

Read Me – V1.07.15243

How to download this software to the unit:

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Downloading via the Internet:

The easiest way to download the software to an SX is to connect the SX to the internet using the Ethernet port.

Go to the System - Engineer page and press 'Download'.

This will download the latest version.

Downloading from a computer:

If you are unable to connect the unit to the Internet, download the latest software using another computer which will be a zip file containing several files.

Extract these files into a directory/folder on that computer and then use the Ethernet connection on the SX to FTP files into the 'setup' directory on the SX.

Once all the files have been copied over you may install the software. If any files are missing, an error message will be displayed on Installation.

Installing software:

Select the latest software version from the list given and press 'Install'. When the install has completed you will be prompted to re-start the SX using the Power on/off switch. Once the unit has re-started, if you are using a version of software prior to 0.09.2420, please install it again to get the latest version of Linux on the SX. Later versions of Sx software check this

automatically.

IMPORTANT:

If you are using a software version earlier than version 0.10.0109
you MUST install version 0.10.0109 BEFORE installing this version.

If you do NOT do this you will get a blank white screen after installation.

You can recover from the white screen by holding down the Left and Right
navigation buttons during startup until the factory recovery message is shown.

This file contains all changes in reverse order

i.e. latest changes at top of file

Version 1.07

New Features:

- * AV Delay Analysis

Version 1.06

New Features:

- * IP 2022-6 Support
- * IP-SDI Gateway
- * SDI-IP Gateway
- * Reference Generator phase lock to SDI/SFP reference
- * Reference Timing for SFP sources

Bugs Fixed:

- * Reference BB Output shows low luminance staircase
- * SD-CVBS 625i generator lists NTSC standards in error
- * YUV support in user pattern files
- * Unable to access ANC inspector data via remote control
- * Audio threshold events not triggering
- * Unable to capture screen via remote control
- * Dolby E generator ramps incorrect
- * AES metadata incorrect when generating Dolby bit-streams

Version 1.05

New Features:

- * HDMI EDID Display
- * Online Updater for SFP database

Bugs Fixed:

- * AV Delay Pattern fixes
- * Analogue Audio Alignment levels now configurable

Version 1.04

New Features:

Bugs Fixed:

- * Correction to the NTSC subcarrier frequency
- * NTSC Japan level fixes

Version 1.03

New Features:

Bugs Fixed:

- * Composite output now uses correct settings after waking from power save
- * SFP configuration file parsing fixed

Version 1.02

New Features:

- * Enhanced power management
- * Only one generator output can be used at a time
- * Only inputs in use are powered up
- * Analog audio circuits power down when not in use

Bugs Fixed:

- * MSA FSPs no longer cause device malfunction
- * Dual pattern generation for 3G dual stream output enabled

Version 1.01

New Features:

- * PAL Standards autodetect PAL-M / PAL-N
- * HDBNC SFP Coaxial support added
- * New software update process

Bugs Fixed:

- * Composite picture and vectorscope zoom fixed
- * Waveform and tri-level syncs per line selection fixed
- * SDI Out jitter reduced
- * Composite vectorscope and picture standard change detection fixed
- * PAL-M graticle is fixed

Version 1.00

New Features:

- * Support for PAL-M, PAL-N, PAL-N(ARG), NTSC-M, NTSC-M(JP)
- * Support for 4GB Micro-SD Card
- * Support for Micro-BNC SFP

Bugs Fixed:

- * 2K Test Pattern Fixes

Version 0.12.0028

New Features:

- * Main menu allows SDI and REF to be selected as IN or OUT
- * Main menu allows AES and Analog output to be setup.
- * Can generate and analyser 3GA-1920x1080 47/48 SDI signals.
- * Waveform Zoom mode working for CVBS inputs.

Bugs Fixed:

- * Bouncing box changes each frame for Segmented Frame Stds.
- * AES Eye triggers correctly when set to AES source.

- * Generator page re-enabled when in loop through mode.
- * SFP output forced ON when in loop through mode.
- * SDI data view shows CbCr in correct colour.
- * Black level fixed for SDI outputs.
- * Improved SDI generator jitter levels.
- * SFP status page can now be displayed if SFP option present.
- * 3G-B 1920x180p-47/48 video stds now generated correctly.

Version 0.12.0024

New Features:

- * First TAG release

Known Bugs:

- * Zoom disabled on Picture and WFM tabs.
- * Zoom disabled for composite input on vectorscope.
- * Sometimes doesn't startup due to LM80 read problem.
- * Vertical and horizontal blanking values incorrect for YCC-444 formats on generator.
- * Bouncing box has wrong frame rate for segmented formats.
- * Dolby analysis of Audio Description formats not supported yet.
- * Audio groups incorrectly displayed as present when missing for 3GA SDI signals.

Version 0.12.0014

Bugs Fixed:

- * EDH enabled correctly at power-up.

- * No longer occasionally crashes on video format change.

Version 0.12.0013

New Features:

- * Dolby D and Dolby D Plus generation.
- * Dolby D and Dolby D Plus analysis & logging.
- * Status line shows AES Dolby status if present.

Bugs Fixed:

- * Dolby E generation on 3G-Level B fixed timing and no packet gaps.
- * Fix Dolby analyser lock-ups
- * Dolby-E timecode decoded correctly so doesn't stop at 6minutes.
- * Test pattern now loads correctly when changing between 3GA 1080p30 YCC444-10 and 3GA2k 1080p29 YCC444-10
- * Fix problem with generating certain audio frequencies.
- * Only show second test pattern controls if valid.
- * Audio level check during scripting works correctly.
- * Custom colour field values can go to legal levels.

Known Bugs:

- * Vertical and horizontal blanking values incorrect for YCC-444 formats on generator.
- * Bouncing box has wrong frame rate for segmented formats.
- * Dolby analysis of Audio Description formats not supported yet.

Version 0.11.0004

* Added SDI In Loop to SDI out with control on System-Engineer page

Version 0.11.0003

New Features:

- * Added 2K option
- * Added XYZ options for waveform display.
- * Waveform can now be displayed in RGB order rather than GBR.
- * Colour field values can now be set to full ranges.
- * Scripting report files can now be renamed and renumbered by user.

Bugs Fixed:

- * Audio meter levels now rounded (down) to nearest 0.1dB so that -12.56dB now displayed as -12.6dB and -12.55dB is displayed as -12.5dB.
- * Audio output now relative to -18.06dB if master level set to -18dB.
- * Sample rate converter on AES input always disabled if AES input is 48kHz
- * Dolby-E generation should now keep working when changing Dolby line numbers.
- * Vertical and horizontal blanking values correct for RGB-444 formats on generator.
- * Errors on switching line correctly ignored for 3G-B formats.

Known Bugs:

- * Dolby generation at 3G-B can cause muting of audio.
- * Vertical and horizontal blanking values incorrect for YCC-444 formats on generator.

Version 0.10.0111

Bugs Fixed:

- * Fix crash if Sx left on for too long under automation control

Version 0.10.0109

Bugs Fixed:

- * Fix generation of checkfield at SD which was flickering

Version 0.10.0108

Bugs Fixed:

- * Fix generation of ARIB 28-75, ARIB 28--i and Tartan bars which were flickering

Version 0.10.0107

Bugs Fixed:

- * Generator at 3G level B 1080p50 now locks correctly to PAL reference
- * Directories sorted in list boxes.

Version 0.10.0106

Bugs Fixed:

- * System-Engineer tab only shows software releases.

- * Cable length display restored to SigInfo tab
- * Changing from Checkfield to another test pattern too quickly corrupted the output pattern.
- * Dolby streams are only installed if they change to speed up installation.
- * Fix problem with Dolby Stream downloads failing.
- * Removed ringing from some RGB/YCC-444 test patterns

Known Bugs:

- * Some Dolby streams are missing. These will be added at a later date. These include 7.1 Program Configs at -3dB, -18dB and -20dB
- * Dolby generation currently requires a reference to be connected or errors may be detected.

Version 0.10.0105

Bugs Fixed:

- * Embedded audio fixed for units without Dolby option

Known Bugs:

- * Some Dolby streams are missing. These will be added at a later date. These include 7.1 Program Configs at -3dB, -18dB and -20dB
- * Dolby generation currently requires a reference to be connected or errors may be detected.

Version 0.10.0104

New Features:

- * NOTE: Audio pages moved to under Audio tab on Main Menu.
- * Show decoded SMPTE 352 information in red and log errors if incorrect.
(See new manual)
- * Dolby E Generation BETA working (requires Dolby-E generation option)
- * Main menu now shows difference between Dolby E/D/Dolby Plus.

Bugs Fixed:

- * Memories in archives are displayed correctly in the scripts.
- * Error messages added to log if archives or memories fail to load in scripts.
- * Top line of ident text restored to generator output.
- * Reference locking improved.
- * Bottom line of generator output restored for 3G-B dual stream formats.
- * Signal Data View of 720p24 signals shows CbCr fields in correct colours.
- * Report directory only created if required.
- * Fixed scripting check for meter levels too high.
- * Script Memory can now be modified on Sx GUI.
- * Faster startup even if lots of script report files present.

Version 0.10.0086 released

Bugs Fixed:

- * SDI data view at 3G-B RGB/12bit formats can now select high value samples.
- * ANC inspector shows correct description for "Marked for Deletion" and "End of packet"
- * SDI Data view made more responsive.

Version 0.10.0085 released

New Features:

- * AES error count now displayed and may be cleared for remote control use.
- * Can now only log events between specified times if required.
- * Jitter values displayed in red if above specified values in Log setup.
- * Scripting can screen dump the Main Menu.

Bugs Fixed:

- * List of archives on Command Script tab is updated when new scripts copied onto Sx.
- * Eye/Jitter scripting tests may now be run when power adaptor not plugged in.
- * Can now select "clear AP CRC" error count on SxA
- * Fix problem with generator standard being changed when viewing output waveform or vectorscope.

Version 0.10.0080 released

Bugs Fixed:

- * Download/Install process faster and reboot should happen after install.
- * Pressing Close Window after adding a memory when running a command script no longer stops command scripts from running - "Close Window" does same as pressing "No".
- * Restore Waveform cursor buttons.
- * ANC inspector display improved to show which words have parity errors.
- * 3G-A 720p SMPTE 352 status fixed to show progressive transport.
- * Battery warning message only shown once now. Ignore at your peril!
- * Last command script used is restored on power-up
- * Disallow creation of blank user on login screen

- * HANC/VANC title position more logical on ANC inspector setup dialog
- * Improved Eye/Jitter lock detection for command scripts.
- * Fix compressed user line patterns for interlaced formats.

Version 0.10.0076 released

New Features:

- * Check-box added to ignore CRC errors on switching lines.
- * Generator can now generate errors ONLY on switching line (field-1).
- * ANC inspector improved:
 - * Now displays which Virtual Interface a packet was found in to simplify finding errors.
 - * Added button to goto Line/Sample in picture and SDI data displays for detected packet.
 - * Can now detect Gaps in ANC packets (illegal)
 - * Can filter ANC errors on whether they are found in ANC/VANC areas.
- * Generator Moving Box can now have its colour changed.

Bugs Fixed:

- * Patterns now get fully loaded even if video standard changed while loading.
- * If AES input is NOT 48k and is thus Sample rate converted to 48k, the channel status information is ignored to remove confusion.
- * On 3GA-RGB formats the super-black levels fixed for Pluge patterns.

Version 0.10.0074 released

New Features:

- * ANC inspector improved with filters and display of packet line/sample no.
- * NEW ANC status display with logging shows which packets are present in SDI stream. (Option must be purchased)
- * Scripts can now check for absence of audio.
- * ANC inspector and Data View screens now always active.
- * Added bouncing box over test patterns to show video active.
- * Generator can now use compressed User files (.pat etc.) for faster loads.

Bugs Fixed:

- * 3G Level B 2nd link now listens to link 2 audio rather than link 1.
- * Script 'Continue' button always has initial focus when displayed.
- * DPX files larger than the active picture area now get loaded correctly
- * Battery level meter now shows battery status more closely.
- * SDI data view now shows correct column widths for COMP mode.
- * Colour field generator bug generates correct colours when adjusting YCC.

Version 0.10.0068 released

New Features:

- * Added control of which embedded audio pairs are logged (and during monitored scripting).
- * Added "Continue" button to user script prompt
- * If errors found during scripting, go to event log when script stopped.
- * User script prompt text may now wrap over multiple lines to allow longer prompts.
- * Added ability to change PortNo for remote control.

- * Active Picture CRC number of changes can now be viewed and thus read by remote control.
- * PC simulator may now be controlled by Phabrix Remote control API for testing without real SX hardware(use localhost as IP Address). Multiple simulators may be run with different Port values to simulate real life systems with multiple SX units. (Command line parameter "-P port")

Bugs Fixed:

- * Fixed locking of 3G-Level A 1080p50/59/60 to SD Black and burst references.
- * Speed up loading of event log and status data from web browser.
- * Correct SDI data generated for Black for RGB 12bit video formats.
- * Audio levels can only be set o 0 to -72dB (with 0dB master) lower values now show -99dB.
- * Improved measurement of SxE Eye pattern rise/fall times.
- * Stop installation of un-supported software versions (too old for hardware)

Version 0.10.0066 released

Bugs Fixed:

- * Status on web browser fixed if SMPTE 352 data missing (gave XML error)
- * ANC status counts fixed on SxD for SD video standards

Version 0.10.0065 released

Bugs Fixed:

- * Channel status decoded properly.

* Unused scripting files deleted.

Version 0.10.0064 released

Bugs Fixed:

- * Text Keyboard doesn't get out of step with caps lock key.
- * Fix crash with certain Dolby-E meta data.

Version 0.10.0062 released

IMPORTANT NOTE:

- * Remote Control Command *name* change to get naming convention correct:

COM_GEN_LOG_ACTIVE_PICTURE_CRC_ENABLE ->
COM_ANALYS_LOG_ACTIVE_PICTURE_CRC_ENABLE

New features:

- * Can now show a login screen at startup with user defined prompt.
Users can be assigned different access levels (see manual)
- * Text editing keyboard added with different country layouts.
Allows easier text editing and foreign text idents.
- * TRS position errors now logged if required.
- * EDH present/missing status now logged.
- * Checksum errors in ANC packets now logged and counted
- * Added COM_ANALYS_LOG_FORCE_CLEAR commandID for remote control clearing
of event log without manual confirmation.
- * Eye measurement values grayed out if cable length too long.
- * Can now get LCD image by remote control.

Bugs Fixed:

- * Input failure detection has been improved to detect TRS position

failure which can detect more SDI failures at SD without EDH present.

- * EDH detection no longer locks up if SDI frequency changes too often.
- * Dolby-E now supports signals with keys (XnnK on DM100)

Version 0.10.0059 released

New features:

- * Added ability to disable keyboard when under remote control.

Bugs Fixed:

- * Temperature compensated free run frequency disabled as caused Eye/Jitter glitches.

Version 0.10.0058 released

Bugs Fixed:

- * Eye/Jitter locking fixed for SxE's with newer serial nos.

Version 0.10.0057 released

New features:

- * Dolby-E analyser option added to Signal Info pages if option purchased.
Adds Guard Band timing and meta data decoding to SxA/SxD/SxE
Dolby-E status changes may also be logged. Dolby Peak audio levels may

now be metered on Analyser-Audio Meters page if Dolby source selected.

- * The V-bit and PCM bits for all audio outputs (AES and SDI embedded) now reflect the source status.
- * The Dolby, V-bit and PCM status for the embedded input and basic Dolby Meta data state is now displayed on main menu.
- * Eye amplitude and jitter values are now displayed on main menu.
- * The speaker may now listen to audio signals with validity bit set.
- * Channel Status is now displayed in a grid to improve readability.
(This may affect remote control users - but command ID is the same)
- * The generator free-run SDI frequency may now be temperature compensated on Sx units with temperature display (SxD/SxE and newer SxA).
NOTE: Users should re-calibrate their reference free-run frequency see manual for further details.
- * Generator status shown as OFF on SxA/SxE when generator output turned OFF
- * Dialog displayed if internal temperature gets high (Fan failure etc.)
- * Unit turns off if internal temperature gets too high - message in event log.
- * Active Picture CRC changes may now be logged - only use for static pictures and don't use for CheckField/Pathological signal which is a 2 frame sequence.

Bugs Fixed:

- * Channel Status V Bit and PCM bits for AES and embedded audio now follow the source selected.
- * EDH errors now ignored for a few frames after SDI input connected.
- * ASI signals should now be detected by SxE unit and Eye/Jitter displayed correctly.
- * SMPTE352 data improved for 3G-B dual link standards - now shows non-progressive transport.
- * EDH errors ignored immediately after SD input detected.

- * The channel status source now correctly tracks input selection.
- * ALL Active Picture CRC changes are now detected.
- * Ident colour corrected for some video formats.
- * SDI signal loss now detected for short interval losses.

Version 0.10.0052 released

New features:

- * Show total number of errors when running a command script.

Bugs Fixed:

- * Improved measurement algorithm for Eye amplitude/overshoot/undershoot.
- * Vertical luma ramp fixed for interlaced HD standards
- * Text ident fixed for interlaced Tartan Bars etc.
- * Hide web page report entries for non-existent reports

Version 0.10.0051 released

New features:

- * Checking of active picture CRC now works for HD SDI
- * Number of scripting errors for complete script now shown at end of log file and report file.
- * System-Utils page now shows hardware error counts and message counts
- * Input status monitoring now detects wrong line lengths/line counts.

Bugs Fixed:

- * Vertical luma ramp fixed.
- * Scripting only clears event log if first loop.
- * Several SDI video formats showed wrong part of picture when zoomed.

Version 0.10.0049 released

Bugs Fixed:

- * Restored downloads link on Web browser.
- * Sample rate converter also switched off if AES input channel status is Data.
- * Generator delay and Timing measurements fixed for some 3G-Level B stds.

Version 0.10.0047 released

New features:

- * Sample rate converter now switched off when a Non-PCM (e.g. Dolby) signal detected. NOTE Channel status is NOT changed so this is only a short term fix.
Also, audio gains MUST be set to 0dB for the signal to not be corrupted.
- * A dialog box is shown when restoring an archive file if memories have been modified.
(Of most use when an archive file is associated with a command script)
- * When checking audio levels in command scripting, failed meter levels are shown in dB for easier fault finding.
- * Command scripts can now select Event Log tab

Bugs Fixed:

- * Improved locking of 3G-Level A video formats to external reference.
- * Correct archive file is restored when a command script is run.
- * Can now check meter levels for meters 9-16
- * The top line of picture no longer flickers in Dual Link video standards (including 3g-level B).

Version 0.10.0043 released

New features:

- * SDI data view can now automatically display unpacked colour data.
- * Added ability to read a controls Visible state via remote control API.
- * Can now read an SDI data view grid via remote control as single tab separated string.
- * Improved text for Eye/Jitter tabs to make options more obvious.
- * Added scripting action to check Eye for SMPTE limits
- * Added scripting action to check Jitter for user defined limits.
(n.b. above checks wait for Eye/Jitter locked first)
- * Added scripting action to check that audio meters levels are at -18/-20db
- * Checking for SDI errors in scripting now checks that signal is present.
- * Last Archive file loaded is displayed on System-Memories page.

Bugs Fixed:

- * Generator pattern selection value restored to old values for compatibility
- * Checkfield generated correctly now for 3G level B signals.
- * Picture analyser now has a vertical filter to improve display of certain test patterns.
- * SMPTE 352 data no longer has (reserved) Byte 2 bit 7 set for HD/3G stds.

- * SMPTE 352 Aspect ratio not displayed in HD/3G stds as not valid.
- * System-Memories tab now allows navigation to all check boxes.
- * Loading of user test patterns smaller than active picture size now loads all file.
- * Speed up loading of test patterns.
- * Embedded audio HD clock phase information correct for all stds.
- * Fix crash if Eye display selected with no input signal.
- * Active picture CRC for output 2 not displayed on SxA/SxE when analyser selects output.
- * Changing video standard from HD to 3G no longer intermittently stops pattern loading fully.
- * Navigation from filename to save button fixed on Memory Backup dialog.

Known Problems:

- * Inserting text on video output causes gamut errors on output.
- * Turning off audio groups in 3G-A video formats not always detected.

Version 0.10.0038 released

Bugs Fixed:

- * Generator test patterns included. (Got lost in 0.10.0037)
- * WFM cursors fixed for 3G level A formats with double line length.

New features:

- * Improved method of selecting video stds when changing from SD/HD/3GA etc.

Version 0.10.0037 released

Bugs Fixed:

- * Web Browser updated at startup
- * Can now download screendumps via web browser
- * Multi-level eye display improved for signals with high jitter.
- * Increase power disconnected timeout to 20s
- * Reference lock status now shows '?' if not vertically locked.
- * Cursors on eye display for Min/Max 20%/80% no longer have D.C. offset
- * AES output turned off fully (not just silence) when set OFF

Known Problems:

- * When genlocking the generator to a reference the offset is currently incorrect. It will vary between reference standards.
- * Inserting text on video output causes gamut errors on output.

Version 0.10.0035 released

Bugs Fixed:

- * Widescreen mode can be changed in PAL mode without disconnecting input.
- * Allow command script loop count to be edited - couldn't select it.
- * User specified archive file now loaded when command script run.
- * Fix dialog title if AC adaptor removed after event log cleared.

Version 0.10.0033 released

NEW features:

- * Web browser can now view Picture, Waveform, Vectorscope, Eye and Jitter displays.
- * Can now screendump current screen by holding down "OK" key.

- * Web browser has link to downloads page to allow easy viewing of screendumps.
- * Generator can now frame lock to reference input with adjustable line/sample timing adjustments.
- * Timing of input(s) relative to reference can be measured.
- * On SxD, timing between inputs may be measured.
- * Command scripts option now allows ability to load a memory archive when script is selected.
- * Command scripts option may now optionally generate a customisable HTML report which may be viewed in Web Browser downloads.
- * Command scripts may now stop when an error is detected.
- * SxE has multi-level eye display.
- * SMPTE 352 is now present on virtual interface 2 for 3G-level A standards.
- * AES v-bit state changes are now logged.
- * Clearing event log now requires confirmation.
- * Can now insert an event log marker line to mark significant events.
- * Software installs now require confirmation.
- * Software installs will re-boot the unit automatically when completed.
- * Give warning when removing AC adaptor power and shut SX down unless user intervenes.
- * Improved measurement of EYE amplitude on SxE's for strange eye waveforms.

Known Problems:

- * When genlocking the generator to a reference the offset is currently incorrect. It will vary between reference standards.
- * Inserting text on video output causes gamut errors on output.

Version 0.10.0027 released

Bugs Fixed:

- * Stop crash when input removed on SxE

Known Problems:

- * Inserting text on video output causes gamut errors on output.

Version 0.10.0026 released

New features:

- * 1080i/1080sF DualLink standards added to 3G level B list.
- * Different jitter thresholds provided for logging at SD/HD/3G
- * Eye/jitter should be measureable for ASI inputs.

Bugs Fixed:

- * SDI data view is incorrect for Dual-link or 3GB-Dual link stds
- * Cursor positioning improved for Dual link and 3G level A formats
- * Improved reliability of generator when changing output format.
- * Checkfield fixed for more 3G colour mapping modes.

Known Problems:

- * Inserting text on video output causes gamut errors on output.

Version 0.10.0025 released

New features:

- * Input video std now shown in long format with colour mode.
- * Active Picture CRC values calculated for all video standards

- * Support for RGB/YCC 4:4:4 and 12bit video formats on SxD and on SxE/SxA with ExtraVideoStandards option
- * Added ability to save current system status in a scripting step.

Bugs Fixed:

- * Web browser no longer locks up if connected for too long (>3 hours)
- * Allow unit to shut-down under all circumstances
- * Removed battery error message at startup.
- * SxE jitter meters no longer lock up intermittently when changing video standards.
- * Input video frequency and Lines/Pixels count updated regularly even if video standard doesn't change.
- * Generator master level no longer affects AES input level (double mastered)

Known Problems:

- * Inserting text on video output causes gamut errors on output.
- * SDI data view is incorrect for Dual-link or 3GB-Dual link stds

Version 0.10.0019 released

Bugs Fixed:

- * Units with static IP address now set up networking correctly at startup.
- * Cable length on SxE eye units now visible.
- * SxE 3v3 voltage title is now visible

Version 0.10.0018 released

Bugs Fixed:

- * SxD should display EDH state of 2nd input correctly.
- * Reduce chance of SxE/SxD not shutting down.
- * Generate SMPTE 352 payload ID for 3G-Level B SDI as progressive signal on interlaced payload.

Version 0.10.0017 released

New Features:

- * Fields on Sig Info tabs re-arranged to be more logical.
- * Support for SxD added - Dual-Link output/input
- * Video standard on top line displayed as "Invalid" if noisy or intermittent.
- * XML status display (on web browser) hides inappropriate values.
- * Setting up TCP/IP easier. Network status displayed and Sx may be reconnected to network using single button.
- * Colour field may be set using YCbCr colours
- * Cable type may be specified on SxE so that cable length measurement is better.
- * SDI bit rate displayed for better diagnostic of input signals.

Bugs Fixed:

- * Web browser displays Sx screen faster
- * Text ident colours now set using correct colour space.
- * Eye displayed better for 3G-level B standards.

Known Problems:

- * In Dual-stream modes (HD 2 str and 3G-B 2str) the first output is the same as the second output.

Version 0.10.0014 released

Bugs Fixed:

- * Sx units with static IP address get set up from remote control correctly at startup.
- * PCB revisions displayed on System-Misc tab.
- * Display correct PSU voltages for old issue PCBs.
- * Jitter level calculation algorithm improved at 3G video standards.

Version 0.10.0013 released

Bugs Fixed:

- * Dealers can now delete all options again
- * Zone plate edit dialog cannot be shown unless option purchased.
- * SxE has new algorithm for improved eye amplitude measurement.
- * Selection of generator standard has been improved to make more obvious.
- * Several test patterns have been edited to remove ringing.
- * Changing frame rate no longer gives false detection or CRC/EDH errors.
- * A few GUI improvements

Version 0.10.0010 released

New Features:

- * Editable zone plate option implemented - see manual for more details
- * Level B and Dual Link(On SxD) working for YCbCr 4:2:2 formats (SMPTE352 MUST be present)

- * Web browser has new clickable links to get unit status and event log.
- * TCP/IP address shown on main menu
- * Number of Active Lines added to Video Format display.
- * Channel status display format improved.
- * Top status line now displays improved 3G/DualLink format.

Bugs Fixed:

- * Wrong line number was shown in grid view when cursor is after active pixels on line.
- * Bottom of SDI data view was corrupted if HD displayed after SD
- * Scrolling in SDI data view fixed
- * Stopped potential for network lock-up at shutdown

Known Problems:

- * SDI Data view and ANC display can only select first link of dual link formats.
- * 3G Level-B and Dual Link only support 4:2:2 YCbCr 10 bit formats.
- * Panning to the left of the start of active picture in waveform or picture in 720p24/23.98 can give Chroma swaps.
- * Analyser doesn't detect audio groups on 3GA sources going away.

Version 0.9.2501 released

Bugs Fixed:

- * Can now view WFM data in blanking area - was being blanked even if ActivePicture unchecked.
- * Picture display no longer blanks when scrolling around it.
- * Error log now shows current CRC/EDH status when signal restored.

Version 0.9.2500 released

Bugs Fixed:

- * Jitter-1 meter label on SxE now shows correct value (was always 100kHz)

Version 0.9.2499 released

New Features:

- * Displays hardware revision.
- * Now supports 2G uSD card if fitted

Bugs Fixed:

- * Some old U-boot versions now get updated correctly and thus stop prompting with annoying message at startup.
- * On SxE: On Advanced jitter analysis tab, Jitter meter labels sized and positioned better.
- * On SxE: Fixed bug #21 which caused excessive jitter when under battery operation and switch between eye/jitter pages and other pages.

Version 0.9.2494 released

New Features:

- * Full screen mode is now always un-zoomed so that the full image is always seen.

Bugs Fixed:

- * When on battery and jitter logging turned ON, the eye/jitter is enabled and a message given. (It previously wasn't turned on again)
- * Stopped intermittent problem where eye/jitter didn't startup if cold.

Version 0.9.2491 released

New Features:

- * First release of Software with support for SxE

Bugs Fixed:

- * Generator amplitude more constant for different video standards.

Version 0.9.2479 released

New features:

- * Audio meter source selection improved
- * Audio meters for an audio pair now not displayed if input is missing.
- * Added audio level in dB under each meter.
- * Cursors available on Waveform display.
- * Added ARIB-28 test patterns.
- * AES status show on top line.
- * AES input may now be metered.
- * AES status logging added.

Bugs Fixed:

- * Audio meter scales more accurate for both scales.
- * If remote control sends a command value to a 'button' control an ACK is now returned rather than a NACK but value is set to 0.

- * Archive files now working - was broken. Old archive files will NOT have correct data in them.
- * Loading archive files now loads state of unit when archived.
- * Scrolling down sample number in split mode now works.
- * Editing of text fields after cancel pressed has been fixed.
- * Reference status now correctly shows when signal lost.

Version 0.9.2472 released

New features:

- * Battery status visible and changes colour according to status:
Green=Battery operation. Yellow=charging. Blue=AC powered. Red=Low battery.
- * Eye and Jitter release with measurements.

Bugs Fixed:

- * Some text was truncated.
- * Battery level not always updated correctly when charging.

Version 0.9.2467 released

New features:

- * Added cursors on picture window linked to other cursors. Auto-pulse cross mode will occur if cursors moved into blanking.
- * Input standard on top line will change colour if the analyser is analysing generator output.
- * Pulse cross control has been removed.
- * Display line lengths for input signal.
- * Some fields have a single CommandID and contain multiple lines

when accessed by remote control. Old multi-line commands deleted.

- * Cursor reset to top left corner of screen if video input standard changes.
- * Faster ident drawing when over user files.
- * Added cursors on picture window linked to other cursors. Auto-pulse cross mode will occur if cursors moved into blanking.
- * Input standard on top line will change colour if the analyser is analysing generator output.
- * Pulse cross control has been removed.
- * Display line lengths for input signal.
- * Some fields have a single CommandID and contain multiple lines when accessed by remote control. Old multi-line commands deleted.
- * Cursor reset to top left corner of screen if video input standard changes.
- * Faster ident drawing when over user files.

Bugs fixed:

- * Fixed intermittent lockup at startup.
- * ANC status display (Option) no longer gets wrong data after SDI Data display viewed.
- * Fix display of information on SDI data view when in comp. mode.
- * Fixed intermittent lockup at startup.
- * ANC status display (Option) no longer gets wrong data after SDI Data display viewed.
- * Fix display of information on SDI data view when in comp. mode.

Version 0.9.2461 released

New features:

- * Added SMPTE 219 test patterns
- * Faster startup
- * Support .otf font files for text idents
- * Added PLL/EQ Check patterns
- * Faster startup if event log has lots of entries.
- * Faster clearing of log.
- * Slightly faster startup time.

Bugs fixed:

- * Improved support for NTSC inputs with different line counts.
- * 1080pSF user files now loaded from correct directory (1080yuv)
- * MPF embedded audio flag fixed
- * When event log cleared - now shows 0 of no events rather than -1
- * Don't truncate log messages when loading.
- * Remote control can now get item value lists and string lists.
- * Black colour field now correct for SD colour space.

Version 0.9.2457 released

New features:

- * Passive remote control fully working.
- * Basic Zone plate pattern.
- * 6 and 11 step greyscale bar patterns.
- * Colour field generator with custom colour selection.
- * Give error message if reference lost during calibration.
- * Signal Info page now shows time since last error reset action.
- * Can now log reference status.

Bugs fixed:

- * Massive jitter reduction when external reference.
- * AES output selection fixed when connect to embedded input channels.
- * Better error reporting during software upgrade if files missing.

Version 0.9.2445 released

Bugs fixed:

- * SX now recognises a signal containing SMPTE 352 data showing 1080i/25 status as being interlaced and not progressive.
- * Pressing Main Menu button toggles FullScreen mode

Version 0.9.2443 released

New features:

- * Show 'Z-bit error' message if embedded audio has incorrect Z-Bit
- * Added Tartan Bars test pattern.
- * Pluge pattern now has filtered edges.
- * Add more logging for software updates.
- * Check for AC adaptor present when checking battery level at startup.
- * Scripting tab now shows number of loops run and time spent running script.
- * Script files can now pause for n seconds.

Bugs fixed:

- * Pluge now has super black columns on left hand side
- * Added ability to update u-boot during download.
- * Fix potential problem with lost input on some units.
- * EDH/CRC time now shows dd:hh:mm when over 24 hours
- * SDI data view headings now get updated if video standard changes while

page active.

- * Script tab no longer gets confused about which script is loaded.
- * Changing video standards with user files no longer stops user file from being displayed.
- * Fixed occasional corruption of GUI screen if text ident used.
- * EDH/CRC errors could get ignored after Clear ALL Error Count button.
- * Test patterns only get blanked and re-loaded if they really have to be.
- * Fix some output corruptions when changing video standards/turning ident on/off quickly.
- * Remove speaker silence source.

Version 0.9.2433 released

Bugs fixed:

- * SMPTE 352 checkbox now stores state for SD/HD/HD-3G
- * SMPTE 352 Payload ID only used to detect 1080iSF - ignored for other standards.
- * Select first Ident font if none selected.

Version 0.9.2429 released

Bugs fixed:

- * Fix bug where an internal test pattern was overwritten by user test pattern if still being loaded.

Version 0.9.2424 released

New features:

- * Add ability to see disk free space.
- * Make sure that setup directory is copied onto uSD disk.
- * Make sure that usbrc is copied onto uSD disk.

Bugs fixed:

- * Changing video standards while a user file is being loaded no longer locks up.

Version 0.9.2422 released

Web access to Sx no longer locks up if IP address of Sx changed or DHCP mode changed.

Renamed Full Ramp as legal ramp as it only uses legal values.

Added Full Ramp pattern which generates illegal values as well.

User pattern files now loaded while rest of GUI carries on to improve user experience.

Event log can be set to beep when a log event occurs.

Low Battery threshold voltages adjusted.

Unit will not power up if battery voltage is too low - warning message given until unit plugged into charger.

Don't download software update if already downloaded - message given.

Speaker may be set to silent source.

Can now log internal system errors.

Log message forced into log if Flash disk is r/o

Software update will now update Linux OS if required.

Version 0.9.2415 released

Added Reference Free-Run calibration dialog with progress feedback

Fixed OK time for CRC/EDH so that it is correct - was showing d-h:mm at wrong time

Added dialog and progress indication while calibrating reference.

Audio noise output can now be selected correctly (was silence).

Added plain 75% bars pattern without red at bottom.

Can now display video - blue only.

Checkfield (Pathological) pattern now fully conforms to SMPTE standards for both fields/frames.

Fixes to improve SDI jitter once hardware modifications have been made (See Dealer)

Can now use .yuv/.qnt files for test patterns/idents.

When displaying the waveform monitor in 'single line' mode the correct line is now selected.

Version 0.9.2414 released

New Linux version - but only for new units as installer can't install linux

Fix wavform and vector offsets.

Fixed some spelling mistakes.

Can now load .tga and .dpx files as UserFiles and Idents as well as TFT screens.

LCD Image updated correctly if browser is refreshed (F5)

Waveform and vectorscope displays now have proper lines rather than dots.

Waveform mode controls now on page (not dialog) for faster access.

Waveform display now has ability to zoom in on waveform and scroll around it.

Vectorscope display now has ability to zoom into any of the colour positions.

Add ability to recover from some application corruption states

Web Server working - no pictures yet

Dealer Option bug fixed.

Memories backed up before performing upgrade.

Fix crashing bug at startup if keys pressed before unit finished starting

Pressing Max/Min/Default when editing Line or sample numbers no longer allows negative values to be seen.

Min/Max Line/Sample now go to start/end of line.

SDI output now produces lower jitter.

Embedded audio channel status follows generated video format NOT received format.

Indicated bit depth now correct for SD/HD formats.

Add Dealer option flag and dialog that pops up when a dealer option page selected.

Speaker now monitors AES output correctly.

Command scripts now show correct fields (text and time) for actions

Version 0.6.2390 released

Download of new software fixed - was looking for setup.ini.

Scripts can now enable/disable logging.

Low Battery voltage dialog no longer pops up repeatedly if battery VERY low.

ANC status added to Engineering options to allow detection, display and decoding of ancillary data packets.

If 1080p-3G standard selected on generator, SMPTE 352 is turned ON - it may be subsequently turned off for testing.

If the generator is generating 1035i video signals, SMPTE 352 signal is no longer output (with wrong data).

If SMPTE 352 is turned ON, can now use it to detect 1080sF input signals

IF the analyser is monitoring the input.

SMPTE 352 status display added to Signal info-Video Status page.

Aspect Ratio control (PAL only) moved to Analyser-Picture page

Fixed Memory save/load with selected groups.

Add ability to save/restore memory backup files which are application version independent.

Fixed so that memories group masks work correctly

Adding a new memory copies existing memory but adds '+' to end of name

Fixed SDI signal glitches if 3G-HD signal generated and analysed asynchronously

Show TRS words on Signal Data page in different colour

Fixed split/stream signal data displays.

Generator video standard shown in red if generating errors.

Can now select a single line for display in Waveform Monitor and Vector Scope modes.

Switching between field 1 and field 2 on analyser pages for an interlaced video

format now selects correct line in other field for SD video standards.

Can now specify aspect ratio that PAL signals are to be viewed in when viewing in Picture mode or full screen view.