

VS Series Software 5.3.2

General Remarks:

VS Series Software Version 5.3.2 is a Software update suitable for all Nautel VS Series transmitters.

This release is considered **NECESSARY** for those who require any of the new features, improvements and/or bug fixes listed below. Nautel recommends you upgrade at your earliest convenience, **during your next scheduled site visit**.

In the event you require support from Nautel Customer Service, they may require you to upgrade to the latest software release to resolve your issues if deemed necessary.

You can download VS Series Software Version 5.3.2 [here](#).

Software Upgrade procedures can be found in “Upgrading Software” in the transmitter’s Operations and Maintenance Manual. If upgrading from pre-5.Y.Z, refer to IS18008*, *VS 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.

Bug Fixes:

- Increased VS with UG132 Power Supply Output Voltage target maximum from 12V to 20V when a Power Supply failure condition is detected, in advance of issuing a PS Fail alarm and acting; to account for increased UG132 minimum power supply output voltage set-point, when compared to original UG69 power supply.
 - PS Fail alarms now clear at 21V instead of 13V.
- Increased VS2.5 with UG132 PA Voltage minimum value from 18V to 19V to resolve current limiting behaviour under specific operating conditions.

Known Issues:

- 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 alarms is not impaired.
- If you have an active preset with the first created stream as the Audio Source and another preset with the first created playlist as the Audio Source and switch to the second preset, the stream will continue to modulate due to both the playlist and stream having the same order value. See Workaround (1).
- If you have more than one Livewire stream and switch from one stream to another the note will be on the new stream, but the transmitter will continue to modulate the first stream. See Workaround (2).
- RDS Decoder is not available in VS transmitters with HD exciters set as the active exciter.

Workarounds:

1. Create another stream that has a different order value than the desired playlist and then switch to that stream from the current stream and then switch back to the desired playlist. This method will also work for switching from a playlist to a stream.
2. Performing a Host Reboot will allow the new stream to become the modulating source.

Installation Considerations:

This software update will take approximately 30 minutes and may require multiple attempts if the process does not successfully complete. 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 required.

VS Series Software 5.3.1

General Remarks:

VS Series Software Version 5.3.1 is a Software update suitable for all Nautel VS Series transmitters.

This release is considered **NECESSARY** for those who require any of the new features, improvements and/or bug fixes listed below. Nautel recommends you upgrade at your earliest convenience, **during your next scheduled site visit**.

In the event you require support from Nautel Customer Service, they may require you to upgrade to the latest software release to resolve your issues if deemed necessary.

You can download VS Series Software Version 5.3.1 [here](#).

Software Upgrade procedures can be found in "Upgrading Software" in the transmitter's Operations and Maintenance Manual. If upgrading from pre-5.Y.Z, refer to IS18008*, *VS 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.

Bug Fixes:

- Fixed an issue where there was minor IPA Power overshoot when RF was turned on (VS2.5 only).

Known Issues:

- 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 alarms is not impaired.
- If you have an active preset with the first created stream as the Audio Source and another preset with the first created playlist as the Audio Source and switch to the second preset, the stream will continue to modulate due to both the playlist and stream having the same order value. See Workaround (1).
- If you have more than one Livewire stream and switch from one stream to another the note will be on the new stream, but the transmitter will continue to modulate the first stream. See Workaround (2).
- RDS Decoder is not available in VS transmitters with HD exciters set as the active exciter.

Workarounds:

1. Create another stream that has a different order value than the desired playlist and then switch to that stream from the current stream and then switch back to the desired playlist. This method will also work for switching from a playlist to a stream.
2. Performing a Host Reboot will allow the new stream to become the modulating source.

Installation Considerations:

This software update will take approximately 30 minutes and may require multiple attempts if the process does not successfully complete. 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 required.

VS Series Software 5.3.0

General Remarks:

VS Series Software Version 5.3.0 is a Software update suitable for all Nautel VS Series transmitters.

This release is considered **NECESSARY** for those who require any of the new features listed below. Nautel recommends you upgrade at your earliest convenience, **during your next scheduled site visit**.

In the event you require support from Nautel Customer Service, they may require you to upgrade to the latest software release to resolve your issues if deemed necessary.

Software Upgrade procedures can be found in “Upgrading Software” in the transmitter’s Operations and Maintenance Manual. If upgrading from pre-5.Y.Z, refer to IS18008*, *VS 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:

- Added support for the Nautel UG132 Power Supply-based VS transmitters.
- Updated IPA Output High alarm behaviour to include activation when IPA Current exceeds 4A and clears when IPA Current falls below 3.9A.
- Added routine (Exc Att Routine) to optimize DAC Attenuation and DAC Gain for VS1 and VS2.5 transmitters.
 - The routine is required to be run after the installation of a new pre-amp/IPA PWB, or exciter/control PWB, or as instructed during alarm troubleshooting.
 - Located in Front Panel UI at: System Settings -> Factory Settings -> Calibration -> Exc Att Routine
- Added DAC Attenuation (Fwd Att) and DAC Gain meters in the VS300 Front Panel UI Meters.
 - Located in Front Panel UI at: View Status -> View Meters
 - If Transfer Controller is enabled: View Status -> View Meters -> Transmitter
 - If VS HD Exciter is set as Installed Exciter: View Status -> View Meters -> Exciter

Known Issues:

- Minor IPA Power overshoot when RF is turned on (VS2.5 only).
- 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 alarms is not impaired.
- If you have an active preset with the first created stream as the Audio Source and another preset with the first created playlist as the Audio Source and switch to the second preset, the stream will continue to modulate due to both the playlist and stream having the same order value. See Workaround (1).
- If you have more than one Livewire stream and switch from one stream to another the note will be on the new stream, but the transmitter will continue to modulate the first stream. See Workaround (2).
- RDS Decoder is not available in VS transmitters with HD exciters set as the active exciter.

Workarounds:

1. Create another stream that has a different order value than the desired playlist and then switch to that stream from the current stream and then switch back to the desired playlist. This method will also work for switching from a playlist to a stream.
2. Performing a Host Reboot will allow the new stream to become the modulating source.



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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 required.

VS Series Software 5.2.1

General Remarks:

VS Series Software Version 5.2.1 is a Software update suitable for all Nautel VS Series transmitters.

This release is considered **CRITICAL** for those who are experiencing issues with SNMP lockup. 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 behavior, 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 that 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 VS Series Software Version 5.2.1 [here](#).

Software Upgrade procedures can be found in IS18008*, *VS 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.

Bug Fixes:

- Resolved SNMP lockup issue.

Known Issues:

- 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 alarms is not impaired.
- If you have an active preset with the first created stream as the Audio Source and another preset with the first created playlist as the Audio Source and switch to the second preset, the stream will continue to modulate due to both the playlist and stream having the same order value. See Workaround (1).
- If you have more than one Livewire stream and switch from one stream to another the musical note will be on the new stream, but the transmitter will continue to modulate the first stream. See Workaround (2).
- RDS Decoder is not available in VS transmitters with HD exciters set as the active exciter.

Workarounds:

1. Create another stream that has a different order value than the desired playlist and then switch to that stream from the current stream and then switch back to the desired playlist. The same goes for switching from a playlist to a stream.
2. Restart the AUI to have the new stream be the modulating source.

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.

VS Series Software 5.2

General Remarks:

VS Series Software Version 5.2 is a Software update suitable for all Nautel VS 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 behavior, 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 that 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 VS Series Software Version 5.2 [here](#).

Software Upgrade procedures can be found in IS18008*, *VS 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.

Note: This shares the functionality of 4.4.1 with the changes listed below.

New Features:

- Added RDS Decoder on Local UI. Appears under the “View Status” menu when RDS is enabled. See manual for more details.

Improvements/Enhancements:

- Improved system stability and network stability/connectivity.
- Improved stability for streaming audio and audio files.
- Improved SNMP v2c compliance.
 - New VS and Nautel Base MIBs are available. To ensure SNMP functionality following upgrade to 5.2, **the new MIBs must be loaded onto your SNMP client.**

Removed/Retired Features:

- As part of SNMP v2c compliance, 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:

- Fixed bug where the LMS filter would go back to the default response filter every time there was a preset change; this would negate any pre-loaded Equalization coefficients. Note: Post upgrade, previously loaded equalization coefficients do not require reloading.
- Improved operating system logging to reduce memory consumption.
- Fixed issue where the transmitter would boot up using a different IP than what was set and stayed at that IP until manually changed.
- Fixed issue where the Audio Player would restart the current song when the NextGenServer was restarted.

Known Issues:

- 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 alarms is not impaired.



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- If you have an active preset with the first created stream as the Audio Source and another preset with the first created playlist as the Audio Source and switch to the second preset, the stream will continue to modulate due to both the playlist and stream having the same order value. See workaround.
- RDS Decoder is not available in VS transmitters with HD exciters set as the active exciter.

Workarounds:

- Create another stream that has a different order value than the desired playlist and then switch to that stream from the current stream and then switch back to the desired playlist. The same goes for switching from a playlist to a stream.

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.

VS Series Software 4.4.1

General Remarks:

VS Series Software Version 4.4.1 is a Software update suitable for Nautel VS Series transmitters.

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: This version shares the functionality of 4.4 with the changes listed below.

Bug Fixes:

- Fixed an issue with the ramp-up in VS2.5 systems which, when certain variants of the power supplies were installed, would cause the system to flag them as failed and halt the system until the system was reset with a power cycle.
- Fixed a bug with UECP packet reception that would cause packets that contained byte stuffing to be received in error and discarded.
- Fixed a timing issue in VS1 systems that, under certain conditions, cause spikes in the RF output to the IPA, resulting IPA failures.

Known Issues:

- MPX is available as a main audio source on the VS150C. Selection it will not produce any modulation, as the VS150C lacks the hardware to use MPX as a source.
- MPX over AES is not available as a main audio source on the VS150C.

Installation Considerations:

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



VS Series Software 4.2.6

General Remarks:

VS Series Software Version 4.2.6 is a **SIGNIFICANT** Software update suitable for all Nautel VS Series transmitters. We recommend upgrading your transmitter(s) to this latest release DURING THE NEXT REGULARLY SCHEDULED SITE INSPECTION.

You can download VS Series Software Version 4.2.6 [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: This version shares the functionality of 4.2.5 with the changes listed below.

Bug Fixes:

- Fixes issue in RDS Section where UECP handling code was not properly handling byte stuffing.
- Fixes VS1 IPA reliability issue related to improper timing of RF drive attenuator adjustments.
- Adjusted command signal timing of UG69 power supply at AC on to ensure stable establishment of DC output voltage.

Installation Considerations:

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

VS Series Software 4.4

General Remarks:

VS Series Software Version 4.4 is a **CRITICAL** Software update suitable for Nautel VS Series transmitters. We recommend upgrading your transmitter(s) to this latest version IF YOU ARE EXPERIENCING NETWORK CONNECTION DROPOUTS THAT DO NOT RECOVER.

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: This shares the functionality of 4.3.1 with the changes listed below.

New Features:

- HD PowerBoost is now licensed by default on all VS transmitters.

Improvements/Enhancements:

- Substantially improved network reconnection in the case of network drops.
- Increased the number of connection retry attempts in the case of a lost Shoutcast connection.
- Adjusted Audio Player log rotation settings.

Bug Fixes:

- Restored communication with the VS Transfer Controller.
- VS150C users can once again select main audio sources.
- Changed the default IPA Power setpoint on the VS1 from 75W to 37.5W
- Adjusted the remote power increment/decrement step size on VS1 from 10% to a more appropriate 1% of max power.
- Changed the default RDS injection level from 0% to 5%.
- PTY text is now being sent properly in RDS.
- RDS Current Time will now only increment 1 minute for every actual minute.
- Eliminated excessive Audio Player logging.
- The Custom Input Severity drop-down box under Remote Inputs no longer gets stuck open.
- TX_ALARM_VIRTUAL_INTPUT_8 will no longer show up as an alarm name in VS Status or Logs.
- Pressing the "Apply" button within the Remote Inputs page of the Remote I/O no longer causes an error popup.
- Fixed a minor error that could occur if one user was looking at Remote I/O while another was modifying it.
- The Audio Processor Distortion tab has been restored.
- Audio Processor preset widgets on the distortion tab now all appear correctly.
- Fixed a number of typos in the AUI.
- The SNMP system log is now cleared during the upgrade procedure.

Known Issues:

- MPX is available as a main audio source on the VS150C. Selection it will not produce any modulation, as the VS150C lacks the hardware to use MPX as a source.
- MPX over AES is not available as a main audio source on the VS150C.



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Installation Considerations:

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



Nautel VS Series Software Release Notes

VS Series Software 4.3.1

General Remarks:

VS Series Software Version 4.3.1 is a **SPECIAL** Software update suitable for all Nautel VS Series transmitters. We recommend upgrading your transmitter(s) to this latest version IF YOU ARE EXPERIENCING NETWORK CONNECTION DROPOUTS THAT DO NOT RECOVER.

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: This shares the functionality of 4.3 with the changes listed below.

Improvements/Enhancements:

- Restores some missing utility files. This resolves some previously unrecovered network connection drops.

Installation Considerations:

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

VS Series Software 4.3

General Remarks:

VS Series Software Version 4.3 is a Software update that is **NOT RECOMMENDED** for use.

Note: This shares the functionality of 4.2.5 with the changes listed below.

New Features:

- This release introduced a new SNMP agent, one which adheres correctly to the SNMP standard. Issues surrounding invalid GETs, the inability to walk the OID tree, and including multiple commands in a single packet have been resolved. As well, the MIB data has been cleaned up substantially.
- The Oscilloscope instrument has been implemented in VS. See manual for details
- Nautel's Audio Backup feature has been implemented in VS. See manual for more details.
- Nautel's Simple Site Control has been implemented in VS. See manual for more details.
- Nautel's Spectrum/Efficiency Optimizer has been implemented in VS. See manual for more details.
- VS now supports PS Scrolling. A number of other minor RDS fixes and improvements have also been implemented. See manual for more details.

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 6 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 the 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 remote-enabled.
- Corrected Heatsink Temperature meter upper limit.
- Minor UI consistency changes.
- The Transfer Ctrl Comms alarm now displays properly on VS.
- Fan Speed meter ranges have been adjusted for VS.
- Fixed a typo in Critical Parameters "Settings" output.
- Resolved some display issues around available selections in the remote I/O screen.



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- Corrected available preset fields when Audio Player->AES2 is selected as the audio source.
- Renamed 'Main Mod Adjust' option to read 'Main Audio Gain Adjust'.
- Renamed 'Secondary Source' to 'Audio Player Source' in the presets when the audio source is 'Audio Player->AES 2'.
- Renamed preset field 'Dynamic' to 'Dynamic PTY'.
- Renamed the Remote I/O->Analog Outputs columns for clarity.
- The Mod Loss Timeout action 'None' has been renamed to 'Alarm Only', to more accurately reflect actual behaviour.
- 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'.
- The VS alarm "ARM Not Responding" has been renamed to "Host Not Responding".

Known Issues:

- Unable to remotely control transmitter via SNMP. SNMP SET commands fail with "No Such Name" error. SNMP monitoring functions perfectly.
- Communication failure with VSTC. "Transfer-Controller COMMS Fail" alarm appears.

Installation Considerations:

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