GV Series Software 5.2.0

General Remarks

GV Series Software Version 5.2.0 is a Software upgrade suitable for all Nautel GV Series transmitters (**excluding GV60**) that use the NAC118*, NAC124, and NAC124A controllers.

For those who do not require any of the bug fixes/improvements identified below, are satisfied with current transmitter behaviour or require any of the unimplemented features, do not upgrade to this version.

You can download GV Series Software Version 5.2.0 here.

Upgrade Considerations

Upgrade File Compatibility

- For GV3.5 to GV40s using an NAC118* controller (identified by the PS/2 port and CF card port), use:
  - **gv.5.2.0.1+UB97.tgz** for software upgrade
  - **GV_SW_5.2.0.1+UB97.img** for OS image
- For GV3.5 to GV40s using the NAC124 or NAC124A controllers (identified by the HDMI-to-VGA adapter connected to the SBC), use:
  - **gv.5.2.0.1+UB118.tgz** for software upgrade
  - **GV_SW_5.2.0.1+UB118.img** for OS image

Upgrade Procedure

Prior to performing a software upgrade, please perform an evaluation of the transmitter's rack boards (Module Control/Interface PWB) to ensure that the transmitter is eligible to upgrade in its current state using the System Health Eligibility Evaluation Program 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 for NAC118* controllers, refer to IS15006A, *GV Series – Burning Compact Flash Card* and IS19013, *GV Series – Burning OS files on SSD*. For NAC124 and NAC124A controllers, refer to IS23002, *GV Series with NAC124 – Burning OS Files to SSD_iss1.0*. Please be sure to review and understand the complete set of instructions prior to beginning your upgrade.

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

Nautel does not recommend downgrading to previously released software.

Added

- Added support for the NAFP109B/01 power probe changing to 219-6524, Refld Power Probe PWB Assy and 219-6526, DC Refld Power Probe PWB Assy.
  - Added RF Probe option in the HW Config menu under System Settings in the controller's UI with the following options:
    - Version 0 (All probes prior to NAFP109B/01)
    - Version 1 (NAFP109B/01)
  - Upgrading to GV SW 5.2.0 will set the default RF Probe option to Version 0.
  - For more information about the NAFP109B/01 power probe, please refer to the *Operating the Transmitter* section of the transmitter's *Operations & Maintenance Manual*.
- Added support for the VS-TC-HP Transfer Controller.

- To enable support for the VS-TC-HP, the Transfer Control Enable option has been added to the Controller's UI (User Interface) User Settings menu.
- VS-TC-HP-related settings are now shown in the UI when Transfer Control is enabled.
- VS-TC-HP-related meters are now shown in the UI when Transfer Control is enabled.
- VS-TC-HP-related alarms are now shown in the UI when Transfer Control is enabled and when the alarms become active.
- New controller-based Transfer Controller Communications alarm when Transfer Control is enabled and the transmitter loses communication with the VS-TC-HP.
    - It is also logged in the AUI (Advanced User Interface) and the UI.

Changed

- The Rack 1 Sync Required alarm will now be triggered if the transmitter's controller version is 2.11.0.2 and the backplane version is **not** 1.2.0.1. This will inhibit RF operation.

Removed

- Removed MP11 functionality due to some setup scenarios causing undesired audio artifacts.

Known Issues

- If a connected VS-TC-HP has Dummy Load Interlock functionality installed, the Dummy Load Interlock Open alarm shows as "unused_2_6" in the controller's UI.
- 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.
    - 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.
- 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 -100 dB to -3 dB when they should be -100 dB to 0 dB. The levels cannot be set higher than -3 dB in the AUI.
    - Using the UI, both Main Audio Low Trip Level and SCA Audio Low Trip Level values can be set from -100 dB to 0 dB.
- The span for the Spectrum tool will only go as low as 100 kHz instead of the labelled minimum of 10 kHz.
- The resolution bandwidth for the Spectrum tool will only go as low as 300 Hz instead of the labelled minimum of 75 Hz.

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.

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:

- 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.

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.