

## 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.

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 conjuncture with FM17013 "Modifying NVLT Transmitter for HD Operation".
- 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, and HD presets to 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 instrument, Signal Constellation instrument, AM-PM Instrument, and PM-PM instrument have been added to the NVLT AUI.
- Updated the NVLT critical parameters data capture to include applicable HD alarms, meters, presets and settings.
- The NVLT critical parameters settings data capture now displays the 88MHz, 93MHz, 98MHz, 103MHz, and 108MHz frequency calibration values.

All Nautel Software Releases are cumulative and contain features and fixes from prior releases.

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- 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. This is used to shutdown the fans in the system to prevent 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 powers 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 changes to the Main and Backup Audio options unless HD is enabled, in which case they will see HD audio options.
- 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 page and logs.
- Added Rack Sync Required alarms.
- Exciter A, Exciter B, and Orban firmware versions will now correctly display on software versions screen.
- Eliminated excessive Audio Player logging.
- Fixed issue that disallowed SNMP logs to rotate correctly.
- 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.

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- 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 our 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 trap OIDs will be placed within their own groups.
- SNMP set requests while in local-only mode no longer cause the SNMP subsystem 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 window:
  - 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.

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## **NVLT Series Version: 4.6.1    Software Release Notes**

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.