

How to download this software to the unit:

=====

Downloading via the Internet:

The easiest way to download the software to an RX is to connect the RX 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 RX to FTP files into the 'setup' directory on the RX.

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 RX using the Power on/off switch.

The software installation process will remove the current system presets so that they can be updated. Once the software update has completed use the "Restore Preset Backup" function to restore the "\_Before\_Upgrade.mem" file. The Rx system should then function

as before the software upgrade. From release 9.04 corrupted presets, or presets not supported by the current system will be highlighted in red on first boot. These presets should be removed and recreated.

In some cases when new features have been added, the system's engineer settings will need to be reset. This can be done in the "Sys Menu"- "Engineer Setup" window by selecting the "Enable" check box then pressing "Set Defaults" in the "Default Settings" section.

This will clear the HDMI screen of instruments and will require some system settings to be reconfigured, including:

System Locking reference setting

Audio Monitor settings

Dolby Decoder settings

-----  
This file contains all changes in reverse order  
i.e. latest changes at top of file

-----  
Version 9.05.14681  
-----

\*\*\*\* Important Note \*\*\*\*

This version contains firmware updates that are not backwardly compatible with versions 9.03 and earlier.

To revert 9.05 to earlier versions you must first revert to 9.04.

Bug Fixes:

#706 Increase socket timeout

-----  
Version 9.05.14679  
-----

\*\*\*\* Important Note \*\*\*\*

This version contains firmware updates that are not backwardly compatible with versions 9.03 and earlier.

To revert 9.05 to earlier versions you must first revert to 9.04.

Bug Fixes:

- #16 Loudness fractional part of the number flashes red-yellow at different time to the integer part
- #67 Subtitles Timeout
- #327 Dolby Meta Data: Start and End Gains Broken
- #351 Rx generating corrupted 3G-B and 3G-B 2str Checkfield test pattern
- #353 Meters are missing labels in Dolby D and D+ for loudness
- #376 DNS server address can't be set from RX2000 front panel
- #377 Trigger not working correctly on Ancillary Inspector
- #381 RX generator failing to output dolby properly when gain is non-zero
- #382 Metadata meter levels incorrect for Dolby-E 4+2x1
- #387 Loudness meter not working for Dolby E Decoder-program 2
- #392 Audio meters dialog not defaulting to quad size properly and setup can't be enlarged
- #404 Rx channel status displaying corrupted information in the Origin and Destination areas
- #438 Anc Inspector not showing line and sample number in small hdmi dialog
- #440 Opening another window causes the single channel listening mode to cancel on Audio Meters
- #451 CPU SDI master audio level is missing
- #459 Loudness meter starting in red for infinite mode after booting up
- #461 Loudness meter bar disappears when audio reaches 0 dBFS
- #462 Loudness infinite mode keeps showing errors after input removed
- #463 Loudness Range should apply over whole programme
- #465 User Mix Mode on Audio Metering is missing meters for Dolby config: 6x1 when Dolby Src is Decoder1

- #471 Dolby e decoder channel names incorrect and incomplete on audio metering for ##4+4x1##
- #473 Rear panel - Follow speaker source not being set up properly in presets
- #474 Unable to show Dolby pair 1 and 2 on the right hand section of audio metering (pair 7 and pair 8)
- #482 Dolby decoder program selection should not control which meter to show for Dolby E
- #483 Loudness monitoring for Dolby D/D+
- #491 Audio metering-Mix mode field show %s on TFT
- #493 Surround Channel Setup menu missing from TFT on RX2000
- #499 Trapped on solo buttons while navigating Audio Meters of RX2000 TFT
- #500 Can't select closed caption error logging on TFT of RX2000
- #501 Closed caption error logging algorithm falsely reports captions are missing
- #503 AES Status - error clear button can't be navigated from RX TFT
- #505 Audio Status Page - AES error count is missing on RX2000 TFT
- #506 Caption line errors from Misc Aux status missing from logging
- #511 Loudness - need to add support for decoder 1 and decoder 2 on AES card
- #513 Can't navigate to rate source on Dolby generator of RX2000 TFT
- #515 CRC error count not visible on Dolby Meta-data
- #524 Loudness Error count stops going up
- #543 Enable on-screen alarms missing from engineer page on RX2000 TFT
- #563 AA, AG, GG, Eye icon needs adding to the Slot Input tab
- #565 Event log-need to have the ability to add mark in the event log anywhere instead of just at the end
- #566 Event log-last reset time needs adding
- #567 Grab missing from the picture context menu
- #570 True peak Alarm threshold setting value is out by a factor of 10
- #576 Add a delete preset backup (mem files) in the preset backup menu
- #581 Volume should not be changing between presets
- #592 Loudness dialog - Top Hat not following true peak properly on audio meter
- #605 Picture - Input name not transparent for full screen
- #618 Input timing window doesn't work properly when the input is switched using input drop-down
- #619 Log enable settings should be made optional in presets

- #622 Logging - Jitter 2 errors going in as Jitter-1 and Jittler-1 logging errors not working
- #629 RX generator-Ident colour not being initialised properly and corruption in bottom of colour picker
- #638 Eye colour dropdown should not be linked to each other
- #642 Video Status CRC Error counts not visible in small dialog
- #643 Event number not visible when it less than 10
- #645 User file info button hidden when loading generator user pattern
- #664 Input 2 and delta bar not always appearing on AA card in input timing window
- #676 Vectorscope missing field box for SDI2 on RX2000 TFT
- #690 350mV/-350mV labels required for waveform YCbCr mode
- #691 Show speaker output on HDMI display
- #698 The CPU generator **##Off##** status is not being shown on the HDMI and CPU pattern and standard should be added
- #707 Dolby Generator **##Invalid Source##** message needs to come out on HDMI status pane
- #725 Loading audio presets need speeding up
- #726 Last window is not being recalled in presets
- #727 HDMI/Rear speaker setup (audio monitoring dialog) not initialised at startup
- #728 Dolby decoder doesn't always start up properly
- #729 Input name should not be transparent for SD and 720p full HDMI picture
- #730 Loading preset backup should show backup name instead of number in log
- #733 Overwriting preset backup confirmation warning not working properly
- #734 Input drop-down missing in instruments for the first analyser
- #735 ANC status clear button is only working for SDI1
- #736 File filter box needs adding to loudness options dialog
- #739 Last sample of first active line in SD Checkfield pattern needs to end with 0x80
- #741 Dolby Program config label missing from RX2000 audio meters
- #742 Centre graticules properly for vectorscope
- #746 Dial Norm indicator needs adding to Home Rh TFT page on RX2000
- #747 Closed caption need fixing on RX 2000 home page of TFT
- #748 AFD information needs showing on RX2000 TFT home page
- #749 **##EyeJitter did not lock in time##** pausing Rx when no video present and preset clicked
- #750 Dolby Decoder Status needs showing on the slot input tab

- #751 High memory usage by Firefox browser when connected to RX
- #754 Preset delete needs to be made more reliable
- #765 Loudness not working for second Dolby decoder when both decoders have got Dolby in them
- #768 DNS server can't be setup from front panel on RX500/1000
- #770 Gamut threshold needs individual setup units
- #771 Preset context menu not working for presets buttons 11 to 14
- #781 Output hex units properly for Gamut setup
- #786 Generator in use by front panel indicator required
- #787 RX2000 input selector missing upon loading preset backup
- #789 Max and min (-50mv , 766mV) labels required for luma waveforms graticules
- #790 Mute icon needs adding to RX500/1000 menu display
- #791 Screenshot web page not opening properly on RX500/1000
- #792 Mouse issue-sometimes can't select another window
- #793 Screenshots not working in certain cases
- #794 RX500/1000 front panel stops responding when gamut setup is displayed
- #805 Ensure top 1023 mV marker does not impinge on waveforms
- #815 Correct I and Q slopes on vectorscope graticules and -I label
- #824 GPIO selection not working for deleted presets properly
- #830 Dolby Gen not working for AG card on slot 3 G4P1, G4P2
- #832 User-1,User-2,User-3 labels missing from ANC log setup
- #838 Presets buttons disabled after loading backup file
- #839 Cancel log not working properly on RX2000 TFT
- #842 Auto-repeat mechanism not working for cursor and log
- #845 Can't set static ip address from Rx500 front panel when ethernet disconnected
- #847 Reference locking `##Lock## / ##NoLock##` label state logic incorrect
- #850 Loudness start/pause/resume and reset buttons lose their state if you reload (or load) a preset
- #851 Dolby Decoder selection displayed but not actioned on recalling a preset
- #852 Dolby 5.1+2 Program 2 Audio Meter pair labels incorrect
- #853 Audio Meters not correctly tracking selected Decoder Dolby E Program when recalling a preset
- #854 Dolby D Downmix not working until set up by Dolby E

- #855 Loudness Bar not cleared on reset
- #856 Loudness monitoring of Dolby uses current Dolby E program at selection time and never changes
- #857 Loudness input selection shows 7.1 when its not supported and Decoder1/2 even when not fitted
- #858 Surround Mix-Mode 5.1A and 5.1B should not be available on AES4
- #859 Dolby channel naming is incorrect in Audio Meters
- #861 Dolby Meta-data information difficult to read as black on grey
- #862 Locking to unavailable SDI reference should fall back to free run
- #866 Input timing incorrect when Input is also the SDI Reference
- #868 Dolby Software Meter order and program mappings incorrect

New Features:

- Instrument View on Left Hand Rx2000 TFT
- Support for 2K HD Standards generation and analysis
- Preset reordering (HDMI)
- Screen capture can be triggered remotely

-----  
Version 9.04.14365  
-----

\*\*\*\* Important Note \*\*\*\*

This version contains an operating system upgrade which will take a few minutes.

During this process the Rx will reboot a number of times.

Please ensure any USB sticks are removed before proceeding with the upgrade.

Bug Fixes:

- #35 Add GPIO assignment to Rx 2000 Front Panel Presets Menu
- #111 AV Delay Pattern fix for 1080sF
- #112 AV Delay Pattern fix for 3GA/B 2K
- #125 Test Pattern generation last line fix

- #161 De-clutter Waveform display
- #182 AV Delay Pattern fix for 3G-B
- #185 Add Frame Capture information to logging
- #186 Audio Phase Meters rendering
- #187 Audio Presence Identifiers on TFT
- #188 AES Groups C and D on TFT
- #189 Speed up screen capture (hold OK button)
- #192 Misc Status correction for 3G-B D/S (50i)
- #193 Logging fix for generating HD without SMPTE 352
- #196 Dolby Program Config fixes for Audio/Loudness meters
- #197 Dolby Generator Program Config initialisation fixes
- #198 Dolby Generator channel ordering fixes for various Program Configs
- #199 AES Output channel status TFT fixes
- #206 AV Delay tone generation via 4AES module
- #214 Generator Ident repositioning fix for GEN4
- #217 Resolve SFP system cpu loading
- #253 Resolution of crash when closing USB TFT Dialog
- #257 Reference selection on web browser interface
- #261 Rear Audio Calibration saving
- #262 HDMI Lock To Reference Fix
- #284 HDMI audio follow speaker gain fix
- #285 CRC Change counter resize/display fix
- #286 Loudness options Dealer options fix
- #287 Remote Web browser interface lockup fix
- #288 Dolby Decoder initialisation fix
- #291 MMC filesystem date/timestamp fix
- #293 Dolby Generator fix for Dolby E 20 bit 5.1 Ramp
- #296 Moving box/AV Delay speed correction for segmented frame formats
- #297 Disable un-supportable audio groups for 2K formats
- #298 Video Status Clear All fix
- #301 Resolution of crash when removing USB stick without ejecting



- #302 Provide access to GenLock selection on LH TFT
- #303 Double click support for web browser interface (to enable transition to/from full screen)
- #304 Date/Time dialog fix
- #305 Daylight Saving Time fix
- #306 Web browser interface lockup resolution
- #311 Resolution for SDI Audio Loss on dual analyser
- #312 Flash update reset fix
- #313 Generator fix for invalid/missing ext ref selected
- #314 Reference locking when switching between A and B input
- #315 Ini file recovery modifications
- #316 List box mouse scrolling
- #319 "AFD Missing" in HD fix
- #324 Menu bar preset button initialisation
- #326 Resolution for options panes still active when hidden
- #329 GPIO preset assignments fixed for analysers 3 & 4
- #330 Log event source/naming standardisation
- #338 Audio Meter level fix when switching from Dolby
- #339 Save Audio Monitoring configuration to presets
- #342 Lissajous AGC setup fix
- #344 AV Delay control for TFT
- #345 AES audio threshold logging fix
- #346 HDMI Audio follow speaker source fix
- #348 Default to large on-screen keyboard
- #349 "Add Mark in Log" button added to HDMI log window
- #350 Resolution for cursor disappearing when grab controls are displayed
- #352 Save Dolby Decoder configuration in presets
- #356 Fix mouse wheel scrolling for list boxes
- #357 Default to large presets window
- #358 Resolution of waveform artefacts when brightness and persistence at 100%
- #359 Menu bar double click fixes
- #362 Save log file to USB in CSV format

- #365 Screen dump naming rationalisation
- #366 I/O Setup display fix
- #367 In-picture input name update fix
- #371 SFP input switching fix
- #373 Eye overshoot, undershoot & cable length fixes
- #395 SDI1b preset fix
- #408 ANC Status read fix
- #409 VI/WSS/AFD indicator flashing fix
- #412 Resolution for missing waveform preset information
- #418 AFD Detection fix
- #424 Stop frame grab on clearing grab checkbox
- #435 Fix for preset showing A and B input simultaneously
- #437 Reset cursor position on preset load
- #439 Add missing "left" option for 7.1 Surround Channel Setup
- #445 Fix for closing and resizing windows when mouse outside of area
- #469 Show keyboard on frame grab save
- #484 USB write error protection
- #485 Resolution for SDI1b preset coming up as SDI1a
- #488 Resolution for preset load stopping analyser from being selected
- #522 Fix for TFT menu navigation on Audio Monitoring
- #525 AES Menu stability fixes
- #526 3G-B 2Str menu selection fixes
- #532 Fix for looping system/preset load
- #534 NTP Threading fix
- #536 SFP input label cycling fix
- #541 GPIO preset triggering fix
- #542 Add missing GPIO event to event log
- #549 Resolution for crash when moving audio meters
- #551 Prevent preset save from overwriting current preset
- #557 Change Audio Monitor default back to G1P1
- #599 Resolution for frame grab buttons not responding to input (module) switch.

- #602 Resize AFD/WSS/VI overlay box
- #603 Fix for Dual Link standards on AA/AE cards
- #610 Fix SDI timing against reference display
- #615 Fix for Logging state initialisation after clearing log
- #648 Fix for generator user file not being saved in preset
- #653 Logging Time Start/Stop limits fix
- #655 Log file save file name fix
- #656 HDMI Output generator selection fix
- #658 Audio Phase Meters resized
- #659 Preset Saved Dialog centred on screen
- #660 Fix for input timing display for AG card
- #668 Fix for Loudness Range calculation
- #669 Change Loudness defaults to LUFS
- #N/A Closed Caption Display fixes

New Features:

- Mix mode implementation in Audio Monitoring
- Auxiliary status display
- True Peak Display in Loudness
- DialNorm display in Audio Monitoring
- 64-Bit remote API support
- Remote logging
- Log filtering

-----  
Version 9.03.13813  
-----

Bug Fixes:

- #254 Loudness logging should be disabled by default

-----  
Version 9.03.13798  
-----

New Features:

- Improved Menu Display and On-screen Error Indication
- GPIO Output on Error
- AV Delay Test Pattern & Audio Tone
- AV Delay Check
- System Time controlled by NTP
- Loudness measurement of Decoded Dolby Programs
- Dolby Audio Meter Differentiation
- Waveform Improvements
- VI Indication in Picture
- Improved Font for large instruments
- Large on-screen keyboard
- Ability to save full size picture as preset
- Picture gamut scale set by Waveform Instrument
- System recovery mode at startup

Improvements:

- \* More accurate input timing measurement with respect to different locking references.
- \* More accurate placement of Generated Dolby Packet
- \* Dolby Meta-data Instrument now set to SDI by default rather than Ext Ref
- \* Full checking of preset backups on loading and at startup

Bug Fixes:

- #31 Audio over HDMI not correctly initialized when selected
- #69 Audio Monitoring window does not remember Analyser audio pair selection on power down
- #73 System Popup menu always captured with HDMI Screen Capture
- #123 Second PHRXM-GDL module ident doesn't work.

- #81 Audio Metering measurement of audio level with VU and VUFR selected incorrect
- #107 Audio Monitoring of discrete L and R channels does not work
- #136 6 Line Difference between Black & Burst and HD Sync locking references
- #144 Presets going wrong under certain circumstances
- #141 Audio Metering - Dolby Source setting not saved in preset
- #146 Dolby Decode problems with 3G-Level B-1080p50
- #151 Rx AES and non-eye modules causing the Eye and Jitter tab to disappear in Rx2000 front panel
- #153 Dolby E not Generated correct by Rx with some system configurations
- #168 Free Run not initialized on system power-up - causing timing and Dolby issues
- #169 HDMI/CPU SDI Setup Audio Grp1 not correctly initialized on power-up
- #194 RX2000 browser-left hand LCD not updating automatically and right hand LCD update rate too slow
- #181 Rx 2000 browser session disconnects if Rx static IP used
- #204 Audio Status window displaying "a b c d" in Audio Present section instead of "1 2 3 4"
- #216 Loudness Momentary and Infinity displays stop updating and logging after 23.59 (Midnight)

-----  
Version 9.02.13535  
-----

Improvements:

- \* Implement full preset checking and indexing at software upgrade and preset restore.

Bug Fixes:

- \* Restore remote control timing values to microseconds.
- \* Resolve upgrade issues for users moving from version 8 to 9.02.
- \* Fix Switching Line number for error insertion (generator) and ignoring correct line on analyser

-----  
Version 9.02.13417  
-----

New Features:

- \* Frame Grab (Analyser Modules)
- \* Frame Grab Playout (Generator Modules)

Improvements:

- \* Loudness instrument Improvements
- \* Improved Dolby timing across all video formats
- \* More accurate measurement of jitter at low frequencies
- \* Picture window line and sample picker now only on when Cursor enabled

Bug Fixes:

- \* Dolby Metadata Analysis of 3G-Level B
- \* Dolby Metadata Analysis of Dual Link HD
- \* Dolby Metadata Analysis of 2K-SDI
- \* Dolby Generator not locking correctly for all output formats
- \* ANC Status not updating correctly
- \* Eye Cursors in incorrect position
- \* Switching from HD to 3G-B 2str causing analyser input to change from SDI#a to SDI#b

-----

Version 9.02.13137

-----

New Features:

- \* Audio Mix Down of selected audio channels
- \* Improved Audio Monitoring menu
- \* ADF/WSS Monitoring in Picture
- \* V-chip Monitoring in Picture
- \* GPIO control of Presets

Improvements:

- \* System Performance Improvements
- \* Loudness instrument Improvements

- \* Gamut Monitoring Improvements
- \* HDMI Interlaced output Improvements

Bug Fixes:

- \* White screen on Rx 2000 on powerup
- \* Memory leakage when logging loudness continuously
- \* Memory leakage when repeatedly changing Generator video formats using presets
- \* Dolby Generator output levels
- \* Blanking levels incorrect

-----

Version 9.01.12714

-----

Improvements:

- \* More robust initialisation of Dolby Decoder on startup with different Dolby program types
- \* More robust handling of power off without proper shut down
- \* Routing for future software versions to a different web address

-----

Version 9.01.12565

-----

New Features:

- \* Dual simultaneous Dolby decoder channels
- \* Asynchronous analyser audio operation
- \* Release of Dolby Generator option (PHRXO-BDG)
- \* Waveform brightness Persistence
- \* Improvement to presets

-----

Version 0.09.0027

-----

New Features:

- \* SFP Information window available when SFP module fitted.
- \* Can set up Safe Area from Rx2000 front panel
- \* Can turn on/off Gamut from Rx2000 front panel
- \* Can turn on/off Caption from Rx2000 front panel
- \* Can turn on/off TimeCode from Rx2000 front panel
- \* Can change audio meter assignments from Rx2000 front panel
- \* Cursors visible on Rx2000 when viewing waveform.
- \* Can now set instrumentation to SDI output on Rx500/1000

Bug Fixes:

- \* Fixed lockup when SFP plugged in to GG I/O card
- \* Fixed 2k pattern YCC levels

-----  
Version 0.09.0024  
-----

\*\*\*\* Important NOTE:\*\*\*\*

Customers with Eye/Jitter cards MUST contact their dealers for new hardware.  
Eye/Jitter functionality disabled otherwise.

New Features:

- \* Initial release with Hi-Resolution waveform
- \* Cursors and measurements available on Picture and Waveform windows on HDMI screen.
- \* Cursors displayed on Picture on TFT screen
- \* Dolby decoder can be used as audio source for speaker/headphones/rear panel output.
- \* Picture and waveform windows on HDMI screen can be 3/4 size or full size.
- \* System reference can be sourced from SDI inputs for Dolby-E compatibility.
- \* Up to 13 Recall Preset buttons on status bar.



- \* Larger pop-up menus (mouse right click) for smaller HDMI screens.
- \* Gamut indication on Picture window.
- \* Can now monitor audio output on HDMI and CPU SDI outputs.
- \* Audio meters configurable on a pair basis.
- \* Picture can be zoomed up to native resolution with mouse scrolling.
- \* Waveform RGB and YCbCb overlay modes added.

Known Features missing:

- \* Cursors cannot be controlled on Rx2000 front panel.
- \* Audio metering cannot be configured on Rx2000 front panel  
work-around: Use HDMI output to configure.
- \* Screen grab and HDMI browser display corrupt for interlaced instrumentation outputs.
- \* Closed caption and Gamut cannot be controlled on Rx2000 front panel.

Bug Fixes:

- \* Fixed loss of ethernet connection when changing DHCP mode.