



Nautel NVLT Software Bulletin

NVLT Series Software 5.0 Release Notes

General Remarks:

NVLT Series Software Version 5.0 is a Software update suitable for all Nautel NVLT Series transmitters.

This release is considered **CRITICAL** for those who are experiencing issues with network/system stability, are using a streaming service for audio content (such as Shoutcast) or require any of the bug fixes/improvements identified below. Nautel recommends you upgrade at your earliest convenience, **during your next scheduled site visit.**

For those who do not require any of the bug fixes/improvements identified below or are satisfied with current transmitter behaviour, this release is considered **NON-CRITICAL** and Nautel typically does not recommend you upgrade under these circumstances. If you choose to upgrade, Nautel recommends you perform the upgrade **during a regularly scheduled site inspection.** In the event you require support from Nautel Customer Service, they may require you to perform an upgrade to the latest software release in order to resolve your issue if deemed necessary.

You can download NVLT Series Software Version 5.0 [here](#).

Software Upgrade procedures can be found in IS19001*, *NVLT Series – Updating to 5.x Software and OS Recovery Procedure*. Please be sure to review and understand the complete set of instructions prior to beginning your upgrade.

New Features:

None at this time.

Improvements / Enhancements:

- Improved system stability and network stability/connectivity.
- Improved stability for streaming audio and audio files.
- Increased the Watchdog timeout from 30 seconds to 1 minute to account for the stability health check system.

Removed / Retired Features:

None at this time.

Bug Fixes:

- Fixed a bug where the User could not switch the Main Exciter from A to B or vice versa using the UI.
- Pilot Signal fields no longer appear when the Audio Source is set to MPX or MPX Over AES.



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- The following alarms now appear in the AUI Status page in addition to also being logged and queried via SNMP:
 - Controller: Unsigned DSP Image
 - Controller: High Temperature Latch
 - Exciter A/B/Active: Software Mute

Known Issues:

- The Exciter A/B Fan Fail alarms do not trigger if the exciter's fan is enabled and goes below 2000 RPM.
- Blank logs can be created from Active Exciter hardware misconfiguration after the enabling/disabling of HD, which disallows the act of copying AUI logs. See (1).
- AlarmPaOverTemperature is present in the MIB, however it will return a value of off(0) regardless of the actual alarm status. The transmitter functionality dependent on the alarm is not impaired.
- Summary alarms in FM products are present in the MIB however they will return a value of off(0) regardless of their actual alarm status. The transmitter functionality dependent on the alarm is not impaired.

Workarounds:

1. The workaround is to delete logs after configuring the Exciter and enabling/disabling HD.

Installation Considerations:

This software update will take approximately 30 minutes and may require multiple reboots. You will be OFF AIR during the upgrade process. If you experience LAN-related alarms soon after an OS recovery, another OS recovery may be needed.

NVLT Series Software 4.6.1 Release Notes

General Remarks:

NVLT Series Software Version 4.6.1 is a Software update suitable for all Nautel NVLT-Series transmitters.

This release is considered **CRITICAL** for those who require HD functionality for their NVLT transmitter or require any of the bug fixes/improvements identified below. Nautel recommends you upgrade at your earliest convenience, **during your next scheduled site visit**.

For those who do not require HD functionality, any of the bug fixes/improvements identified below or are satisfied with current transmitter behaviour, this release is considered **NON-CRITICAL** and Nautel typically does not recommend you upgrade under these circumstances. If you choose to upgrade, Nautel recommends you perform the upgrade **during a regularly scheduled site inspection**. In the event you require support from Nautel Customer Service, they may require you perform an upgrade to the latest software release in order to resolve your issue if deemed necessary.



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You can download NVLT Series Software Version 4.6.1 [here](#).

Software upgrade procedures can be found in the *Non-Standard Maintenance* section of your *Operations and Maintenance Manual*. Please be sure to review and understand the complete set of instructions prior to beginning your upgrade.

Note: If doing an OS recovery, it may take multiple attempts to successfully perform.

New Features:

- Support for NVLT with HD when used in conjunction with FM17013 “Modifying NVLT Transmitter for HD Operations.”
- Improved SNMP Compliance. New NVLT and Nautel Base MIBs are available. To ensure SNMP functionality following upgrade to 4.6.1, the new MIBs must be installed.

Improvements / Enhancements:

- Added support for HD alarms, HD exciter channels, HD presets to HD NVLT AUI.
- The following screens have been added to the NVLT AUI to support HD operation:
 - Spectrum/Eff. Optimizer
 - FM Polarity
 - Exgine Settings
 - Spectrum Mask
 - IBOC Settings
- Added Exgine channel support to NVLT AUI.
- The Power Distribution Plot, Signal Constellation, AM-PM and PM-PM instruments have been added to the NVLT AUI.
- Updated the NVLT critical parameters data capture now displays the 88MHz, 93MHz, 98MHz, 103MHz and 108MHz frequency calibration values.
- When the VSWR is greater than 10:1 the exciter VSWR meters in the UI and AUI show as the infinity symbol and “Infinite” respectively.
- In the Factory Settings menu the Exciter Power menu item is now Exciter PA Power.
- Exciter PA Power reading is changed from “XXX W @98MHz” to “XXX W @98MHz per PA”.
- The allowable LVPS Voltage range is now 40V to 53V instead of 35V to 53V.
- Added a new Controller alarm called LVPS Shutback that indicates when the LVPS output voltage is low. The is used to shutdown the fans in the system to present power dips when switching to the UPS, which can cause rack lockups. The alarm activates when the LVPS voltage drops below 36V and will not clear until it rises above 37V.
- The following meters were added to the list of UI Exciter meters when the transmitter is in hybrid/digital mode: Data MER USB, Data MER LSB, Ref MER USB and Ref MER LSB.
- The Controller forward power meters will show 0 if they are not applicable to the current mode (Digital Power will be 0 in Analog only mode, FM will be 0 in All Digital mode) and the fan will show the same reading as the Exciter A fan when HD is disabled.
- Existing NVLT users should see no changed to the Main and Backup Audio options unless HD is enabled, in which case they will see HD audio options.



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- Filter Tilt added for NVLT with HD customers. Previously this was visible (under Factory Settings UI page) but did not apply to NVLT customers.
- Increased the number of connection retry attempts in the case of a lost Shoutcast connection.
- Adjusted Audio Player log rotation settings.
- New OIDs have been added to the NVLT MIB exposing HD channels.
- Updated the Fast SWR Shutback Threshold calculations to improve accuracy and remove transmitter model dependencies.

Removed / Retired Features:

- The IncreaseDecreasePower OID has been deprecated – use the SetPower OID instead. Deprecation will not affect existing usage of this OID.
- As part of SNMP v2c compliance, write-only OIDs may no longer be used. Nautel's write-only channels which are exposed via SNMP OIDs remain *functionally* write-only but are listed as read-write and will return a 0 when queried.

Bug Fixes:

- LVPS Shutback alarm added to NVLT Status and Logs pages.
- Added Rack Sync Required alarms.
- Exciter A, Exciter B and Orban firmware versions will now correctly display on the Software Versions screen.
- Improved operation system logging to reduce memory consumption.
- USB devices should now always mount properly.
- Older system logs are now being purged during upgrades as they provide little value and potentially occupy a lot of space.
- Nautel's MIBs have been modified to meet a stricter criteria of SNMP v2c compliance.
- The syntax of traps listed in the MIBs has been changed to conform to the notification syntax expected by SNMP v2c.
 - Traps OIDs now explicitly contain a '0' node prior to the trap node number, a requirement for SNMP v2c.
 - Any customers who had previously worked around the omission of the node should no longer do so to maintain function.
- Nautel has overhauled the OID groups to both be SNMP v2c compliant and to better reflect the current state of the OIDs and their logical groupings.
 - As part of this rework a new node has been placed in the group OIDs to describe the status of a group (whether an OID is deprecated or current). As such, deprecated OIDs will be placed within their own groups.
 - As part of this rework a new node has been placed in the group OIDs to describe whether the OIDs contained within the group are trap OIDs. As such, traps OIDs will be placed within their own groups.
- SNMP set requests while in Local-only mode no longer cause the SNMP Agent to lockup.



Known Issues:

- The Exciter A/B Fan Fail alarms do not trigger if the exciter's fan is enabled and goes below 2000 RPM.
- LAN instability results in interruptions that temporarily affect access to the remote AUI. This is self-correcting, connectivity recovers without user intervention.
- Blank logs can be created from Active Exciter hardware misconfiguration after the enabling/disabling of HD, which disallows the act of copying the AUI logs.
 - The work around is to delete logs after configuring the Exciter and enabling/disabling HD.
- AlarmPaOverTemperature is present in the MIB however it will return a value of off(0) regardless of the actual alarm status. The transmitter functionality dependent on the alarm is not impaired.
- Summary alarms in FM products are present in the MIB however they will return a value of off(0) regardless of their actual alarm status. The transmitter functionality dependent on the alarm is not impaired.
- The following alarms are logged by the AUI and return an accurate value when queried via SNMP but do not appear in the AUI Status page.
 - Controller: Unsigned DSP Image
 - Controller: High Temperature Latch
 - Exciter A/B/Active: Software Mute
- Manually changing from Exciter A to Exciter B via the transmitter's UI and Remote PWB does not work.
 - However, manually changing from Exciter A to Exciter B via the Remote AUI does work.

Installation Considerations:

This software update will take approximately 30 minutes and may require multiple reboots. You will be OFF AIR during the upgrade process.

To ensure SNMP functionality following upgrade to NVLT SW 4.6.1, the new NVLT and Nautel base MIBs must be downloaded and installed. These MIBs are available via the FTP site.

NVLT Series Software 4.4 Release Notes

General Remarks:

NVLT Series Software Version 4.4 is a **SIGNIFICANT** Software update suitable for all Nautel NVLT Series transmitters. We recommend upgrading your transmitter(s) to this latest release DURING NEXT REGULARLY SCHEDULED SITE INSPECTION.

You can download NVLT Series Software Version 4.4 [here](#).



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Software Upgrade procedures can be found in the *Non-Standard Maintenance* section of your *Operations and Maintenance Manual*. Please be sure to review and understand the complete set of instructions prior to beginning your upgrade.

New Features:

- This release introduced a new SNMP Agent, one of which adheres to the SNMP standard. Issues surrounding invalid GETs, the inability to walk the OID tree and including multiple commands in a single packet has been resolved. As well, the MIB data has been cleaned up substantially.

Improvements / Enhancements:

- The RF Modules page for FM products has been modified to improve TX responsiveness when viewing that page.
- Remote Output logic levels now change in real-time on the Remote I/O page.
- Cleaned up mode-dependent preset field availability for a number of fields,
- Expanded the number of RDS Alternate Frequencies from 7 to 25.

Removed / Retired Features:

- The ability to individually enable or disable SNMP traps has been removed. It is still possible to enable or disable traps as a whole.
- “Transmitter RF Off” has been removed from the Notifications alarm list. It is not technically feasible with the current software topography.

Bug Fixes:

- Users can now make scheduler rules that start or end in January.
- The Host Not Responding alarm now displays correctly in the AUI Logs on ARM-based systems.
- The “Secondary Source” field now only populates when Main Audio Source is set to “Audio Player -> AES2”.
- Fixed an issue with incorrect scrolling in the Alert box.
- Cleaned up some Phone Home connect/disconnect issues.
- Only the top-most error message on any given AUI page will now be shown at the bottom of the page.
- Users can now input Audio Processor preset names with actual characters rather than *s.
- Corrected a display issue with Audio Processor button labels.
- Audio Processor controls now work on the local AUI when the transmitter is set to Remote-only.
- Corrected Heatsink Temperature meter upper limit.
- Minor UI consistency changes.
- Fixed a type in Critical Parameters “Settings” output.
- Resolved some display issues around available sections in the Remote I/O screen.
- Corrected available presets field when Audio Player -> AES2 is selected as the audio source.
- Renamed “Secondary Source” to “Audio Player Source” in presets when the audio source is “Audio Player -> AES2”.
- Renamed preset field “Dynamic” to “Dynamic PTY”.
- The Remote I/O->Analog Outputs columns for clarity.



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- The Mod Loss Timeout action “None” has been renamed to “Alarm Only” to more accurately reflect actual behavior.
- The RDS preset Dynamic PTY options have been renamed from “Enabled/Disabled” to “Dynamic/Static”.
- The RDS preset Stereo options have been renamed from “Enabled/Disabled” to “Stereo/Mono”.

Installation Considerations:

This software update will take approximately 30-60 minutes and may require multiple reboots. You will be OFF AIR during the upgrade process.