

## GV Series Software 5.1.0

### General Remarks:

GV Software Version 5.1.0 is a Software update only suitable for Nautel GV transmitters that use the NAC118 controller.

This release is considered **CRITICAL** 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 GV Series Software Version 5.1.0 [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 IS15006A, *GV Series – Burning Compact Flash Card* and IS19013, *GV Series – Burning OS files on SSD*. Please be sure to review and understand the complete set of instructions prior to beginning your upgrade.

**WARNING: This release is only for GV transmitters with the UB97 (NANO-PV-D5251-R10) SBC (identified by the PS/2 port labelled “Keyboard/Mouse” and CF card port labelled “Compact Flash”). DO NOT install a TGZ that has a “+UB118” reference as this will cause the AUI to not connect and will cause system reboots. Resolving this issue will require a re-imaging of the transmitter’s CF card/SSD.**

### New Features:

- Added MP11 support.
  - Refer to IS22007, *GV Series – Compatibility and Power Capability for GV SW 5.1.0 and Newer* for MP11 power and efficiency information.
- Added HD Carrier Protect Filter to HD PowerBoost.
  - Refer to IS22006, *GV Series – Changing the HD Carrier Protect Filter* to configure the HD Carrier Protect Filter.

### Known Issues:

- 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 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).
- The error messages for both “MPX Peak” and “MPX SCA Peak” both refer to “Int. SCA1 Peak” and “Int. SCA2 Peak” respectively and vice versa. No change to functionality.
- The range for both the Main Audio Low Trip Level and SCA Audio Low Trip Level in the AUI are both -100dB to -3dB when they should be -100dB to 0dB. The levels cannot be set higher than -3dB in the AUI. See Workaround (2).
- The span for the Spectrum tool will only go as low as 100kHz instead of the labelled minimum of 10kHz.
- The resolution bandwidth for the Spectrum tool will only go as low as 300Hz instead of the labelled minimum of 75Hz.



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## 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. Using the UI, both Main Audio Low Trip Level and SCA Audio Low Trip Level values can be set from -100dB to 0dB.

## Installation Considerations:

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

## GV Series Software 5.0.0

### General Remarks:

GV Series Software Version 5.0.0 is a Software update suitable for all Nautel GV Series transmitters.

This release is considered **CRITICAL** for those who 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.

**Note: As a result of this release, Nautel's MIBs have been modified to meet stricter criteria for SNMP v2c compliance, and therefore, as part of the upgrade process, ensure your MIBs are also updated.**

You can download GV Series Software Version 5.0.0 along with the new Nautel Base MIB and GV MIB [here](#).

Software Upgrade procedures can be found in IS15006A, *GV Series – Burning Compact Flash Card* and IS19013, *GV Series – Burning OS files on SSD*. Please be sure to review and understand the complete set of instructions prior to beginning your upgrade.

**Note: Multiple software upgrades may be required to complete the upgrade process.**

### Improvements/Enhancements:

- Improved out-of-band spectral performance, specifically in IBOC modes of operation.
- Improved stability for streaming audio and audio files.
- Improved system stability and network stability/connectivity.
- Increased the default RDS Injection Level from 0% to 5%.
- 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.
  - Trap 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 functionality.
- 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, trap OIDs will be placed within their own groups.

### Removed/Retired Features:

- The gvControllerIncDecPower OID has been deprecated – use the gvControllerSetPower 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:

- Critical Parameters now records the exciter IBOC Power Calibration values correctly.
- Critical Parameters now records Forward Scale Factor values for 88, 93, 98, 103 and 108MHz correctly.
- Capture Settings in Critical Parameters now works correctly.
- Renamed "Exc Low" and "Exc High" to "RF Drive Low" and "RF Drive High" under Thresholds in the Controller UI and in Thresholds under Capture Settings in the AUI.
- Changed "2-Slope Limiter" to "L/R Limiter" in the UI.
- Changed RDS Alternative Frequency range from "87.6MHz to 107.9MHz" to "87.5MHz to 108.0MHz".
- Changed the Maximum Power Setpoint for GV3.5 in the UI from 4.150kW to 4.125kW in order to align with AUI limit.
- SNMP set requests while Local-only mode no longer cause the SNMP Agent to lock-up.
- Fixed an issue where the MPX Calibration Value and MPX SCA Calibration Value would always share the same value.
- Fixed a bug where the User couldn't switch the Main Exciter from A to B or vice versa using the UI.
- Fixed an issue that disallowed SNMP logs to rotate correctly.
- Fixed an issue where the AUI would go back to the default read/write strings for SNMP if the transmitter was rebooted.
- 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
- The following options no longer appear in Other Settings tab when MPX or MPX Over AES are selected as the Audio Source:
  - Pilot Level
  - Pilot 1PPS Sync
  - Pilot Sync Phase
- Fixed various typos.

## Known Issues:

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- 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).
- The error messages for both "MPX Peak" and "MPX SCA Peak" both refer to "Int. SCA1 Peak" and "Int. SCA2 Peak" respectively and vice versa. No change to functionality.
- The range for both the Main Audio Low Trip Level and SCA Audio Low Trip Level in the AUI are both -100dB to -3dB when they should be -100dB to 0dB. The levels cannot be set higher than -3dB in the AUI. See Workaround (2).



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- The span for the Spectrum tool will only go as low as 100kHz instead of the labelled minimum of 10kHz.
- The resolution bandwidth for the Spectrum tool will only go as low as 300Hz instead of the labelled minimum of 75Hz.

## 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. Using the UI, both Main Audio Low Trip Level and SCA Audio Low Trip Level values can be set from -100dB to 0dB.

## 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.

## GV Series Software 4.5

### General Remarks:

GV Series Software Version 4.5 is a **MINOR** Software update suitable for all Nautel GV Series transmitters but intended specifically for the GV60. We recommend upgrading your transmitter(s) to this latest release DURING THE NEXT REGULARLY SCHEDULED SITE INSPECTION.

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 features support for the GV60.

### Improvements/Enhancements:

- Substantially improved network reconnectivity in the case of network drops.
- VSWR Meter now displays “Infinite” on the AUI and UI when a VSWR of greater than 10:1 is observed.
- In the Factory Settings menu, the Exciter Power menu is now Exciter PA Power.
- Exciter PA Power reading was 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 LVPS power 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
  - Ref MER LSB
- Updated the Fast SWR Shutback Threshold calculations to improve accuracy and remove transmitter model dependencies.
- Increased the number of connection retry attempts in the case of a lost Icecast connection.
- Improved the accuracy of the pretty meters.

### Bug Fixes:

- SNMP Set requests while in local-only mode no longer cause the SNMP subsystem to hang.
- Eliminated excessive Audio Player logging.
- Eliminated excessive SNMP Agent logging.
- Adjusted the allowable AUI limits of the Main/Backup Audio Gain Adjust field to match the actual limits.
- The Custom Input Severity drop-down box under Remote Inputs no longer gets stuck open.
- Pressing the “Apply” button within the Remote Inputs page of 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.
- Older system logs are now being purged during upgrades as they provide little value and potentially occupy a lot of space.
- Fixed a number of typos.



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## 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.



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## GV Series Software 4.4.1

### General Remarks:

GV Series Software Version 4.4.1 is a **SIGNIFICANT** Software update suitable for all Nautel GV Series transmitters. We recommend upgrading your transmitter(s) to this latest release DURING THE NEXT REGULARLY SCHEDULED SITE INSPECTION.

You can download GV Series Software Version 4.4.1 [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.

### Improvements/Enhancements:

- The RF Modules page for FM products has been modified to improve TX responsiveness when viewing that page.

### 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.



## GV Series Software 4.4

### General Remarks:

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

You can download GV Series Software Version 4.4 [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.

This release marks a significant shift in our development process that should streamline future updates. Most functionality is largely unchanged, though SNMP in particular has been greatly improved. Further details are 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.

### Improvements/Enhancements:

- Remote Output logic levels now change in realtime 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 Notification 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.
- Fixed a typo in Critical Parameters “Settings” output.
- Resolved some display issues around available selections in the Remote I/O screen.
- 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”.



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- Renamed “Secondary Source” to “Audio Player Source” in the presets when the audio source is “Audio Player -> AES2”.
- 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 from “Enabled/Disabled” to “Dynamic/Static”.
- The RDS preset Stereo options have been renamed from “Enabled/Disabled” to “Stereo/Mono”.
- Updated Exciter Fan Fail function to reduce exciter output power to 10W to increase likelihood of remaining on-air at reduced transmitter output power (still changes over to standby exciter if applicable). The exciter heatsink temperature exceeding 85C will still inhibit the transmitter output, recovering when the temperature drops below 75C.

## 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.