look-and-feel of the web pages (added 'Create Bootable USB Key').

### v3.1-004 ALPHA - 2009-10-23

- [Bug #5473] Use "YYYY-MM-DD" date format throughout the release notes.
- [Bug #5450/2] Gain control and shuffle control tallies do not work.
- [Bug #5457] Extend passive mode (Ya) to allow j7 and/or individual audio tallies on a per-port basis.
- [Bug #5452] Invalid jn command being sent when try to scroll outside range of audio select sources.
- [Bug #5474] DSKx fade rate increases every time entering the 'Fade Rate' menu.
- [Bug #5476] iControl does not recover PGM In status after input cable is disconnected.
- [Bug #5482/1] Inconsistent behaviour reading and writing unsigned int in Oxtel.
- [Bug #5449/1] Improve the look-and-feel of the web pages.
- [Bug #5480] No bulk tallies received on registration of the passive mode.
- [Bug #5501] Move and rename PASSIVE\_AUDIO\_TALLY\_\*.
- [Bug #5504] Sending the empty automation command ':' incorrectly reports a fade-to-black.

- [Bug #5489] IMM and Xplorer are unable to build thumbnails for EAS templates.
- [Bug #5498] Correct log messages for Easytext commands Zd and Ze.
- [Bug #5496] Ensure textbox commands 'Zd' and 'Ze' can cope with a string length shorter than specified.
- [Bug #5505] Decibel values for j commands should have 0.5dB precision in message log.
- [Bug #5512] Cannot set the serial baud rate.
- [Bug #5329/1] Remove multiple message queues.
- [Bug #5495] Unacceptable CPU load due to I/O wait on test for locked status of AES transceivers.

### v3.1-003 ALPHA - 2009-10-19

- [Bug #5140/2] Move `passive_mode` and `audio_metering_send_mode` into `oxtel_port_state_t`.
- [Bug #5422/2] Remove the use of preinitialised arrays in any C++ code that are dependent on an enum.
- [Bug #5458] Add OXE support to audiofile library.
- [Bug #5459] Easyplay crashes with truncated WAV/OXW files.
- [Bug #5462] Refactor implementation of get audio file length to support audiofile library.
- [Bug #2499/5] Implement Easyplay 2 support.
- [Bug #5464] Disable OXE support based for low end platforms.
- [Bug #5433] Add new configuration DTDs to Imagestore release.
- [Bug #5456] Log message format for 'jp4' command is incorrect.
- [Bug #5467] Add support for XML based configuration component enabling.
- [Bug #5466] The log message for the asymmetrical rate command UG is incorrect.
- [Bug #5450/1] Gain control and shuffle control tallies do not work.

### v3.1-002 ALPHA - 2009-10-13

- **Integrated latest firmware for AUDIO\_SD (20090922\_2) and CPU (MK32) FPGAs.**
  - [Bug #5440/2] Implement firmware support for Audio Description (AD).
  - [Bug #5439] Stores incorrectly load certain width images.
- [Bug #5309/2] Alarm config and status tally messages wasteful of space.
- [Bug #5435] Add software support for Audio Description (AD).
- [Bug #5434] 'jo0' command parameter 6 'MakeBreak' log message displayed incorrectly.
- [Bug #5417] Log spammed with 'Voiceover out of range' messages.
- [Bug #5284] Rename the DVE mode 'None (Delay)' as 'Bypass + Delay'.
- [Bug #5422/1] Remove the use of preinitialised arrays in any C++ code that are dependant on an enum.

### v3.1-001 ALPHA - 2009-10-12

- **Integrated latest firmware for AUDIO\_HD (20091008\_2) and SOD (1V17) FPGAs.**
  - [Bug #5414] Marginal Timing Performance of SOD FPGA.
  - [Bug #5375] Audio is corrupt on PVW, CLF and MON outputs.
  - [Bug #5440/1] Implement firmware support for Audio Description (AD).
- [Bug #5402] Add support for playing out OXW files with Easyplay 2.
- [Bug #5271/2] Add support for jp commands in `oxtel_to_text`.
- [Bug #5420] Add support for build numbers in version string.
- [Bug #5421] Use of the serial ports hangs up `imstmain`.
- [Bug #5377] Audio feed status menus are broken.
- [Bug #5405] Audio feed routing is not correctly dealt with.

- [Bug #5425] Files uploaded with the web page are owned by the wrong user.
- [Bug #5410] Selecting to download a configuration file from the webpage fails in Internet Explorer.
- [Bug #5419] Configuration library can fail to use default values when reading config/state.
- [Bug #5413] '#h' enquire current mixfile command returns an empty response when sent from imsttest.
- [Bug #5393/2] Fix AB mix fade rate commands.
- [Bug #5424] Log message errors related to 1-based integers.
- [Bug #5411] Preview Input menu is confusing when AB Mix licence is present.
- [Bug #5431] Some commands do not get logged after log suppression is enabled.
- [Bug #5395] Add ability to load/save shuffle/gain presets from the front panel.

### v3.0rc1 - 2009-10-08

- **Integrated latest firmware for CPU (MK31) and KID (1V15) FPGAs.**
  - [Bug #5397] Easyplay fails to restart correctly (CPU).
  - [Bug #5267] Easyplay 2 appears to output 3 channels from 2 channel wav file (CPU).
  - [Bug #5138] Easyplay 2 channels misaligned (CPU).
  - [Bug #5139] Easyplay 2 FIFO overflows causing incorrect channel alignment (CPU).
  - [Bug #5291/1] DVE mask is just under full screen when the DVE is 100% (KID).
- [Bug #5335/2] imstmain process should use CPP linking throughout.
- [Bug #5378] Sending an AB mixer command that matches the current state is logged as invalid.
- [Bug #5383] 'Xd' command description should be changed to 'Delay next command by'.
- [Bug #5295] Message log is spammed when 'Preview Output' is not set to 'Preview o/p'.
- [Bug #5382] 'WR' command description should not display 'PGM + PVW' option.
- [Bug #5393/1] Fix AB mix fade rate commands.
- [Bug #5291/2] DVE mask is just under full screen when the DVE is 100% (software changes).
- [Bug #5401] Easyplay fails to unload data properly if a new clip is loaded but load fails.
- [Bug #5407] Memory leak causes imstmain to crash.
- [Bug #5408] 'j78' command description should display 'AES status' (not EAS).
- [Bug #5409] 'j1' command description should display 'Mute' (not 'Mote')

### V3.0b9 - 2009-10-06

- [Bug #5309/1] Alarm config and status tally messages wasteful of space.
- [Bug #5335/1] imstmain process to use CPP linking throughout.
- [Bug #5365] In the context of arm-take internal structures "delete" should be renamed "disarm".
- [Bug #5364] Verbose logging shows the '3' command twice 50% of the time.
- [Bug #5367] DVE duration parameter for W2/W7/W8 commands should always work in frames.
- [Bug #2499/4] Implement Easyplay 2 support.
- [Bug #5370] The mdpresets, gainpresets, shufflepresets and sequences directories are missing from the backup.
- [Bug #5361] Capabilities file saves with wrong extension.
- [Bug #5360] Metadata AB mixer allowed without an AB mixer.
- [Bug #5181/2] Automation formatting must be exactly consistent with older versions of software (including spacing and parameter lengths).
- [Bug #2839/2] Add Xb automation command to return full software version number - **(Xpanel/RCP-BR)**.
- [Bug #5037] Add "Follow Video AB Mix A Input" and "Follow Video AB Mix B Input" to SDI feed sources.
- [Bug #4851] Trying to restore a 'backup' file fails with backups over 150MB.

- [Bug #5297] Changing GPI On/Off macros should not affect the real output state of the GPO.

### V3.0b8 - 2009-09-29

- [Bug #5306] GPI output status not display status correctly for GPI pins (5 to 8) from front panel 'Setup > GPI > Show GPI OPs'.
- [Bug #5034/1] Add alarm for AES presence.
- [Bug #5331] Update MIB to reflect "non-implemented" parts, and remove unimplemented misc section.
- [Bug #5324] Symbolic link cfgtemplates is not set up.
- [Bug #5278] Login page for web site states the IS750 is an LGK-3901.
- [Bug #5288] Ensure contents of /home/\*\_default directories are cleared before upgrade.
- [Bug #5087] Selecting to download a configuration template from the webpage fails in Internet Explorer.
- [Bug #3634] Correct web link given after creating a USB upgrade media.
- [Bug #4486] Mixfile should not require an empty line after the last 'endmix'.
- [Bug #5341] Imagestore crashes if the mix engine fails to initialise.
- [Bug #5181/1] Automation formatting must be exactly consistent with older versions of software (including spacing and parameter lengths).
- [Bug #5338] Remove binary drivers/kernel from the IS750 release.
- [Bug #5346] Wrong packages versions are installed on the USB stick.
- [Bug #5345] Remove binary drivers/kernel from the IS750 USB stick.
- [Bug #5347] Makefile target for 'upload' is incorrect.
- [Bug #5348] Use 'Enquire' for R6 and R8 message log strings (not 'Inquire').
- [Bug #5344] Correct Doxygen warnings.
- [Bug #5350] U4 and U5 commands not working correctly.
- [Bug #5351] WU command DVE mask is incorrectly logged.
- [Bug #5353] Implement floating point support in oxtel\_to\_text library.
- [Bug #5271/1] Add support for jp commands in oxtel\_to\_text.
- [Bug #5352] Correct behaviour when automation command receives a rate of 0.

### V3.0b7 - 2009-09-24

- [Bug #5140/1] Move passive\_mode and audio\_metering\_send\_mode into oxtel\_port\_state\_t.
- [Bug #5276/2] Add stores fill/keys and external fill/keys to Clean Feed output.
- [Bug #5305/2] Prevent 'Active Preview' from controlling PVW keyers when PGM keyers are cut up/down without arm/disarm - (Configurator Tool description).
- [Bug #5175/2] Images with linear key do not fade-to-black along with the background.
- [Bug #5100/2] Active Preview should be disabled by default - (Xpanel/RCP-BR).

### V3.0b6 - 2009-09-22

- [Bug #5094/4] Refactor Densite command tallies.
- [Bug #5287] Logs spammed with 'get\_urs\_status' messages.
- [Bug #5289] Make logging library multiplatform.
- [Bug #5250] Fetching MAC address far too expensive.
- [Bug #5300] Use a script to generate submakefiles.
- [Bug #5276/1] Add stores fill/keys and external fill/keys to Clean Feed output.
- [Bug #5304] Add native target to make system.
- [Bug #5305/1] Prevent 'Active Preview' from controlling PVW keyers when PGM keyers are cut

up/down without arm/disarm.

- [Bug #5308] copy750 script does not work anymore.
- [Bug #5029] Implement Basic Swap Preview mode.

### V3.0b5 - 2009-09-15

- [Bug #5094/3] Refactor Densite command tallies.
- [Bug #5272] Easytext templates containing clocks spam the message log.
- **Integrated latest firmware for SOD (1V16) and KID (1V14) FPGAs.**
  - [Bug #5273] All four outputs failing for 1-in-10 power ups.
  - [Bug #5274] DVE squeezes over a green background on boot up.
- [Bug #5268] OxSox: GetDir/GetFullDir commands does not return EAS from factory default directory.
- [Bug #5265] ZC command log message shows speed parameter incorrectly.
- [Bug #5281] 'Erase Audio' and 'Erase Mixfile' should not be available from front panel 'Setup > Miscellaneous > File Ops'.

### V3.0b4 - 2009-09-11

- [Bug #5094/2] Refactor Densite command tallies.
- [Bug #5251] Drop frame parameter to XE command is not actually sent.
- [Bug #5259] Remove redundant dolby.xml file from IS750 release.
- [Bug #5211] Easyplay not working as expected when 'Use Voiceover' set.
- [Bug #5225] imstmain crashes with exception 11 when performing a soft reset.
- [Bug #5266] System locks up when moving store images or on startup with an RCP-BR - **(Xpanel/RCP-BR)**.
- [Bug #5261] The "no thumbnail" thumbnail is incorrectly generated.
- [Bug #5270] Audio cut with a V fade causes glitch.
- [Bug #5262] All error log messages should include the function name.
- [Bug #5211] Easyplay not working as expected when 'Use Voiceover' set.

### V3.0b3 - 2009-09-07

- [Bug #5168] Visibility of front panel voiceovers and audio program select should depend on whether the route manager is being used.
- [Bug #5094/1] Refactor Densite command tallies.
- [Bug #5200] Move Oxtel automation handling files to new location.
- ~~[Bug #5100/1] Active Preview should be enabled by default - **(Xpanel/RCP-BR)**.~~
- [Bug #5143/2] Preview input selection is no longer in the routing section of the Configurator tool.
- [Bug #5204] imstmain process crashes if /home/params/config.xml does not exist.
- [Bug #3646/1] Ensure that all malloc/realloc errors are logged.
- [Bug #5089/2] Improve descriptions of audio blocks shown in the Configurator Tool.
- [Bug #5215] Set text background to gradient Z7 automation command is being ignored completely.
- [Bug #5220] Consolidate imstdef.h stdhdr.h and imst.h header files.
- [Bug #5175/1] Images with linear key do not fade-to-black along with the background.
- [Bug #5223] Enquiring textbox Za automation command does not return any valid text box information.
- [Bug #5224] Send a Y9 tally if media fails to load and the previous image is unloaded - **(Xpanel/RCP-BR)**.

- [Bug #5222] Linux reports no memory left on creating message queues.
- [Bug #5232] The Yg tally should only be sent when the crawl count changes.
- **Integrated latest firmware for HD/SD DVE (2V1) and KID (1V13) FPGAs.**
  - [Bug #5195] Simplify DVE firmware interface to assist future HAL work.
- [Bug #5239] Set Intuition Keyer Input command is reported as invalid.
- [Bug #5226] Arming a keyer fade rate causes any previously armed fade rate for any keyer to be disarmed - **(Xpanel/RCP-BR)**.
- [Bug #5241] /etc directory has wrong file permission.
- [Bug #4910] EAS templates thumbnails show corrupt or no thumbnail on Presmaster - **(Xpanel/RCP-BR)**.

### V3.0b2 - 2009-08-26

- [Bug #3565/3] Refactor configuration code.
- [Bug #5177] Refactor configuration object into shared memory.
- [Bug #5180] Add new automation command (Xn) to enquire the full product name - **(Xpanel/RCP-BR)**.
- [Bug #5089/1] Improve descriptions of audio blocks shown in the Configurator Tool.
- [Bug #5186] Audio feed selection set in config file not validated when read in.
- [Bug #5173] Network address changes should take effect immediately.
- [Bug #5176] Animations glitch and flash every second.
- [Bug #5190] Move lsplib into shared.
- [Bug #5183] VITC timecode drop-frame status is wrong.
- [Bug #5193] Logs spammed with config errors.

### V3.0b1 - 2009-08-19

- [Bug #4899/2] Add a tally for the Store to Keyer assignment - **(Xpanel/RCP-BR)**.
- [Bug #5132] Update software does not work and only resets the system.
- [Bug #3943 WIP] Move DVE access into HAL.
- [Bug #2499/3] Implement Easyplay 2 support.
- [Bug #4962/4] Send tallies with new automation handlers.
- [Bug #5146] OxSox file rename fails upon transfer completion.
- [Bug #5127] Colour fields are not within range at startup.
- [Bug #5143/1] Preview input selection is no longer in the routing section of the Configurator tool.
- [Bug #5147] Ensure message queue library does not log "EAGAIN" errors in non-blocking mode.
- [Bug #5077/3] Ensure all new audio commands have 0.01dB accuracy.
- [Bug #5157] Reduce the front panel status refresh rate.
- [Bug #5073] 'Load Pending' messages spamming logs during file load.
- [Bug #4927] Allow special Temperature Probe template to work without Easytext option enabled.
- [Bug #4416] PSUA and PSUB converted status is not reported correctly using XV Automation command.
- [Bug #5166] SDI fill/key preview outputs are not accepted from configuration file.
- [Bug #5167] Stores cannot be repositioned to negative offsets.
- [Bug #5169] 'imstmain' crashes when media/configs are copied/moved/changed/deleted.
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- [Bug #5170] Log is spammed when cmddelay or cmdstall is used.

### V3.0a16 - 2009-08-14

- [Bug #4177] Ensure compatibility of the configuration files from older software versions.
- [Bug #5077/2] Ensure all new audio commands have 0.01dB accuracy.
- [Bug #5107] Config tool fails to open active config.
- [Bug #5090] Incorrect response from the j72 enquire.
- [Bug #5110] Add audio mix engine support for 48 channel buses.
- [Bug #5103] Add GPIO alarm severity to the front panel and Zi, Zk automation commands.
- [Bug #5086] Logs spammed with messages for unsupported automation commands sent by external applications.
- [Bug #5113] Tally send attempted even after disconnection.
- [Bug #5119] Ensure HAL is used to determine number of crosspoints.
- [Bug #5108] Add ability to change the alarm trap enable settings via automation and the front panel.
- [Bug #5106/1] Log messages spammed when config imported with unsupported audio modules.
- [Bug #2499/2] Implement Easyplay 2 support.
- [Bug #5075/2] Move oxtel-specific code into oxtel automation library.
- [Bug #5134] Move densite protocol-specific code into densite automation library where possible.
- [Bug #5131] Keyer and FTB rates are swapped when saved and when enquired.

### V3.0a15 - 2009-08-10

- [Bug #4954] Sending automation without gaps works but you get no auto2text message.
- [Bug #4996] Correct imstreg FPGA chip data.
- [Bug #4811] Rename MAX\_FADER to make it more understandable.
- [Bug #3444] Correct log messages for j4 commands when toggling AB mix and voiceover status.
- [Bug #5071] Selecting a default mix file from the webpage fails.
- [Bug #5077/1] Ensure all new audio commands have 0.01dB accuracy.
- [Bug #2499/1] Implement Easyplay 2 support.
- [Bug #5095] SNMP fails to shut down on software restart when loading a config file.
- [Bug #4781] Refactor search for next file code.
- [Bug #4638] Add temperature probe option.
- [Bug #5084] R0 automation command does not respond when the layer enquired has no store.
- [Bug #3712/2] Add support for Dolby metadata insertion in VANC.
- [Bug #5101] Front panel does not show the current Intuition settings.
- [Bug #4963/2] Green screen appears when single-channel DVE licence in enabled.

### V3.0a14 - 2009-08-05

- **Integrated latest firmware for AUDIO (HD\_20090804\_2, SD\_20090805\_1) FPGA.**
  - [Bug #5079] Split delay banks into 16 banks of 8.
  - [Bug #5081] Add ability to read Dolby 'f' bit.
  - [Bug #5080] 625 line audio is broken.
- [Bug #5067] Integrate 20090720\_3 multistandard audio firmware.
- [Bug #5068] Upgrade to distro v2.01.
- [Bug #5069] String library function crashes calling function when string argument is too long.
- [Bug #5063] Logs are spammed with messages on entering the audio menu.
- [Bug #4812] Make the AB mix transition types an enum.
- [Bug #5075/1] Move oxtel-specific code (auto2text) into oxtel automation library.
- [Bug #5047] Program audio output is incorrect when using legacy mixfiles.
- [Bug #5059] DVE mode 'Enabled' does not give a compensating frame delay on the background.
- [Bug #5076] Add support for reading and writing fixed point signed floats.
- [Bug #4928] Xpanel/Presmaster audio meters do not display preview and program audio correctly

- (Xpanel/RCP-BR).

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- [Bug #5061/2] Dolby E Encoder goes silent with 'follow decoder mode'.
- [Bug #4782] Refactor maximum file number code.

### V3.0a13 - 2009-07-30

- **Integrated latest firmware for SOD (V1.16) FPGA.**
  - [Bug #5050] Monitor Output not transmitting video.
- [Bug #4971/3] Implement Audio Level Metering (ALM) Densite commands.
- [Bug #4590/2] Add checks to the Xv embedded audio type command.
- [Bug #5057] High CPU usage.
- [Bug #5060] Embedded audio type is not initialised when the config selects it as a default value.
- [Bug #5061/1] Dolby E Encoder goes silent with 'follow decoder mode'.
- [Bug #5055] Imagestore is sending the wrong AB mix state in the Y8 tally.

### V3.0a12 - 2009-07-27

- [Bug #4095] Basic arm/take allows 'Virtual GPI On' but not 'Virtual GPI Off' - (Xpanel/RCP-BR).
- [Bug #4971/2] Implement Audio Level Metering (ALM) Densite commands.
- [Bug #5048] Add option to mute Dolby output when the incoming audio contains material out of alignment.

### V3.0a11 - 2009-07-23

- [Bug #4994] Add remaining FPGA firmware information to the system information webpage.
- [Bug #5009] Audio command enquires do not respond.
- [Bug #5015] iolib fails to build for IS750.
- [Bug #4962/3] Send tallies with new automation handlers.
- [Bug #4895/2] Remove HIDDEN, PUBLIC, LOCAL and extern on function declarations.
- [Bug #4981] Ensure audio features are checked against hardware/software capabilities.
- [Bug #5013] Increase limit of TCP-IP sockets from 8 to 32 - (Xpanel/RCP-BR).
- [Bug #5026] Log messages spammed with messages about "Unknown alarm severity!".
- [Bug #5027] Add target for 64 bit X86 architecture.
- [Bug #5036/1] Add support for audio meter multiplexor.
- [Bug #4971/1] Implement Audio Level Metering (ALM) Densite commands.
- [Bug #5042] Ensure imagestore\_core driver uses correct types for pointer arithmetic.
- [Bug #4432/3] Refactor forward to Intuition code.

### V3.0a10 - 2009-07-15

- [Bug #4995] Upgrade build system to toolchain v1.02, distro v2.00.

### V3.0a9 - 2009-07-15

- [Bug #4962/2] Send tallies with new automation handlers.
- [Bug #4993] Rename state\_ to state\_t, remove ssa\_local.
- [Bug #4963/1] Green screen appears when single-channel DVE licence in enabled.
- [Bug #4941] Read back of FPGA ident, version and build date.

- [Bug #4949] The reference offset displayed in the Configuration Tool does not match the correct value from the front panel.

### V3.0a8 - 2009-07-14

- [Bug #4933] Refactor audio module commands to use automation handlers.
- [Bug #4940] #F command does not log message for invalid parameters.
- [Bug #4953] The B and @ commands do not work for values bigger than 2 digits.
- [Bug #4931/2] Refactor schedule commands to use automation handlers.
- [Bug #4787] Program and preview should have separate fade-to-black control.
- [Bug #4959] Message file spammed with errors about input status/lookup.
- [Bug #4930] Refactor arm take commands to use automation handlers.
- [Bug #4792/6] Add automation parsing library.
- [Bug #4964] Ensure the reference offset is re-set when escaping the front panel menu option.
- [Bug #4768/2] Current mixfile incorrectly displayed as NONE.
- [Bug #2788] Add arguments to .enable functions in front panel code.
- [Bug #4970] Change "Embedded Audio Present" alarm to "Embedded Audio Loss".
- [Bug #4965] GetFileStat2 OxSox command should return successfully for files that are currently being copied.
- [Bug #4948] DVE sequence enabled does not display after system reboot.
- [Bug #4962/1] Send tallies with new automation handlers.
- [Bug #4909] Alarm for video embedded audio loss is not yet implemented.
- [Bug #4195] Loading of an analogue clock at start-up fails.
- [Bug #4974] Suppress unused sscanf parameters rather than reading and discarding them.
- [Bug #4977] GPI input events are not correctly displayed on the front panel.
- [Bug #4936] Ensure audio feed status is not tied in with SDI input status in the front panel.
- [Bug #4980] Fix compiler warnings picked up with gcc 4.3.2.
- [Bug #3870] Y7 command responds with ACK and STX.

### V3.0a7 - 2009-07-02

- [Bug #4432/2] Refactor forward to Intuition code.
- [Bug #4711/2] Extend front panel to use all 8 voiceovers.
- [Bug #4792/5] Add automation parsing library.
- [Bug #4897] Message logs spammed with PSU converter failures.
- [Bug #2839/1] Add Xb automation command to return full software version number - **(Xpanel/RCP-BR)**.
- [Bug #3908] Selecting PGM DVE o/p from Preview Select causes message clogging in absence of DVE hardware.
- [Bug #3945] Configuration tool shows audio input B even if not supported.
- [Bug #4752] Correct return values for audio action handlers.
- [Bug #4593] Add j78, j1, j78, j7s, j7v, #6, #7, #z, RB to auto2text for logging.
- [Bug #4881] Messages spammed with 'Command not supported (no easyplay licence/hardware)'.
- [Bug #4834] Software changes prevent Licence Manager understanding output of imstlic.
- [Bug #4890] Remove unused parameter MAX\_OBJECT.
- [Bug #4825] Log a message when the timezone offset is changed.
- [Bug #4666/2] Serial protocol not checked against system features.
- [Bug #3466] XL command does not display System Halt information on the front panel.
- [Bug #4899/1] Add a tally for the Store to Keyer assignment - **(Xpanel/RCP-BR)**.
- [Bug #4904] Set correct permissions and boa configuration for shuffle and gain presets.
- [Bug #4914] Integrate latest validation file DTD.

- [Bug #4908] Temperature sensor serial protocol does not fit on the front panel.
- [Bug #4915] Add validation sections for shuffle and gain presets.
- [Bug #4916] Integrate latest config file DTD.
- [Bug #3842] Ensure that a local systemFeatures is accessed where possible.
- [Bug #4707] Change duck and preset config attributes to floats.
- [Bug #3532] Some audio components allow multiple sources for a single audio channel.
- [Bug #4652] ZC command allows a strap speed of zero that prevents further speed updates.
- [Bug #4919] Add deprecate messages to deprecated components.
- [Bug #4708/2] Add caption support for configurator params, containers and components.
- [Bug #4920] Some channel names on audio components are incorrect.
- [Bug #4921] Use pingroup names as the multiplexor source names.
- [Bug #4923] Rename SDI inputs as SDI feeds in the configurator.
- [Bug #4925] X6 and XV commands do not return valid fan speeds.
- [Bug #3741] expand\_time log messages.
- [Bug #4859/1] Select Mixfile should show 'Route Manager' as its first list item.
- [Bug #3909/1] Add support for configurable audio feeds.
- [Bug #4694] Remove unused arm and take code.
- [Bug #4845/2] 'imstmain' hangs if the BR-RCP is restarted - **(Xpanel/RCP-BR)**.
- [Bug #4856/2] Inconsistency in community password for MIB browser and trap viewer.
- [Bug #4849/2] Prevent network connections/disconnections from spamming the logs and include IP address in network automation logs - **(Xpanel/RCP-BR)**.
- [Bug #4937] Setting stores memory allocation to 100% crashes front panel mirror.
- [Bug #4935] Xi command does not log message for invalid parameters.
- [Bug #4939] Add support for embedded audio SNMP attributes/traps.
- [Bug #4931/1] Refactor schedule commands to use automation handlers.
- [Bug #4942/1] Add support for GPIO SNMP attributes/traps.
- [Bug #4932] Refactor metadata commands to use automation handlers.
- [Bug #4943] Setting heartbeat frequency of zero crashes the unit.
- [Bug #4945] Add HAL support for reading FPGA dates and ids.
- [Bug #4947] Remove stale use of objects library.

### V3.0a6 - 2009-06-24

- [Bug #4792/4] Add automation parsing library.
- [Bug #4883] Add remaining SNMP network attributes.
- [Bug #4868] Arming a fade appears to cause one previously armed cut to fail - **(Xpanel/RCP-BR)**.
- [Bug #4864/2] Refactor hash commands to use automation handlers.
- [Bug #4884] Soft Restart after a configuration import from the front panel halts the unit.
- [Bug #4879] Refactor the easytext automation Z commands.
- [Bug #4891] Refactor alarm automation commands.
- [Bug #4892] Refactor single character single automation commands.
- [Bug #4895/1] Remove HIDDEN, PUBLIC, LOCAL and extern on function declarations.
- [Bug #4896] Improve logging for Emergency To/From Air.
- [Bug #4888] Easysound cutting and fading transitions using j4 commands are ignored.
- [Bug #4894] Ensure all strings created are destroyed.
- [Bug #4711/1] Extend front panel to use all 8 voiceovers.
- [Bug #2908] VO fade down results in immediate stop of Easyplay at the start of the fade.
- [Bug #4855] Temporary media files show up in OxSox directory listing.

### V3.0a5 - 2009-06-18

- [Bug #4758] Start Strap is named as Stop Strap when creating sequences for GPI Inputs.
- [Bug #4802/2] Refactor DVE automation handlers.
- [Bug #4852] DVE: Command WA doesn't work for channel B.
- [Bug #4856/1] Inconsistency in community password for MIB browser and trap viewer.
- [Bug #4861] Add support for both 4Mhz and 8Mhz variants of P238 front panel (firmware MK08).
- [Bug #4857] Performing any keyer input operation or 'H' command crashes unit.
- [Bug #4821/3] Refactor status (X) automation commands.
- [Bug #4092] Log an error code after any failure to adjust the store memory from the front panel.
- [Bug #4864/1] Refactor hash commands to use automation handlers.
- [Bug #4865] Change hal generic void\* type to an incomplete struct type.
- [Bug #3723] Replace use of the "Empty" string with a constant variable.
- [Bug #4579] Remove the use of duplicated system features.
- [Bug #4813] Create a system features array for the input SDI options.
- [Bug #4849/1] Prevent network connections/disconnections from spamming the logs and include IP address in network automation logs - **(Xpanel/RCP-BR)**.
- [Bug #4792/3] Add automation parsing library.
- [Bug #4862] imstvoltage name object id 1.3.6.1.4.1.3872.23.7.3.1.3 does not respond correctly.
- [Bug #3382] DVE sequence 5 (single-channel) plays incorrectly after playing a dual-channel sequence.
- [Bug #4869] Refactor preview Y commands to use automation handlers.
- [Bug #4507/2] Always convert errno into string equivalent when logging errors.
- [Bug #4870] A single keyer cut/fade up/down command is often actioned twice.

### V3.0a4 - 2009-06-10

- [Bug #4821/2] Refactor status (X) automation commands.
- [Bug #4792/2] Add automation parsing library.
- [Bug #4837] Dolby E Encoder Module requires intelligent switching.
- [Bug #4840] Dolby AC3 Encoder Module requires intelligent switching.
- [Bug #4802/1] Refactor DVE automation handlers.
- [Bug #4836] Refactor GPI automation commands.
- [Bug #4845/1] 'imstmain' hangs if the BR-RCP is restarted - **(Xpanel/RCP-BR)**.
- [Bug #4846] New imstreg breaks load\_firmware.sh script.

### V3.0a3 - 2009-06-05

- [Bug #4767] Refactor store automation handlers.
- [Bug #4768/1] Current mixfile not displayed correctly.
- [Bug #4677] Refactor initialisation code in imstdisk.
- [Bug #4011] Add ability to route test pattern to output via the front panel.
- [Bug #4771] Add printf style type checking to any functions containing printf format strings.
- [Bug #4772] Add test app that converts a decibel value to audio hardware gain.
- [Bug #4779] Upgrade the distro to v1.30
  - [Bug #4769] Add ntpdate.
  - [Bug #4655] Release script to update bugzilla version number.
  - [Bug #4763] Readline library doesn't link properly.
- [Bug #4776] Re-write imstreg to make it more maintainable.
- [Bug #4432/1] Refactor forward to Intuition code.
- [Bug #4784] Refactor easyplay automation commands.
- [Bug #4789] Refactor EAS and datasource automation handlers.

- [Bug #4766] Number of message queues ID increases by 2 after soft restart.
- 
- [Bug #4795] Refactor animation automation handlers.
- [Bug #4792/1] Add automation parsing library.
- [Bug #4751/2] Refactor keyer automation handlers.
- [Bug #4803] Refactor video AB mixer automation handlers.
- [Bug #4796] Remove unused conditional compiles.
- [Bug #3712/1] Add support for Dolby metadata insertion in VANC.
- [Bug #4817] Refactor clock automation handlers.
- [Bug #4820] Move designated initialisers from h files into c files.
- [Bug #4822] Ensure the core driver returns sensible results for "Is supported"/"get number of" requests.
- [Bug #4821/1] Refactor status (X) automation commands.
- [Bug #4828] SNMP support doesn't work.
- [Bug #4741] XPanel communication eventually causes crash - (Xpanel/RCP-BR).

### V3.0a2 - 2009-05-22

- **Integrated latest firmware for audio (20090519\_2) FPGA.**
  - [Bug #4592] Running Dolby through a delay bank corrupts the Dolby bitstream.
- [Bug #4751/1] Refactor keyer automation handlers.
- [Bug #4270] Refactor the front panel function names.
- [Bug #4590/1] Add checks to the Xv embedded audio type command.
- [Bug #4667] Invalid Intuition release modes accepted by automation.
- [Bug #4647] Animation and file commands do not ensure a store is associated with the keyer.
- [Bug #4739] Make shuffler/gain blocks a singleton block.
- [Bug #4632] Reformat release notes so that most recent additions appear at the top.
- [Bug #4750] Front panel does not allow the mixfile to be changed and preview output is lost after transferring a newly created mix from the Configurator tool.
- [Bug #3919] IS750 Logo has the option for PGM AB mix.
- [Bug #4759] Diagnostics archive doesn't contain logs, configs, params etc.
- [Bug #4760] Add shuffle and gain presets to diagnostics archive.
- [Bug #4423] devicecaps.caps file is 0B after running "Creating Diagnostics File" script.
- [Bug #4762] Webpage doesn't allow media downloads for mixfiles, sounds or metadata presets.
- [Bug #4532] USB update stick fails to boot correctly.

### V3.0a1 - 2009-05-14

- [Bug #4636] Default preview output selection should be 'Preview o/p' not 'Program o/p'.
- [Bug #4637] XH command does not check the input parameters against the system features.
- [Bug #4524] Add support for temperature probe.
- [Bug #4624] Implement shuffle presets and associated shuffle commands.
- [Bug #4640] Add bulk tallies for shuffle presets.
- [Bug #4641] Refactor input bus code to make it generic.
- [Bug #4643] Tidy up audio initialisation code.
- [Bug #4642] Intuition keyer assign read from config file not compared to system features.
- [Bug #4644] Implement EAS audio option for the dynamic audio engine.
- [Bug #4653] Extend XE enquire to return drop frame and direction parameters.
- [Bug #4658] Invalid Intuition keyer assign values accepted by #b command.
- [Bug #4659/1] Add support for shuffle crosspoint tallies.
- [Bug #4662] Intuition Keyer Input does not check against valid ranges.

- [Bug #4668] Ensure log error calls are correctly formed.
- [Bug #4673] Implement gain presets.
- [Bug #4675] Make all GPI references zero based.
- [Bug #4661] Add shuffle preset list.
- [Bug #4687] Add gain preset list.
- [Bug #2656] Responses and tallies are not received for commands forwarded onto Intuition.
- [Bug #4666/1] Serial protocol not checked against system features.
- [Bug #4663] Command to set GPI inputs does not check the available number of GPIs.
- [Bug #4693] Cannot delete first character typed in imsttest.
- [Bug #4690] Upgrade to distro version 1.29.
- [Bug #4691] Add new gain control automation commands.
- [Bug #4699] Add support using floating point values in the configuration library.
- [Bug #4704] Implement new voiceover commands.
- [Bug #4705] Increase number of voiceovers to 8.
- [Bug #4706] Ensure voiceover block is sensitive to shuffles and gains.
- [Bug #4702] The alarm severity and report level set are not tested to be within range.
- [Bug #4708/1] Add caption support for configurator params, containers and components.
- [Bug #4709] Remove redundant voiceover settings from config tool.
- [Bug #4710] Add voiceover position to voiceover config.
- [Bug #4676] Add audio U-fade mix block.
- [Bug #4613] Port various web interface changes, including media uploads from LGK.
- [Bug #4717] Add support for controlling the program gain via the jp commands.
- [Bug #4679] Make webpage downloads available in another format.
- [Bug #4719] Add support for program output shuffler.
- [Bug #4722] Tidy up audio block list in configurator and make the block naming consistent.
- [Bug #4724] Add gain preset to output gain block.
- [Bug #4725] Change caption for Mixfile Inputs/Outputs section in audio config.
- [Bug #4726/1] Express gain block 'gain\_level' attribute as a float.
- [Bug #4731] Add new multiplexor control commands and program/preset input multiplexors.
- [Bug #4736] Add multiplexor source configuration to each multiplexor block.

## V2.1rc1 - 2009-04-30

- **Integrated latest firmware for audio (20090428\_1) FPGA.**
  - [Bug #4576] Add metadata frame delays.
- [Bug #4596] Tidy up upmix metadata handling.
- [Bug #4597] Add support for shuffler in the configurator.
- [Bug #4598] Add support for input gain blocks in the configurator.
- [Bug #4599] Extend j0/j1 commands to support up to 16 channels.
- [Bug #4603] Add short Doxygen description for the Dolby metadata automation functions.
- [Bug #4601] Implement new tally mechanism for audio tallies.
- [Bug #4607] Add automation heartbeat (YD).
- [Bug #4609] Front Panel function being passed wrong argument.
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- [Bug #4615] Make the "Inputs" and "Outputs" sections within the Audio branch mixfile specific.
- [Bug #4575] Noise heard when using backup audio with Dolby Decoder.
- [Bug #4618] Unify the input and output gain blocks.
- [Bug #4617] IS750 automatically restarts (particularly bad with failing timecode).
- [Bug #4554] Add Densite command to return time code status.
- [Bug #4622] Improve the timecode status format on the front panel.
- [Bug #4625] Configuration tool has Presmaster and RCP classic as protocol options.

- [Bug #4631] Load mode should be re-read from the configuration file after changing the store-keyer configuration.
- [Bug #4633] Verify preview output selected in configuration file against system features.
- [Bug #4569] Front panel dumpmenu output has some mistakes.

### V2.1b13 - 2009-04-27

- **Integrated latest firmware for audio (20090424\_1) FPGA.**
  - [Bug #4538] Add metadata detection flag for Dolby Decoders.
  - [Bug #4539] Increase number of metadata writers to 8.
- [Bug #4570] Audio sometimes fails to start up correctly.
- [Bug #4565] Add program gain block.
- [Bug #4575] Noise heard when using backup audio with Dolby Decoder.
- [Bug #4578] Remove unused output gain type pin attributes.
- [Bug #3725] Generate Dolby Metadata from decoders, for case of PCM feeding decoder.
- [Bug #3840] Dynamic Metadata Switching.
- [Bug #4587] Module type is not delayed as it passes through the delay block.

### V2.1b12 - 2009-04-22

- **Integrated latest firmware for audio (20090421\_1) FPGA.**
  - [Bug #4535] Add validity flag to metadata readers.
- [Bug #4418/2] Change the alarm thresholds for input timing.
- [Bug #4550] Implement full support for metadata processor.
- [Bug #4552] Add support for reading the metadata reader validity bit.
- [Bug #4556] System thinks EAS is running even when the template load fails.
- [Bug #4500] Images 99.5% not 100% keyed on.
- [Bug #3076] Audio Type set automatically according to module interconnections.

### V2.1b11 - 2009-04-17

- **Integrated latest firmware for CPU (MK29) and audio (20090416\_1) FPGAs.**
  - [Bug #4541] Make COX bus run DDR to free up CPU/AUDIO IO.
  - [Bug #4542] Implement Easyplay 2 engine.
  - [Bug #4534] Add support to read bitstream status lines on CAT552.
  - [Bug #4543] Add Easyplay 2 support to audio FPGA.
- [Bug #3704] Dynamic Audio Engine.
- [Bug #3530] Add 'MixDown' support in the Configurator.
- [Bug #4520] Change Active Preview mode from "Enabled" to "Disabled" not working properly.
- [Bug #4243] Standard EAS Easytext templates should all exist in a read-only folder.
- [Bug #4530] Add backup audio to Dolby Decoder.
- [Bug #4531] Add metadata routing library.
- [Bug #3900] Metadata processing to be enabled all the time.
- [Bug #4502] Front panel mirror display should be consistent with hardware front panel when loading a file.
- [Bug #4533] Improve handling of cut/data switchpoint for the audio AB mixer.
- [Bug #4537] Metadata processors stopped working.
- [Bug #4536] Allow config files to be erased from the front panel.
- [Bug #4540] Installer fails when the CPU FPGA is upgraded.
- [Bug #600] Unable to modify the Dolby data switch point when AB mixing.

## V2.1b10 - 2009-04-08

- [Bug #4507] Always convert errno into string equivalent when logging errors.
- [Bug #4314] OxSox DoPut temporary files should be prefixed with '.' (not suffixed with '.new')
- [Bug #3704] Dynamic Audio Engine.

## V2.1b9 - 2009-04-02

- No changes.

## V2.1b8 - 2009-03-31

- [Bug #3704 WIP] Dynamic Audio Engine.
- [Bug #4442] Have PVW channel cut down keyers when they are disarmed via basic arm/take.

## V2.1b7 - 2009-03-26

- No changes.

## V2.1b6 - 2009-03-25

- [Bug #3704 WIP] Dynamic Audio Engine.
- [Bug #4384] Ensure codebase goes through Doxygen without errors or warnings.
- [Bug #4409] Add Densite command to retrieve the alarm status.

## V2.1b5 - 2009-03-19

- [Bug #4444] #J commands are not converted to text equivalent in the message log.
- [Bug #4152] Correct message logged for X8 GPI enquire command.

## V2.1b4 - 2009-03-18

- **Integrated latest firmware for SOD (V1.14) FPGA.**
  - [Bug #4422] Ancillary Time Code (SD) is not detected and therefore not passed to the output.
- [Bug #4330] External reference standard mismatch incorrectly reported.
- [Bug #3704 WIP] Dynamic Audio Engine.
- [Bug #4409/2] Add Densite command to retrieve the alarm status.
- [Bug #4425] Move system features library into shared.
- [Bug #4427] Move HAL into shared.
- [Bug #4370] Commands forwarded to Intuition are not translated correctly.
- [Bug #4419] FP Load Images should display 'No Images' if /home/images/ is empty.
- [Bug #4418] Change the alarm thresholds for input timing.
- [Bug #4441] Raise the watchdog priority.
- [Bug #4434] Front Panel Mirror application gives spam in logging, not responding to Attention command.
- [Bug #4323] VIDEO\_INPUT\_STATUS not returning the timing value correctly.

## V2.1b3 - 2009-03-11

- [Bug #4209] Configuration files with spaces in filename are not loadable.
- [Bug #4063] Implement ZLT support for drivers and HAL.
- [Bug #4205] Correct the external reference locked status information.
- [Bug #4387] Write config changes at most every 64 fields.
- 
- [Bug #3704 WIP] Dynamic Audio Engine.
- [Bug #4164/2] Front panel crashes when stores config is changed so a keyer with an image loaded no longer has a store.
- [Bug #4380] Have the Configurator alarm defaults match the S06 document.
- [Bug #4401] Allow port number to be specified on imsttest.
- [Bug #4402] Add bitmask library.
- [Bug #4411] Oxsox problem with ISINFOEX command (50) does not respond with the expected 104 bytes.
- [Bug #4409/1] Add Densite command to retrieve the alarm status.
- [Bug #4398] Changing stores memory reports EAS is the most downstream keyer.

### V2.1b2 - 2009-02-26

- [Bug #4217] Log message reports invalid frames when easytext with clock loaded.
- [Bug #4063 WIP] Implement ZLT support for drivers and HAL.

### V2.1b1 - 2009-02-23

- **Integrated latest firmware for SID (V1.13) and KID (V1.12) FPGAs.**
  - [Bug #4058] Ref standard status should report external reference standard (SID).
  - [Bug #3961] External masks removed when keyer type changed to linear (KID).
  - [Bug #4086] Add test pattern to output router (KID).
  - [Bug #3424] Test pattern is colour swapped in 720p/50
- [Bug #3704 WIP] Dynamic Audio Engine.
- [Bug #4288] Add cleanfeed and monitor outputs to the 'route' testapp.
- [Bug #4292] Make the alarms in the configuration tool and front panel consistent.
- [Bug #4268] Add alarm on/off entries into GPI Outputs menu.
- [Bug #4302] Improve precision of value shown in 'Status > System Info > Disk Space Used'.
- [Bug #4304] Log different messages for PSU and PSU Converter failures.
- [Bug #4141] Add ability to configure the alarms from the front panel.
- [Bug #3872] Refactor external reference selection.
- [Bug #4300] Prevent R4 and R5 commands from enumerating .new files.
- [Bug #4263] Make a set of generic health automation calls - (**Xpanel/RCP-BR**).
- [Bug #4221] Prevent .new files from triggering media image tallies.
- [Bug #4305] Densite spamming messages log with DSK black keyer status.
- [Bug #4303] Rename compact flash dependencies within the code.
- [Bug #4206] Add alarm for loss of backplane.
- [Bug #4102] Only enable SNMP trap features with SNMP capable devices.
- [Bug #4324] Display menu tree on web interface.

### V2.1a21 - 2009-02-11

- [Bug #4236] Missing auto2text for enquiring keyer configuration.
- [Bug #4241] Drivers need to support building for multiple platforms on each target.
- [Bug #4252] 'Software Restart' and 'Hardware Restart' do not fit on front panel.

- [Bug #4251] Incorrect auto2text conversion for Local Logging enable/disable.
- [Bug #4259] USB stick does not work.
- [Bug #4164] Front panel crashes when stores config is changed so a keyer with an image loaded no longer has a store.
- [Bug #4248] Unlicensed GPI Output status options should not be accepted via the XB command.
- [Bug #4261] Inappropriate uses of string library particularly in datasource code.
- [Bug #4249] Intuition Keyer Assign options are missing from auto2text.
- [Bug #4208] Rearrange 'Setup' and 'Setup > System Setup' menu entries.
- [Bug #4244] Set Emergency To Air and Emergency From Air for GPI Inputs is not working.
- [Bug #4257] Production Store Test appears to pass when incomplete.
- [Bug #4239 WIP] Add Densite protocol option update mechanism - preliminary refactoring.
- [Bug #4234] Warn user that the DSK Animation Fill self test may be slow.
- [Bug #4271] Move 'Audio Mod Stat' from Setup menu to Status menu on front panel.
- [Bug #3704 WIP] Dynamic Audio Engine.
- [Bug #3657 WIP] Create virtual Imagestore.

### V2.1a20 - 2009-02-05

- **Distro upgraded to 1.25** USB stick v21.3
- [Bug #4141] Add ability to configure the alarms from the front panel.
- [Bug #4204] 'File Ops - Erase Mixfile' is visible in the front panel when audio is disabled.
- [Bug #4207] Add external reference mismatch alarm.
- [Bug #4232] Typo in GPI Out string 'DSK4-Key-On'.
- [Bug #4203] Move 'Setup - System Info' front panel menu items into 'Status'.
- [Bug #4233] Remove commented out temperature code.
- [Bug #4218] Images within Easytext files are not displayed.
- [Bug #4242] Kernel won't build on newer build environments.
- [Bug #4026] Implement m80 command to delete all datasources.
- [Bug #4237] #I command missing from table of automation commands.

### V2.1a19 - 2009-02-02

- [Bug #3704 WIP] Dynamic Audio Engine.
- [Bug #3936/2] Increase 128KB limitation for datasource memory to 1MB.
- [Bug #4141 WIP] Add ability to configure the alarms from the front panel.
- [Bug #4133 WIP] Resolve any syntax errors in Doxygen function header.
- [Bug #4202] Allow individual video input alarms to be set using the config tool.
- [Bug #4222] Improve warning messages for load commands that should fail when EAS is active.

### V2.1a18 - 2009-01-30

- [Bug #4161] Correct the configuration options in Video > Preview.
- [Bug #4173] Implement OXJ support.
- [Bug #3935] N command needs extending for the number of supported keyers.
- [Bug #4007] Ensure physical monitor/clean-feed are present before returning XP/XH enquire.
- [Bug #4063 WIP] Implement ZLT support for drivers and HAL.
- [Bug #4126] Add GPI output status front panel menu.
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- [Bug #4163] Remove emergency to air from configuration.
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- [Bug #3704 WIP] Dynamic Audio Engine.
- [Bug #4156] Front panel crashes when using Status > Ref Status > Standard.
- [Bug #4207 WIP] Add external reference mismatch alarm.
- [Bug #3936/1] Increase 128KB limitation for datasource memory to 1MB.

## V2.1a17 - 2009-01-27

- **Upgrade to v1.24 of the distribution**
  - Update and Production USB sticks updated to v21.2.
- [Bug #4159] 'C' command is incorrectly logged for 'Self Key' and 'Separate Key' selections.
- [Bug #4147] EAS and Emergency-to-Air should use the most downstream keyer with associated store.

## V2.1a16 - 2009-01-23

- [Bug #4104] Refactor tag library and add text based tag editor.
- [Bug #4111] Report meaningful board revisions to the user.
- [Bug #3845] Improve warning message when gpi.xml is missing.
- [Bug #4113] Move production tests into HAL.
- [Bug #3754] Ensure the relevent video keyer configuration elements are read.
- [Bug #4074] Add 64 bit support to tag file format.
- [Bug #4132] Make all function headers consistent in style - (non-functional change).
- [Bug #4105] Keyer fader angle does not persist correctly (Configurator tool).
- [Bug #4139] Add Version information tab to the front panel.
- [Bug #4052] No selection arrows displayed in System Setup > Serial Comms.
- [Bug #4063 WIP] Implement ZLT support for drivers and HAL.
- [Bug #3933] Add MAC address to front panel.
- [Bug #4153] Correct the values accepted by the Y3 command.
- [Bug #4147 WIP] EAS and Emergency-to-Air should use the most downstream keyer with associated store.

## V2.1a15 - 2009-01-16

- [Bug #4062] Implement dummy HAL calls for halFpOpen and halFpClose.
- [Bug #3893] Add automation command for program and preview input selection (UF).
- [Bug #3654] Add two boot partitions during Production Setup.
- [Bug #4063 WIP] Implement ZLT support for drivers and HAL.
- [Bug #3811] 1080i RGB OXI animations files cause imstdisk to crash.
- [Bug #4076] Remove HRI dependency tag library.
- [Bug #4075] Ensure all code uses only a single tag library.
- [Bug #4085] hda1 and hda3 compatibility links are incorrect/missing.

## V2.1a14 - 2009-01-12

- **Integrated latest firmware for CPU (MK27) FPGA.**
  - [Bug #3959] Change interrupt layout on IS750.
- [Bug #3968] LGK crashes on first store load.
- [Bug #3847] Stores generate kernel OOPS on first store load.
- [Bug #4045] Dump system features debug into a log file.
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- [Bug #4051] Diagnostics archive file scan double-lists files.
- [Bug #4053] Software reset gives some error messages in logging.
- [Bug #4056] Make driver error codes more representative of errors.
- [Bug #4057] Add copy scripts to code base.
- [Bug #3959] Change interrupt layout on IS750.

## V2.1a13 - 2009-01-08

- **Integrated latest firmware for SID (1.12), SOD (1.13) and KID (v1.11) FPGAs.**
  - [Bug #3755] WFM700 displays "standard" errors on IS-750 output once input signal is removed.
  - [Bug #3979] Loss of input video A after software upgrade.
  - [Bug #3950] Audio is not present on Preview Out or Program Out after doing software upgrade but appears after power cycling the unit.
  - [Bug #2903] UES (unknown error status) error flag is set to 1 (should be 0).
- [Bug #3971] Add support for multi-word reads/writes via the HAL.
- [Bug #3876 WIP] Extend SNMP/Alarms for Imagestore and LGK.
- [Bug #3972] Move Easyplay into a separate component.
- [Bug #3974] Move Easyplay functions into their own file.
- [Bug #3970] In-loop-out message should be seen when logging is 'Verbose'.
- [Bug #3978] Split main and blit into separate folders.
- [Bug #3977] Rename imstVideoInputReferenceOffset to imstVideoInputTimingOffset.
- [Bug #3976] Generate alarm when the difference between any two input ref timings are greater than one line.
- [Bug #3983] Refactor blit to make it more consistent with the other Imagestore apps.
- [Bug #3962] xml\_get\_data\_size throws an error if the xml node self closes.
- [Bug #3947] Incorrect SN shown in the logging.
- [Bug #3999] Ensure colour fields are managed via system features.
- [Bug #4000] Emergency-To-Air config setting should not rely on EAS being supported.
- [Bug #4003] Refactor interrupt handling in imstblit.
- [Bug #4004] Break down InterruptHandler.c in blit.
- [Bug #4005] Merge output.c into video.c.
- [Bug #3750] Log invalid commands when required system features are not present.
- [Bug #4001] Remove code duplication from system features.
- [Bug #4010] Add information banner to login prompt.
- [Bug #4016] IS750 hangs on startup waiting for Densitec layer to initialise.
- [Bug #4021] Move all audio calculations into main.
- [Bug #4018] Enquiring the standard of 1080p/59.94 or 1080p/50 references causes front panel to crash.
- [Bug #4030] Move files in HAL into subdirectories for each function.
- [Bug #4033] Poor audio ramp quality with fast fade rates.

## V2.1a12 - 2008-12-17

- **[Bug #3980] Upgrade to v1.23 of the distribution.**
  - [Bug #3960] Add setterm to distribution.
- [Bug #3923] Update CMOS settings on production stick.
- [Bug #3883] Front panel menu items should use "A" instead of "PGM In".
- [Bug #3828] Remove code for a IS750 to emulate a LGK.
- [Bug #3898 WIP] Move audio hardware access into HAL; Delays and tone initialisation.
- [Bug #3921] Remove Presmaster protocol selection where not applicable.

- [Bug #3699 WIP] Add standard Densite front panel entries to root menu.
- [Bug #3932] Green flashes on animations set to 'No Key' which contain fill and key data.
- [Bug #3658] Allow more than one connection on the front panel mirror.
- [Bug #3876 WIP] Extend SNMP/Alarms for Imagestore and LGK.
- [Bug #3185] Installer failed to install.
- [Bug #3450] Add download links to Web Server's Configuration Template page.
- [Bug #3830] Backup of media should include audio files.
- [Bug #3634] Correct web link given after creating a USB upgrade media.
- [Bug #3786] Keyer type linear is really full keying.

## V2.1a11 - 2008-12-08

- [Bug #3473] Add SMNP/alarm support for Imagestore attributes.
- [Bug #3670] Ensure a store is always associated with the final keyer whenever EAS is licensed.
- [Bug #3624] Refactor GPI events code.
- [Bug #3818] imstreg baseline address for FPGAs.
- [Bug #3802] Viewing last config file causes a crash.
- 
- [Bug #3868] Change keyer config to stores config and remove system value persists option.
- [Bug #3877] Fix the AutoMAX configuration.
- [Bug #3898 WIP] Move audio hardware access into HAL; Delays and tone initialisation.
- [Bug #3906] Add a warning into the build to show when drivers are out of date.
- [Bug #3699 WIP] Add standard Densite front panel entries to root menu.
- [Bug #3913] Production stick is failing with certain MAC addresses.
- [Bug #3915] Upgrade software to use distro v1.22.

## V2.1a10 - 2008-11-25

- [Bug #3812] Rename \_MAX and \_MIN functions.
- [Bug #3749 WIP] Front panel needs tidying up.
- [Bug #3778] Refactor serial production tests.
- [Bug #3766] CGT and other keying values wrong on LGK (and unsafe construct on i686).
- [Bug #3794] Config should not allow DVE2 to be monitored without dual channel DVE support.
- [Bug #3465/3] Move all licence and hardware logic into system features.
- [Bug #3809] Refactor use of software licences (X1 command, front panel licences, Configurator tool licences).
- [Bug #3839] System Reference Timing offset not correct.
- [Bug #3836] Setting DVE mode with an incorrect value causes message clogging.
- [Bug #3643] Cannot save GPI file.
- [Bug #3473 WIP] Add SMNP support for Imagestore attributes.
- [Bug #3624 WIP] Refactor GPI events code.
- [Bug #3843] Input Timing Values not being updated.
- [Bug #3218] Store allocation percentages must depend on number of stores.
- [Bug #3682] Check the Intuition keyer options against the available DSKs.
- [Bug #3831] Modify front panel menu dump to show only enabled items.

## V2.1a9 - 2008-11-13

- [Bug #3796] Add wrapper library around netsnmp.
- [Bug #3749 WIP] Front panel needs tidying up.

- [Bug #3743] Cannot select Program Input options on IS750 LOGO.

## V2.1a8 - 2008-11-11

- [Bug #3751] Integral USB Pen Drives 2 to 8 GB do not work with IS750.
- [Bug #3650] Some audio mix options shown on front panel when AB mixer is missing.
- [Bug #3759] LTC device cannot be found during install.
- [Bug #3762] Add SNMP server and basic system SNMP attributes.
- [Bug #3656] Update Production tests for LGK.
- [Bug #3738] Routing may cause error flood on IS750 LOGO.
- ~~[Bug #3743] Cannot select Program Input options on IS750 LOGO.~~
- [Bug #3465/2] Move all licence and hardware logic into system features.
- [Bug #3771] Add Network Production test.
- [Bug #3770] Remove clean feed and monitor feed options based on hardware and licences.
- [Bug #3758] Create per-channel input options when no AB mixer is present.
- [Bug #3785] Fix front panel menu dump.
- [Bug #3776] Video on IS750 LOGO is always black.

## V2.1a7 - 2008-11-04

- [Bug #3649/2] Include command string with 'Incorrect STX' warning message.

## V2.1a6 - 2008-11-04

- [Bug #3565/2] Refactor configuration code.
- [Bug #3661] Keyer fader config settings ignored when external fill and key selected.
- [Bug #3680] Software restart doesn't work on LGK, script rename.
- [Bug #3666] Return of Y6 tally dependent on presence of DVE hardware.
- [Bug #3668] Ensure datasource commands are logged when level is 'Media/Keying'.
- [Bug #3688] Remove monitor, clean feed and dve options from frontpanel on LGK, refactoring.
- [Bug #3691] Remove code for only one fill and key.
- [Bug #3675] Correct possible configuration start-up states of the video frame delays.
- [Bug #3465] Move all licence and hardware logic into system features structure.
- [Bug #2656] Responses and tallies are not received for commands forwarded onto Intuition.
- [Bug #3539] X6 command should not include PSU voltages in calculation of 'Video Voltage Check'.
- [Bug #3701] Change default serial / automation level level for the config tool.
- [Bug #3711] Store sizes are always default.
- [Bug #3713] Animations are flickery and field-swapped.
- [Bug #3694] Correct NTP and logging server values on upgrade.
- [Bug #3708] Prevent O tally from being sent to Presmaster unless explicitly requested - **(Xpanel/RCP-BR)**.
- [Bug #3709] > Empty < not always sent for empty keyers.
- [Bug #3716] Add EEPROM production test for LGK, IS750 refactoring, dist upgrade.
- [Bug #3727] Add GPIO production test for LGK, IS750 refactoring.
- [Bug #1090] Validate in-loop-out animation start and stop values to prevent field-swapping.
- [Bug #3732] Correct the Dolby default values saved in the capabilities file.
- 
- [Bug #3724] Errors do always abort commands in hal.
- [Bug #3733] Add a CF card production test for LGK, IS750 refactoring.

- [Bug #2613] Implement DVE tag file support for IS300 (as for ISHD and IS750) (Amended WU command usage only).
- [Bug #3686] Intuition fill/key input option fill-3/key-3 is ignored.
- [Bug #3737] Audio delay of delay banks 5 to 8 shown as zero on the front panel.
- [Bug #3649] Include command string with 'Incorrect STX' warning message.
- [Bug #3714] Animations are jittery during store load.

### V2.1a5 - 2008-10-14

- [Bug #3567] Add asserts in appropriate places.
- [Bug #3639] Make the X6 return values consistent with v1.14.1 (penultimate parameter).
- [Bug #3645] Cannot ping unit after upgrading software to v2.1a4.

### V2.1a4 - 2008-10-09

- [Bug #3565/1] Refactor configuration code.
- [Bug #3566] Allow asserts to be controlled by a state file.
- [Bug #3157] Help command in imsttest.
- [Bug #2521] Add ability to embed DVE moves within Intuition templates.
- [Bug #3593] Remove Uc command from sources.

### V2.1a3 - 2008-09-24

- [Bug #3563] Add support for layers without stores.
- [Bug #3564] Cannot communicate with filesystem disk process.

### V2.1a2 - 2008-09-22

- **Integrated latest firmware for Audio (20080912\_5), SID (1.10) and SOD (1.10) FPGAs.**
  - [Bug #3492] Momentary loss of valid video on router switches between two synchronised sources, giving red border on ALTO (SD) (SID v1.09).
  - [Bug #3512] 'ALTO fix' is trying to legalise audio samples when it should not (SID v1.10, SOD v1.09).
  - [Bug #3526] SD audio hot cutting click problem (Audio 20080912\_5).
  - [Bug #3533] Intermittent picture breakup across all 4 outputs (SOD v1.10).
- [Bug #3481] Failure to set keyer inputs will cause a crash.
- [Bug #3477] Newly created GPI macro does not work properly.
- [Bug #3461] Audio template description does not match the template.
- [Bug #3483] Correct log\_error calls that contain incorrect parameters.
- [Bug #3460] T3 command does not work with timers when a timezone is set.
- [Bug #3484] Make clocks and store indexes more robust.
- [Bug #3485] 'imstlic' should display time zone.
- [Bug #3493] Rework go scripts to better support multiple platforms.
- [Bug #2614] Make imstreg an XML-based application.
- [Bug #2481] Timecode needs moving into HAL.
- [Bug #3516] Refactor clocks code.
- [Bug #3519] Allow update of reference origin without breaking customer setup.
- [Bug #3502] Add debug to production procedure - (USB stick v21.1).
- [Bug #3521] Setting external fill/key on DSK should be ignored if already set.
- [Bug #3523] "Audio Mix" output can not be used by "AB mixer" or "Audio VoiceOver".

- [Bug #3529] Tallies for configuration files do not work without a dolby/upmix licences.
- [Bug #3535] Reduce amount of memory copied between main and blit.
- [Bug #3536] Remove method pointers in state structure.
- [Bug #3538] Unify the system features (hardware and license detection).
- [Bug #3464] 16chn\_emb\_pass.xml does not load properly.
- [Bug #3544] Refactor layering code to accomodate multiple architectures.
- [Bug #3545] Stores data transferred by DMA is getting corrupted.
- [Bug #3548] Remove input fader code not included in the compiled code.

## V2.1a1 - 2008-09-01

- **Integrated latest firmware for SID (1.08) and CPU (MK25) FPGAs.**
  - [Bug #3416] IS-750 timing issue.
  - [Bug #3456] Add MK25 CPU FPGA to IS750.
- [Bug #3408/2] DVE mode not getting set.
- [Bug #3419] Commands sent through production software freezes unit.
- [Bug #3421] Update software upgrade procedure in release notes.
- [Bug #3417] Audio lost over restart.
- [Bug #3429] Sequences directory missing from diagnostics archive.
- [Bug #3425] Remove redundant Dolby mixfiles.
- [Bug #3433] Remove redundant Dolby directories in /home.
- [Bug #3434] Software should force a 'sync' after writing a config file.
- [Bug #3432] Software should force a 'sync' after writing state.xml.
- [Bug #3435] Prevent refresh of messages files.
- [Bug #3431] Add template configuration files to web page.
- [Bug #3444] Logging doesn't show Inputs information.
- [Bug #3446] Allow cfgtemplates to be accessible via FTP.
- [Bug #3414] Make stores access use a single window.
- [Bug #3454] Implement field-at-a-time store transfers.
- [Bug #3455] Implement stores DMA support.
- [Bug #3469] Add installer support for dual core ETX module (MCAL board).
- [Bug #3471] USB creator should not use hard coded location.
- [Bug #3474] Add support for SATA on new ETX module.
- [Bug #3476] Logging state file should not be created.
- [Bug #3472] Support ZLT board in JTAG chain.
- [Bug #3480] JTAG errors appear when DVE board is missing.

## V2.0rc1 - 2008-08-19

- [Bug #2888/2] Add 64bit support to the OxSox GetFullDir command.
- [Bug #3408] DVE mode not getting set.
- [Bug #3410] Change clean feed label 'AB Mixer o/p' to 'PGM AB Mix'.
- [Bug #3412] Correct capitals on front panel.
- 
- [Bug #3406] DVE windows are green after software restart.

## V2.0b20 - 2008-08-15

- [Bug #3396] Dolby metadata not being parsed properly.
- [Bug #2871/2] Add functionality to read metadata and auto switch Upmix module.

- [Bug #3397] Ensure all I/O pins have meaningful names.
- [Bug #3399] Add new validation DTD.
- [Bug #3400] oH command doesn't work.
- [Bug #3392] Correct Input Enquire XX response.
- [Bug #3401] Preview multiplexors can be connected to illegal sources.
- [Bug #3403] All outputs use PROGRAM\_GAIN - a UNITY\_GAIN should be added.
- [Bug #3402] Cannot set PROGRAM\_GAIN from config tool.

## V2.0b19 - 2008-08-14

- **Integrated latest firmware for AUDIO (14/08/08-2) FPGAs.**
  - [Bug #3074] Audio type (PCM or data) can not be set for each embedded pair.
- [Bug #3111/2] Retain configuration state during upgrade from v1.14.x to v2.0.
- [Bug #3375] Caption changes for Audio inputs.
- [Bug #3378] Production issues programming units with v2.0b18.
- [Bug #3381] Audio route manager allows invalid routes.
- [Bug #3384] Outputs of legacy audio blocks show channel 0-3 (should be 1-4).

## V2.0b18 - 2008-08-11

- [Bug #3359] Audio is mute on program group1.
- [Bug #3354] Remove keyer settings from the Configuration Tool which are stored within media files.
- [Bug #3352] Quarter size screen displayed for A and B Inputs.
- [Bug #3367] Field sync interrupt error messages on startup.
- [Bug #3365] A/B\_DATA\_XP gain type not sensitive to shuffles.
- [Bug #3363] Verify standard in EEPROM and config file on startup.
- [Bug #3366] Change "Set config" automation command to be public.

## V2.0b17 - 2008-08-07

- [Bug #3287] Check "input mask" parameters in configuration file when using external fill/key.
- [Bug #3285] Incorrect behaviour of first 'cut up/down' after loading configuration file.
- [Bug #3288] Ensure emergency-to-air is set correctly when read from configuration file.
- [Bug #3296] Rename parameters inside Keyer Input Operations.
- [Bug #3310] Ensure that audio mute settings can persist and match automation.
- [Bug #3287] Check "input mask" parameters in configuration file when using external fill/key.
- [Bug #3304] Ensure "system value persists" works from first config file import.
- [Bug #3294] Help string required in Configuration Tool to show that load-live (Keyer Input Operation) takes precedence over store load (Keyer Store Operations).
- [Bug #3336] Add ranges to image position that depend on the standard.
- [Bug #3309] Set initial external fill and key mask values and flag.
- [Bug #3340] Firmware update FP bar does not tally with VGA percentage.
- [Bug #3335] Allow automation control of Dolby E/AC3 Encoders (encode or passthrough - q1/q2), and Dolby Decoder (automatic, Dolby E, AC3 or mute - q3).
- [Bug #3342] Audio settings inverted on startup with System Value Persists.
- [Bug #3339] Add log messages when code can exit silently.
- [Bug #3343] Clean Select and Monitor Select options should distinguish between physical SDI inputs and input selections.
- [Bug #3341] Make RCP aware of system state on connection.

- [Bug #3346] Wrong modules requested during module initialisation.
- [Bug #3347] Wrong sources used for audio feeds.
- [Bug #3349] Permissions on config directory and files is set to root during revert from 1.14 to 2.0
- [Bug #3348] Check the external fill/key number when generating the capabilities file.

## V2.0b16 - 2008-08-04

- [Bug #3280] Various configuration/validation issues.
- [Bug #3270] Correct the fade rate default in the validation and configuration.
- [Bug #3274] Correct audio fader rate default in the validation and configuration.
- [Bug #3327] Remove 'mixer wipe softness' from the Configuration Tool.
- [Bug #3281] AB mixer values not being set from configuration file.
- [Bug #3284] AB mixer inputs incorrectly read in from configuration.
- [Bug #3186/2] Correction to automation prompt for Output Level via Gain Type (j1 3) seen in Configuration Tool.
- [Bug #3283] DVE program input not being set from configuration file.
- [Bug #2863] Allow control of DSK3 and DSK4 from RCP classic.
- [Bug #3289] Ensure timecode is set when read from configuration file.
- [Bug #3333] Increase stored number of backlogged messages.
- [Bug #3286] Ensure clip is less than or equal to gain when read from configuration file.
- [Bug #3290] Store key plane not cleared properly when source is 'none'.
- [Bug #3291] Ensure VO duck and preset are set when read from configuration file.
- [Bug #2837/2] Add RB automation command to return the time of an Easyplay file (SMPTE format).

## V2.0b15 - 2008-07-28

- [Bug #3258/2] XR command does not return the correct number of fill/key pairs.
- [Bug #3250] Add new DTDs for configuration.
- [Bug #3202] Define default expansion for 'System Settings' tree in Configuration Tool.
- [Bug #3189] String improvement for Audio Multiplexor dialogs.
- [Bug #3167] Store manager needs implementing.
- [Bug #3261] Serial ports RS232A and RS232B ignored by config.
- [Bug #3111] Retain configuration state during upgrade from v1.14.x to v2.0.
- [Bug #3211] Minimal config settings (from v1.14.x) should default to 'System value persists' in Configuration Tool.
- [Bug #2963] Front panel DVE preview mode is not checked against correct licence.
- [Bug #3265] Capabilities file should allow one DVE for both PGM and PVW channels when SQ2H=1.
- [Bug #3260] Accessing COM1 counter info gives FE error, and then stops working.
- [Bug #3221] Adjust behaviour of keyer parameters so that 'Default value' allows any media loaded at start-up to override values.
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- [Bug #3271] /home/params not always copied on upgrade from v1.14.x to v2.0.
- [Bug #3272] Add audio delay support into the Configuration Tool.
- [Bug #3266] Ensure all values have defaults saved in the config file.
- [Bug #3219] Fill and key settings should be stored in the Configuration.
- [Bug #3270] Correct the fade rate default in the validation and configuration.
- [Bug #3275] Improve help strings for audio gain values (dB) in the Configuration Tool.

## V2.0b14 - 2008-07-23

- [Bug #3258] XR command does not return the correct number of fill/key pairs.
- [Bug #3256] Mixfile not generated correctly after importing configuration.
- [Bug #3253] Overflow error and FE errors when connected IS750 to Presmaster.

## V2.0b13 - 2008-07-22

- [Bug #2837] Add RB automation command to return the time of an Easyplay file (SMPTE format).
- [Bug #3232] Mute attribute is inverted.
- [Bug #3233] Default serial type should be RS422.
- [Bug #3209] Fade Cut causes PresMaster to freeze.
- [Bug #3239] Web page comes up blank after InitHD.
- [Bug #3227] Copy of sounds folder needs to be removed.
- [Bug #3224] Logging settings (logging server/local logging) not honoured on config load.
- [Bug #3223] NTP configuration should be in the config file.
- [Bug #3244] Variable config files should be in /var.
- [Bug #3235] DVE: Routing mode always bypass at startup.
- [Bug #3111 WIP] Retain configuration state during upgrade from v1.14.x to v2.0 - Standard, EEPROM, Logging and Mixfile completed.
- [Bug #3207] Configuration menu should be in Setup menu.

## V2.0b12 - 2008-07-18

- **Integrated latest firmware for AUDIO (18/07/08-1) FPGAs.**
  - [Bug #3168] Level Issues with Dolby E Decoding.
- [Bug #3210] Installing an old version through web interface crashes Imagestore.
- [Bug #3228] Audio in Silence position and VO faded up after system startup.
- [Bug #3208] W2 commands not translated by auto2text.

## V2.0b11 - 2008-07-18

- [Bug #3181] q0 command range detection and auto2text issue.
- [Bug #3196] Beta 10 version can not generate Mixfile based on the configuration.
- [Bug #3108] "System value persists" for Metadata Preset should be made as default value.
- [Bug #3194] Audio requirements need reworking.
- [Bug #3163] Lack of "Revert" version in the new web interface.
- [Bug #2966] Add video options to the Configuration Tool (Use of instance array).
- [Bug #3201] Move webserver files into /var.
- [Bug #3205] Colour fields don't configure properly.
- [Bug #3200] Revert doesn't revert audio module firmware.
- [Bug #3065/2] Remove conf.xml and related functionality.
- [Bug #3217] Setting CGT to 123 causes imstblit to crash.
- [Bug #3206] Keyer input operations don't work from configuration.

## V2.0b10 - 2008-07-16

- **[Bug #3178] Upgrade to version 1.19 of the distro.**
  - [Bug #3176] Front panel mirror shows strange characters.

- [Bug #3172] Production selftests fail.
- [Bug #2961] RS485 production test freezes the unit.
- [Bug #3179] Upmix enable state crashes Imagestore Configurator.
- [Bug #3131/2] Left/Right arrows missing from input status submenus.
- [Bug #3140/2] Add device capabilities file to web interface.
- [Bug #3174] System Information page serial communications referencing.
- [Bug #3182] Meter route should not allow multiple sources.
- [Bug #3175] Refresh rate of fp in Internet explorer.
- [Bug #3171] DTD related error messages in Log file during startup.
- [Bug #3185] Installer failed to install.
- [Bug #3001/3] Add audio options to the Configuration Tool (Configuration Support).
- [Bug #3173] Audio memory selftest fails.
- ~~[Bug #3132] Add passthrough inputs to decoder modules.~~
- [Bug #3188] Update driver version numbers.
- [Bug #3191] imstdisk crashes if state.xml file is zero bytes.
- [Bug #3186] Include automation command prompts in Configuration Tool help strings.

## V2.0b9 - 2008-07-14

- [Bug #3124/2] Front panel should show both Lines/Samples and Lines/uS formats for Timing Report and Set Reference.
- [Bug #3091] Have configuration load media at start up.
- [Bug #3159] Imagestore can crash if DTD validation fails.
- [Bug #3161] Imagestore crashes on startup.
- [Bug #2968] Invalidate unsupported AB mixer transition types.
- [Bug #3162] Strange blank commands when DVE sequences are run.
- [Bug #3067] Perform default value validation within configuration handling.
- [Bug #3164] Errors in log file about metadata preset not being loaded.
- [Bug #3065] Remove conf.xml and related functionality.
- [Bug #3165] Message logs have missing or incorrect parameters for some Preview Select and Clean Select options.
- [Bug #3166] Selecting a mixfile from the front panel doesn't work.

## V2.0b8 - 2008-07-11

- [Bug #3131] Left/Right arrows missing from input status submenus.
- [Bug #3132] Add passthrough inputs to decoder modules.
- [Bug #3133] Rename Upmix inputs/outputs to reflect their use.
- [Bug #3134] syslog errors on first startup.
- [Bug #3136] Refresh on web based fpmirror is flaky.
- [Bug #3130] Web-based FP application gives error even when one application opened.
- [Bug #3137] Move Backup option into Media pane.
- [Bug #3141] Don't compress files on backup.
- [Bug #3142] Sort out System Information page.
- [Bug #3140] Add device capabilities file to web interface.
- [Bug #3070] Add 'Configuration > Last Config' option.
- [Bug #3138] EEPROM standard should be changed during config import.
- [Bug #3145] Licenses XML causes capabilities file to break.
- [Bug #3143] "Keep Current" Should be in square braces on FP.
- [Bug #3146] Rename Upmix mode "Auto" to "From Metadata".
- [Bug #3124] Front panel should show both Lines/Samples and Lines/uS formats for Set

## Reference.

- [Bug #3149] Need to report the UPMIX module status/module type under Audio Mod Stat.
- [Bug #3147] Error message showed up in logging when loading a preset.
- [Bug #3001/2] Restructuring of audio options within the Configuration Tool (validation file).
- [Bug #3148] Disable use of words for compression and dynamic range control.
- [Bug #2568] Add ability to browse data source names and their values.
- [Bug #3154] Debug doesn't work in Makefiles.
- [Bug #3139] DVE 2 Inputs have the wrong default (PGM and PVW).
- [Bug #3151] Loading digital clocks on any DSK causes crashing and looks to be unstable.
- [Bug #3105] Enable parameters to be hidden in the configuration tool.

**V2.0b7 - 2008-07-09**

- [Bug #3120] Default metadata presets directory is wrong.
- [Bug #3112] Long datasource names do not work correctly.
- [Bug #3071] Logging fails if log file reaches 50MB when local logging is off.
- [Bug #3123] Rename validationcgi to gendeviccaps.cgi.
- [Bug #3121] Add configs folder and validation file into diagnostics archive.
- [Bug #3122] Login link is wrong after bad password.
- [Bug #3113] Preview Select should have "Presmaster Preview" as default value.
- [Bug #3115] Preview AB Mixer Select should have "B channel" as default value.
- [Bug #3081/2] Logging level not working.
- [Bug #2813] Center Mix Lvl and Surround Mix Lvl affected by the setting in Extended BSI.
- [Bug #3127] Add backup to IS750 web page.

**V2.0b6 - 2008-07-09**

- **[Bug #3110] Upgrade to version 1.18 of the distro.**
  - [Bug #3109] qDecoder header doesn't meet HTTP specification.
- [Bug #3084] Ensure audio input type is displayed as "N/A" if input is unlocked.
- [Bug #3096] Add IP address to validation file.
- [Bug #3097] Add input/output/pass type to route blocks.
- [Bug #3095] No FTP permission to /home/configs or /home/mdpresets folder.
- [Bug #3077] Web-based FP mirror can not show "Keep Current" menu properly.
- [Bug #3093] FP Mirror through webserver "fails to receive" and doesn't display any info.
- [Bug #3099] Iframe is too small for front panel mirror in IE7.
- [Bug #3100] Frame spacing is incorrect on IE7.
- [Bug #3101] Frame margins cause inconsistencies between browsers.
- [Bug #3102] Software Upload web page (from bootable USB) should mention v2.0 cpio (instead of v1.14).
- [Bug #3104] Audio module command table is wrong.
- [Bug #3106] Web interface media browser has strange behaviour for parent directory.
- [Bug #3072] Make 0/1 based Dolby/Upmix params a drop down box.
- [Bug #2568] Add ability to browse data source names and their values.
- [Bug #3086] Restructure Input Status menu to clear up menus.
- [Bug #3098] Imagestore 750 Upgrade Page & Reset Page don't display in IE7.
- [Bug #3107] No Serial Comms after startup.
- [Bug #3118] Wrong default value for metadata processors.

**V2.0b5 - 2008-07-07**

- [Bug #3075] "Normal" for "Audio Type" better be renamed as "Audio".
- [Bug #3045] Prompt the user to export a configuration when changing standards via the front panel.
- [Bug #3081] Logging level not working.
- [Bug #3083] Many state values are being written to the wrong container.
- [Bug #3050] DVE -> Run Sequence feature is broken.

## V2.0b4 - 2008-07-04

- [Bug #3036] OxSox thumbnailing is broken.
- [Bug #3037] Show 'Set Reference' and 'Input Timing' in lines and samples.
- [Bug #3041] Imagestore attempts to display invalid store raster.
- [Bug #3044] Metadata presets should validate against set DTD.
- [Bug #2889] Preview DSK incorrectly follows Program DSK.
- [Bug #3046] Preview keyer defaults are not cut up.
- [Bug #2890] Webserver should force new load of pages to avoid loading from cache.
- [Bug #2985] Add device and miscellaneous options to the Configuration Tool.
- [Bug #3047] Reordering of 'System Settings' items within the Configuration Tool.
- [Bug #2869] Add ability to update software via the webpage.
- [Bug #3003] Enhancements to 'Import Config' menu in FP.
- [Bug #3060] Add metadata preset to Configuration Tool.
- [Bug #3062] Revamp the Imagestore web interface.
- [Bug #3066] Make web pages auto refresh.
- [Bug #3068] Preview/Cleanfeed/Monitor modes not check for validity - (causes message spamming).
- [Bug #3071] Logging fails if log file reaches 50MB when local logging is off.
- [Bug #3073] Web page can generate nested frameset.

## V2.0b3 - 2008-07-01

- **Integrated latest firmware for KID (MK10) FPGA.**
  - [Bug #2910] Setting DVE Mode to "None" gives corrupted output.
- [Bug #3026] Add support for standard-specific parameters in the Configuration Tool.
- [Bug #3027] Add support for viewing licences within the Configuration Tool.
- [Bug #2962] RCP does not work on any serial port.
- [Bug #3025] Unsafe use of strcpy in string library.
- [Bug #2995] #! command is incorrect and should be removed.
- [Bug #3033] Ensure configuration is validated against DTD when loaded.
- [Bug #2863] Allow control of DSK3 and DSK4 from RCP classic.
- [Bug #3032] Insert mask and reference offset parameters for all standards for the Configuration Tool.

## V2.0b2 - 2008-07-01

- [Bug #2173] Add input signal timings to the front panel.
- [Bug #2843/2] Correct input parameters for XX command (Get Input Status).
- [Bug #3017] Memory leak in imstmain.
- [Bug #3022] USB stick references wrong device node.
- [Bug #2861] Misreported error messages during Revert.
- [Bug #3008] SDI Input masks do not work.

- [Bug #2695] Front Panel mirror closes connection.
- [Bug #2912] GPI related Operations are broken.
- [Bug #2660] FP may not show Store memory assignment accurately.

## V2.0b1 - 2008-06-27

- **Integrated latest firmware for AUDIO (27/06/08-1) FPGAs.**
  - [Bug #2967] Left and Right channel swapped by Upmix Module.
  - [Bug #3005] Metadata UART TX counters do not work.
- [Bug #2966] Add video options to the Configuration Tool (validation file).
- [Bug #2951] Generate mixfile from configuration.
- [Bug #2971] Need ID attribute adding for lists.
- [Bug #2958] Add DVE options to the Configuration Tool (configuration and state).
- [Bug #2905] Remove unimplemented command (\$a) from configuration.
- [Bug #2984] #k should be rejected when dve is not present.
- [Bug #2985] Add device and miscellaneous options to the Configuration Tool (validation file).
- [Bug #2812] Allow manipulation of the "Audio Mode" channel status bits.
- [Bug #2873] Toggle standards between different frame rates gives no messages to restart unit.
- [Bug #2866] Modify mixfile selection to include 'AUTO-GENERATE'.
- [Bug #2843] Correct input parameters for XX command (Get Input Status).
- [Bug #2891] Colour Field Generator Standard Misconfigured.
- [Bug #2911] Range Detection needed for Compre and Dynrng when the compression is a "Word".
- [Bug #2799] Errors reported in log file after the web-based FP launched.
- [Bug #3001] Add audio options to the Configuration Tool (validation file).
- [Bug #2999] Bad message in log file: Unable to find container unmanaged 0.
- [Bug #3003] Change "Load Config" to "Import Config" in FP.
- [Bug #2806] Add RX/TX counters for RS485 ports.
- [Bug #2968] Invalidate unsupported AB mixer transition types.
- [Bug #2904] AB mixer input selection feature is broken.
- [Bug #3006] Newly imported config is lost if setting is change post import.
- [Bug #2966] Add video options to the Configuration Tool (configuration and state).
- [Bug #3007] Keyer FTB is black by default.
- [Bug #2953] Dolby Data Rate is set to 32Kbps of Dolby E output.
- [Bug #3009] Previous state not recovered for unmanaged section.
- [Bug #2707] Auto2text entries need adding for dolby,
- [Bug #2963] Front panel DVE preview mode is not checked against correct licence.
- [Bug #2755] Audio signal type detection.
- [Bug #2728] Expose DVE keyer config to automation.

## V2.0a17 - 2008-06-20

- [Bug #2820] Create new Imagestore Configuration system.
- [Bug #2925] Ensure Dolby Decode works in passthrough.
- [Bug #2933] Function for store memory is badly named.
- [Bug #2940] Move delays into new config architecture.
- [Bug #2864] Add support for different AC-3 bitrates.
- [Bug #2958] Add DVE options to the Configuration Tool (validation file).
- [Bug #2951 WIP] Generate mixfile from configuration.

## V2.0a16 - 2008-06-12

- [Bug #2919] Add stores and standard support to config validation file.
- [Bug #2920] Add MD abmixer support to config.
- [Bug #2921] Remove dolby config.

## V2.0a15 - 2008-06-11

- [Bug #2888] OxSox: add 64bit operation support to Get Full directory command.
- [Bug #2915] Messages file spammed with errors about CAT552.
- [Bug #2871] Add functionality to read metadata and auto switch Upmix module.
- [Bug #2820 WIP] Create new Imagestore Configuration system.

## V2.0a14 - 2008-06-09

- [Bug #2859] Increase 4GB OxSox file transfer limit during reading.
- [Bug #2820 WIP] Create new Imagestore Configuration system.
- [Bug #2864 WIP] Add support for different AC-3 bitrates.
- [Bug #2872] Save state of Upmix module (on/off).

## V2.0a13 - 2008-06-04

- [Bug #2820 WIP] Create new Imagestore Configuration system.
- [Bug #2879] Analogue Clocks crash Imagestore.
- [Bug #2880] Add new XML wrapper functions to work on memory buffers.
- [Bug #2868] Cannot login to unit after first install.
- [Bug #2884] Configs directory is missing.
- [Bug #2886] Add support for 1080p to common codebase.

## V2.0a12 - 2008-05-30

- [Bug #2519] Deferred commands not actioned if requested across midnight boundary.
- [Bug #2824] Execution of scheduled commands not logged.
- [Bug #2615/2] Added missing commands to auto2text for XPanel automation support - **(Xpanel/RCP-BR)**.
- [Bug #2820 WIP] Create new Imagestore Configuration system.
- [Bug #2655/2] Moved software update process to the start of the release notes.
- [Bug #2814] Increase 4GB OxSox file transfer limit.
- [Bug #2818] MD processor 2 not working.
- [Bug #2825] Dolby Module not detected (intermittently).
- [Bug #2763/2] Incorrect preset parameter mapping for Dynamic range.
- [Bug #2802] Range detection to be corrected for Audio channel Mode in AC3 endoder.
- [Bug #2817] Error message concerning Dolby in Log file even the system is working fine after software restart.
- [Bug #2783] Implement per module licensing for Dolby/Upmix.
- [Bug #2736] Implement Upmix Support.
- [Bug #1922] Audio - New automation command to enquire Output Gain Level.
- [Bug #2838] OxSox GetFileStat2 command takes too long (200ms) to return.

## V2.0a11 - 2008-05-15

- [Bug #2770] Set audio mix mode causes invalid passive tally.

- [Bug #2763] Incorrect preset parameter mapping for Dynamic range.
- [Bug #2744] Backed off previous changes - (Presmaster expects Yb to be supported). Some refactoring of Yb command handler, but no functional changes relative to v2.0a9.
- [Bug #2803] Changes files on head so that imstmain builds on ppc.
- [Bug #2732] Endian issues in the Imagestore applications. Part 6.
- [Bug #2776] Dolby Metadata Preset should be remembered by the system.
- [Bug #2736 WIP] Implement Upmix Support.
- [Bug #2811] Move xml wrappers into shared.
- [Bug #2655] Include upgrade process into release notes.
- [Bug #2633] Default serial comms to 57,600.
- [Bug #2807] Messages file spammed with 'N0' null command messages when Keyer Operations is selected on front panel.
- [Bug #2820] Create new Imagestore Configuration system.

## V2.0a10 - 2008-04-30

- **Integrated latest firmware for AUDIO (29/04/08-2), KID (V1.09) and CPU (MK24) FPGAs.**
  - [Bug #2685] Firmware: IS750 Video Delay SO-DIMM - single rank support.
  - [Bug #2729] Engaging video frame delay causes green flash.
  - [Bug #2173] Firmware: Timing report.
  - [Bug #2768] Firmware: Increase frame delays to 16 frames.
  - [Bug #2771] Add support for new RS232 ports.
  - [Bug #2773] Firmware: Add read support for metadata.
  - [Bug #2769] UARTs need moving to BAR1 with level triggered interrupts.
- [Bug #2736 WIP] Implement Upmix Support.
- [Bug #2711] Added j7a1 command to enable unsolicited j7a audio input tallies (an extended version of the j70 tally for all four channels).
- [Bug #2685] Software: IS750 Video Delay SO-DIMM - single rank support.
- [Bug #2765] Correct use of defines in stores code.
- [Bug #2732] Endian issues in the Imagestore applications. Part 4, 5.
- [Bug #2772] imstvfd crashes when CPU FPGA is missing.
- [Bug #2604] COX error interrupt.
- [Bug #2777] Remove need for sudo access to build Imagestore release.
- [Bug #2766] X4 command does not support enquire (just set).
- [Bug #2778] Add delay in after firmware programming.
- [Bug #2768] Software: Increase frame delays to 16 frames.
- [Bug #2767] N command does not return the AB mix transition type.
- ~~[Bug #2744] Remove unused Yb (Set Passive Delay) handler.~~
- [Bug #2771] Add driver support for new RS232 ports.
- [Bug #2774] Add self test for new RS232 ports.
- [Bug #2789] Imstinit crashes during installer.
- [Bug #2782] Add front panel option to send out a wake-up packet on user request.
- [Bug #2662] Remove unused licence codes.
- [Bug #2745] Refactor out Zf (stop animation).
- [Bug #2794] Move platform specific code to its own archive on the head.
- [Bug #2597] Invalid final parameters for S1 automation command are not rejected.
- [Bug #2773] Software: Add read support for metadata.
- [Bug #2775] Add self test for new RS485 ports.

## V2.0a9 - 2008-04-17

- [Bug #2732] Endian issues in the Imagestore applications. Part 2, 3.
- [Bug #2736 WIP] Implement Upmix Support.
- [Bug #2682] Ensure that video and audio tallies are only sent (in bulk) to the port that just registered for them (via Y61, Y81, Ya1).
- [Bug #2664] Feature request for per-layer datasources (m2 and m3 commands).
- [Bug #2734] Ingest of animations which are currently on-air causes jittery graphics. Fixes OxSox media transfers, not ftp.
- [Bug #2641] Inaccurate com port numbering in logging.
- [Bug #2749] Automation containing a "%" causes a crash when verbose logging is on.
- [Bug #2682] Ensure that video and audio tallies are only sent (in bulk) to the port that just registered for them (via Y61, Y81, Ya1). Part 2.
- [Bug #2712] Lack of unsolicited tally for Image Clip/Gain/Transparency (F) + Image Position (G) - **(Xpanel/RCP-BR)**.
- [Bug #2750] Add Y6 and Y8 tally enquire.
- [Bug #2758] Rename internal MD to MD processors, and add flags section to automation.
- [Bug #2753] Horizontal reference adjustment not working.
- [Bug #2761] Program description can continually change after update.

## V2.0a8 - 2008-04-07

- [Bug #2620] Implement Dolby Support.
- [Bug #2721] Software doesn't support audio C and D inputs.
- [Bug #2615] Add XPanel automation support - **(Xpanel/RCP-BR)**.
- [Bug #2724] Add video frame delay support.
- [Bug #2666] Add inotify support for new dolby directory.
- [Bug #2737] Make CAT552 identifiable.
- [Bug #2738] Implement module status.
- [Bug #2732] Endian issues in the Imagestore applications. Part 1.
- [Bug #2725] Implement Dolby firmware upgrade.
- [Bug #2743] Move number of metadata banks into HAL.
- [Bug #2739] Implement Dolby License.

## V2.0a7 - 2008-03-26

- [Bug #2620 WIP] Implement Dolby Support.
- [Bug #2701] Add frame count into timestamp shown in message logs (Doxygen corrected).
- [Bug #2716] IS750 keeps on rebooting after install v2.06.
- [Bug #2717] Make files are pulling in system libraries.

## V2.0a6 - 2008-03-20

- [Bug #2620 WIP] Implement Dolby Support.
- [Bug #2599] Scheduler query commands (i3) do not return any data.
- [Bug #2550] The GPI event list ought to be shared between main and fp.
- [Bug #2644] Remove unused ILIB functionality.
- [Bug #2654] Create full list of assigned automation commands.
- [Bug #2519] Deferred commands not actioned if requested across midnight boundary.
- [Bug #2708] Software reset doesn't work on the head.
- [Bug #2701] Add frame count into timestamp shown in message logs.
- [Bug #2681/1] Imagestore Makefiles need targets for PPC, part fix.

- [Bug #2672] Add unsigned long handlers to the xml file library.
- [Bug #2696] Production tests need to be decoupled from imstreg.

## V2.0a5 - 2008-02-26

- [Bug #2642] Upgrade to v1.13 of distribution.
  - [Bug #2634] Add logrotate to distribution.
  - [Bug #2636] Allow distro to be compiled for PowerPC.
- [Bug #2619] Firmware loads during every startup.
- [Bug #2620] Implement Dolby Support.
- [Bug #2630] Log file is spammed with corrupt imsthealth errors.
- [Bug #2632] GPI Output feature breakage in gpi.xml (following fix for bug #2623).
- [Bug #2614 WIP] Make imstreg an XML-based application.
- [Bug #2603] Verbose Logging stopped during test.
- [Bug #2591] "#g" and "unassigned command handler" refactoring.
- [Bug #2638] Datasource (m) commands incorrectly logged.
- [Bug #2640] Relax tight dependancy between software and USB update stick.

## V2.0a4 - 2008-02-19

- [Bug #2224 WIP] Ensure all hardware access is done via the abstraction layer.
- [Bug #2562] Extra GPI voice-over actions triggered at \*start\* of VO1/2 fade up/down.
  - [Bug #2556] Add rename support to media notifications.
- [Bug #2570] 'EAS Set Test' should read 'EAS Set Text' in auto2text.
- [Bug #2561] GPI setup and trigger sections don't work.
- [Bug #2520] Mask adjustment can cause flickering image.
- [Bug #2450/2] Provide YB tally upon media add/delete/modify.
- [Bug #2573] Upgrade to v1.10 of distribution.
  - [Bug #2556] Add rename support to media notifications.
- [Bug #2571] Changing DVE Config w/o power cycle prevents DSK1 & DSK4 from being cut up/down.
- [Bug #2518] IS750 loses external reference after software upgrade from v1.14.0 to 1.14.1b2.
- [Bug #2536] Prevent 'Run All Tests' from bailing out if HDD is not present - (Production tests).
- [Bug #2523/2] DVE Config in Operate menu does not function in GPI macros.
- [Bug #2575] XR command should return 2 external fill/key inputs for IS750 LOGO instead of 3.
- [Bug #2231/2] Formatting of X5 response is incorrect.
- [Bug #2566] IS750 LOGO- a/b mix audio still changes when using the test harness.
- [Bug #2574] DSK Self Tests are inconsistent.
- [Bug #2595] Increase stores unload timeout from 20ms to 22ms.
- [Bug #2608] Change make targets from product to architecture.
- [Bug #2450/3] Increase length of YB file-type parameter from 2 to 6 characters (8 to 24 bits).
- [Bug #2619] Revert function seems to get broken.
- [Bug #2624] Kernel messages are missing from log file.
- [Bug #2623] Spaces or empty tags within gpi.xml cause older software versions to crash.

## V1.15.0a3 - 2008-01-23

- **Integrated latest firmware for CPU (MK19), SID (V1.07), KID (V1.08) and SOD (V1.08) FPGAs.**
  - [Bug #2293] Key from stores is not in range Black-to-White, clipping key in keyer - (CPU).

- [Bug #2552] Added dual Opencores 16550 UART implementation (disabled by default) - (CPU).
- [Bug #2553] Added support for interrupt signal from audio FPGA (disabled by default) - (CPU).
- [Bug #2554] Added per-interrupt interrupt mask - (CPU).
- [Bug #1976] System reference timing offsets are not correct (SDI input only) - (SID)
- [Bug #2529] DSKs, colour fields and DVEs all failing at 720p59.94 - (KID & SOD)
- [Bug #2502] Stores are missing ODD field and masks don't work.
- [Bug #2224 WIP] Ensure all hardware access is done via the abstraction layer.
- [Bug #2463] Automation-to-text missing C and D for Mix A/B input selection.
- [Bug #2492] Set Transition Duration command (B) has no enquire option. Also saves states of DSK3 and DSK4 fade rates on front panel.
- [Bug #2246] Hostname text datasource is incorrect.
- [Bug #2052] Revoked earlier changes from v1.14.0a2 because of side-effect bug #2442 (Crawls pause sometimes when entering Load Image menu on front panel).
- [Bug #2429] GPI events needed for remaining audio actions, to match IS2.
- [Bug #2248] DVE window's transparency may not be honored properly.
- [Bug #2215] Set CGT (F) does not accept clip/gain values of 0-63 and 941-1023 - (should clamp them to 64 and 940).
- [Bug #2539] Unclear description for Load Live command in GPI setup.
- [Bug #2524] Improvement Request: To use brighter font for FP applet.
- [Bug #2544] Upgrade to v1.09 of the distribution.
  - [Bug #2541] Start stop daemon.
  - ~~[Bug #2551] Add medianotify to distribution.~~
  - ~~[Bug #2555] Add medianotify support to vsftpd.~~
- [Bug #2291] Add RCP support for the IS750.
- [Bug #2545] Add imstrcp into release.
- [Bug #2527] Setting new IP address (#v) causes unit to hang.
- [Bug #2506] Fill\_Key\_?.xml and some other configuration files cannot be saved.
- [Bug #2359] Add write access to params directory for OxSox.
- [Bug #2453] Audio AB mixer (embedded) should follow Mix A and Mix B input selections.
- [Bug #2202] Test Pattern should be associated to silence.
- [Bug #2464] Add new voice-over preview gain type (VO1\_PREVIEW\_XP/VO3\_PREVIEW\_XP).
- ~~[Bug #2536] Prevent 'Run All Tests' from bailing out if HDD is not present - (Production tests):~~
- [Bug #2379] Add new automation command (#w1) that forces a read of gpi.xml.
- [Bug #2450] Provide YB tally upon media add/delete/modify.
- [Bug #2523] Move DVE config to Operate menu on front panel.
- [Bug #2231] X5 command (return colour field status) needs implementing.
- [Bug #2543] DVE doesn't reload a "modified but not saved" sequence.
- [Bug #2297] Add functionality for IS750 LOGO option.
- [Bug #2559] gpi.xml file should contain the software version.

## V1.15.0a2 - 2007-12-20

- **Integrated latest firmware for SID (V1.06), KID (V1.07), SOD (V1.07) and AUDIO (20071212) FPGAs.**
  - [Bug #2225] Added support for keyer masks and input masks.
  - [Bug #2473] Added ability to read DCM status for SID and KID.
  - [Bug #2474] Added DCM phase adjust flag.
  - [Bug #1976] System reference timing offsets are not correct (SDI input only).

- [Bug #2475] Large frame delay support.
- [Bug #2476] Support for extra fill/key video sources (V5).
- [Bug #2350] Luma part of the HANC does not switch to B on a transition.
- [Bug #2465] Add hooks for future support of Dolby serial metadata on P236 Audio Board.
- [Bug #2440] Add extra PGM channel tap-off points for Clean Feed and Monitor (DVE, DSK1, DSK2, DSK3).
- [Bug #2378] ATC location shifted by 8 samples.
- [Bug #2240] Update stick appears not to update CPU FPGA version on rev3 boards to MK18.
- [Bug #2103] Firmware won't load when extra platform flashes are present.
- [Bug #1553] EAS audio support without ESND licence present.
- [Bug #2232] DSK showing shaky images when faded up if they are associated with Audio clips.
- [Bug #1949/2] Software DVE crop of line 21 on NTSC (and wide switch line on PAL)
- [Bug #2117] Add front panel mirror applet to the web page.
- [Bug #1307] Feature request for finding out which input is routed to program & preview
- ~~[Bug #2052] False missing material alarms.~~
- [Bug #2261] FTP Access is open to root user.
- [Bug #2116] Remove 'PSU A CONVRTER' and 'PSU B CONVRTER' from System Information.
- [Bug #2276] imsttest needs to support arbitrary length automation
- [Bug #2213] Implement proper fix for interrupt timeout.
- [Bug #1649] Display feedback on FP if CPU FPGA is dead.
- [Bug #2243] Create process to flag when the CPU FPGA file is missing for a particular board revision.
- [Bug #2053] 2 GB File Transfer Limitation.
- [Bug #2290] Remove unneeded applications from USB stick.
- [Bug #2299] Errors with existing log translations for Rm, XK, XL and Ye commands.
- [Bug #2305] Xb and Xp commands not shown in messages log (vebose logging).
- [Bug #2214] Invalid loop parameters for In-Loop-Out causes crash.
- [Bug #2225] Live Fill/Key mask should support separate or self.
- [Bug #2267] MON output gives trash output for Store fill/key after loading live key.
- [Bug #2321] Add software support for SDI input masks.
- [Bug #2337] EEPROM can appear corrupt.
- [Bug #2340] Factory Reset followed by System Restart causes audio to disappear.
- [Bug #2284] Add ability for DVE sequences to follow-on from end of previous sequence.
- [Bug #2349] Tally for preload completed.
- [Bug #2355] Fixed-size buffers in IS750 code and #t command.
- [Bug #2367] Code conditionally compiled with ROUTE\_AUDIO\_TO\_ESSA macro should be removed.
- [Bug #2369] Numbered file load (via 8 command) no longer works with Easyplay.
- [Bug #1925] Increase animation file limit on Intuition from 2GB to 4GB.
- [Bug #2374] Inconsistency between R5, R6 and OxSox file name length.
- [Bug #2399] Make gpi.xml writable for all users (not just root).
- [Bug #2130/2] Change new crawl tally from Yc to Yg to avoid automation conflict.
- [Bug #2416] auto2text logs Y6 and Y8 commands incorrectly.
- [Bug #2431] Tally when crawl completes (Yg) should include number of crawls so far.
- [Bug #2411] Some IS2 options missing from GPI Setup > GPI Outputs - (VO1/VO2 Off/On)
- [Bug #2458] Keyers used for dve wrongly initialised.
- [Bug #2327] Lose audio EPLY files after the upgrade.
- [Bug #2488] DSK Position adjustment for can cause flickering issue.
- ~~[Bug #2291] Add RCP support for the IS750.~~
- [Bug #2296] Emergency To Air uses DSK2, not DSK4.
- [Bug #2273] Delete operation in GPI setup will make the GPI Macro not respond.

- [Bug #2261] Upgrade to v1.07 of distribution.
- [Bug #2344] Add automation command that returns the full software version number.
- [Bug #2472] Input masks should be reset on standard change.
- [Bug #2471] NTP server should be stored in EEPROM.
- [Bug #2496] xinetd and syslog-ng restart too fast.
- [Bug #2497] IS750 apps slow to start on the head.
- [Bug #2377] Add automation command to change IP configuration.
- [Bug #2486] FP applet can not run with Windows Explorer.
- [Bug #2409] bytemath can be removed from codebase.
- [Bug #2410] EEPROM accessor functions shouldn't all be in sepeate files.
- [Bug #2482] EEPROM should be shadowed in HAL to speed up reads.

### V1.15.0a1 - 2007-10-02

- All changes below are relative to 1.14.0rc1.
- **Integrated latest firmware for CPU (MK18), SID (V1.05), SOD (V1.05), KID (V1.05), AUDIO (20071001\_2), and DVE (20071002) FPGAs.**
  - [Bug #2185] Stores do not work on software restart.
  - [Bug #2187] Absence of stores after IS750 brown out.
  - [Bug #2093/2] IS750 hangs during firmware loading - (CPU).
  - [Bug #2207] IS750 limited standalone mode.
  - [Bug #2208] Locking to wrong frame rate.
  - [Bug #2216] Add safe mode state machine implementation for SID and SOD.
  - [Bug #2217] Add Improved 297 DCM clock checker for KID and SOD.
  - [Bug #2198] PVW DVE window shows green after switching format from 525 to 625.
  - [Bug #1976/5] System reference timing offsets are not correct - (SID).
  - [Bug #2218] Factory reset in 625 mode kills stores - (SOD, KID, AUDIO, DVE)
- [Bug #2162] Update version for IS750 1.15.
- [Bug #2164] Make CF the default install device.
- [Bug #2163] Reduce number of imst devices to one.
- [Bug #2150] FP: Doesn't show loaded audio filename after the associated image file is loaded.
- [Bug #2153] DVE: The keyer mask are not aligned horizontally.
- [Bug #2167] Animation .oxa file can not be cut/fade up.
- [Bug #2168] Some images file can not be loaded into DSK.
- [Bug #2170] Wrong blanking for PGM and PVW.
- [Bug #2155] No output on ABT module after loading the mix file.
- [Bug #2176] Audio muted on software reset with no reference.
- [Bug #2186] Factory reset does not unload DSK's.
- [Bug #2189] Factory reset after deleting an image selects previous image in list.
- [Bug #2184] DSK flashes using animations. All four keyers need to be loaded.
- [Bug #2188] Mask setting does not work for live key.
- [Bug #2192] Key invert doesn't work.
- [Bug #2212] Interrupt timeout issues.
- [Bug #1825] Disable ringing remover (H & V) at 1:1 DVE squeeze.
- [Bug #2220] Add reference source.
- [Bug #2219] Add Reference standard to FP.
- [Bug #2224 WIP] Ensure all hardware access is done via the abstraction layer.
- [Bug #2223] Factory reset can not bring the live Fill/Key mask setting to default.
- [Bug #2172] Verbose logging incorrect for R0 enquire.
- [Bug #2230] Can not set options from 'Set Inputs' in GPI Setup > GPI Inputs
- [Bug #2236] Flashing of animation when DVE move is first initialised.

- [Bug #2233] X9 command is not in auto2text