N4010A Wireless Connectivity Test Set Firmware Revision History

October 23rd 2012

Revision A.05.06.02 – October 18th 2012 - Maintenance release

Please note:
- Bluetooth® & Wireless LAN Options are supported in this release.
- The latest Firmware Upgrade Utility (version 2.1.7) is required to install this firmware.

Enhancement:
- Added support for a new version of the RF Link Subsystem Assembly ("LSS") board.

Other enhancements/changes
- Added an error-checking process at Firmware Upgrade Utility (version 2.1.7) that prevents the firmware from being downgraded to any version older than A.05.06.02 if the new RF LSS board is present.

IMPORTANT NOTES:
- Instruments that use the new RF LSS board must not be downgraded to firmware older than revision A.05.06.02 – doing so may cause the N4010A to generate error messages, fail to operate correctly, or make inaccurate measurements.
- Version 2.1.7 of the upgrade utility eliminates this risk by checking the RF LSS version before attempting to downgrade the firmware.
- If you attempt to downgrade below A.05.06.02 using version 2.1.7 of the upgrade utility, and it detects the new RF LSS board, it will display the error “The selected N4010A is not compatible with firmware revisions prior to A.05.06.01”
- Please note that the version of RF LSS board cannot be checked via either the Front Panel or any SCPI command.
  - The LSS information that is displayed, and can be queried, is for the Baseband portion of the LSS.

Revision A.05.05.01 – March 9th 2012 - Maintenance release

Please note:
- Bluetooth® & Wireless LAN Options are supported in this release.
- The latest Firmware Upgrade Utility (version 2.1.4) is required to install this firmware.

Defects Fixed:
- Resolved an intermittent time-out / hang-up issue that was related to Bluetooth Audio Generation and Analysis (Option 113).
Enhancement:
- Added support for Bluetooth Low Energy Tx/Rx (Option 109).

Revision A.05.05.00 – February 9th 2012 - Maintenance release

Please note:
- Bluetooth® & Wireless LAN Options are supported in this release.
- The latest Firmware Upgrade Utility (version 2.1.4) is required to install this firmware.

Enhancement:
- The Bluetooth® functionality of A.05.03.16 included in this release.

Revision A.05.04.01 – November 10th 2011 - Maintenance release

Please note:
- Only Wireless LAN options are supported in this release. Customers using Bluetooth® options 101, 105, and 107 should not install this release.
- The latest release supporting Bluetooth® options is A.05.03.16.
- The latest Firmware Upgrade Utility (version 2.1.4) is required to install this firmware.

Enhancement:
- Added support for a new version of the Link Subsystem Assembly (“LSS”) board.

Other enhancements/changes
- Added an error-checking process that prevents the firmware from being downgraded below A.05.04.01 if the new LSS board is present.

IMPORTANT NOTES:
- Instruments that use the new LSS board cannot be downgraded to firmware older than revision A.05.04.01 – doing so may prevent the unit from booting up, with no means of recovery.
- Version 2.1.4 of the upgrade utility eliminates this risk by checking the LSS version before attempting to downgrade the firmware.
- The LSS board number can also be checked via the front panel by pressing the following keys: System → Service → Hardware Info
- If the LSS description includes the term “N4010-60030”, then the new version of the board is present. If this term is different (for example, “N4010-60012”), then an older version of the board is present.
Revision A.05.03.16 – February 7th 2011 - Maintenance release

Please note:
- Bluetooth® & Wireless LAN Options are supported in this release.
- The latest Firmware Upgrade Utility (version 2.0.16) is required to install this firmware.
- WLAN Test Suite users should use version 5.5.2, or later, of the API with this release of firmware (using version 6.51, or later, of the API will give improved measurement speed).

Defects Fixed:
- The default setting for command :LINK:CONFigure:FSMaccuracy:IQOFfset[:STATe] has been changed from OFF to ON.
  - When the command was introduced, the default setting of OFF was chosen in error.
  - Prior to A.05.03.15, the default setting for this was ON.
  - Changing the default back to ON ensures there are no compatibility issues between the N4010A firmware and existing customer test code.

Revision A.05.03.15 – January 15th 2011 - Maintenance release

Please note:
- Bluetooth® & Wireless LAN Options are supported in this release.
- The latest Firmware Upgrade Utility (version 2.0.16) is required to install this firmware.
- WLAN Test Suite users should use version 5.5.2, or later, of the API with this release of firmware (using version 6.51, or later, of the API will give improved measurement speed).

Enhancement:
- Added command :LINK:CONFigure:FSMaccuracy:IQOFfset[:STATe] to control/query IQ offset compensation during Bluetooth CFSMA Tests.
  - By default this setting is OFF.
  - This setting is not available via the Front Panel. It can only be set via the remote command above, is not remembered in SAVE/RECALL states, and is not retained following a power cycle.

Revision A.05.03.14 – November 12th 2009 - Maintenance release

Please note:
- Bluetooth® & Wireless LAN Options are supported in this release.
- The latest Firmware Upgrade Utility (version 2.0.16) is required to install this firmware.
- WLAN Test Suite users should use version 5.5.2, or later, of the API with this release of firmware (using version 6.51, or later, of the API will give improved measurement speed).

Defects fixed:
• Resolved an intermittent hang-up when the Bluetooth EDR Relative Power measurement was used in a test sequence.

Revision A.05.03.13 – October 21st 2008 - Maintenance release

Please note:
• Bluetooth® & Wireless LAN Options are supported in this release.
• The latest Firmware Upgrade Utility (version 2.0.16) is required to install this firmware.
• WLAN Test Suite users should use version 5.5.2, or later, of the API with this release of firmware.

Enhancement:
• Improved power control tracking to prevent the N4010A from sending redundant commands to the DUT when it is already at maximum/minimum power levels.

Revision A.05.03.12 – October 1st 2008 - Maintenance release

Please note:
• Bluetooth® & Wireless LAN Options are supported in this release.
• The latest Firmware Upgrade Utility (version 2.0.16) is required to install this firmware.
• WLAN Test Suite users should use version 5.5.2, or later, of the API with this release of firmware.

Enhancement:
• Added support for a new DSP that will be used on the Link Subsystem Assembly (“LSS”).

Other enhancements/changes
• Added an error-checking process that prevents the firmware from being downgraded below A.05.03.12 if the new DSP is present.

IMPORTANT NOTES:
• Instruments that use the new DSP cannot be downgraded to firmware older than revision A.05.03.12 – doing so may prevent the unit from booting up, with no means of recovery.
• Version 2.0.16 of the upgrade utility eliminates this risk by checking the DSP version before attempting to downgrade the firmware.
• The DSP version can also be checked via the front panel by pressing the following keys: System → Service → Hardware Info
• If the “LSS” description includes the term “HW=2008T4”, then it is using the new DSP. If this term is different (for example, “HW=2001T4”), then it is using the older DSP.
Revision A.05.03.10 – July 18th 2008 - Maintenance release

Please note:
- Bluetooth® & Wireless LAN Options are supported in this release.
- The latest Firmware Upgrade Utility (version 2.0.9) is required to install this firmware.
- WLAN Test Suite users should use version 5.4.5 of the API with this release of firmware.

Enhancement:
- Implemented the auto-answer enable/disable feature.

Defects fixed
- Pre-defined sequences did not run all tests.
- Resolved a reliability issue with the firmware for the DAP board. Prior to this fix, the DAP board could enter a state whereby the receiver noise floor would appear to be outside the spectral mask limits.

Revision A.05.03.05 – April 8th 2008 - Maintenance release

Please note:
- Bluetooth® & Wireless LAN Options are supported in this release.
- The latest Firmware Upgrade Utility (version 2.0.9) is required to install this firmware.
- WLAN Test Suite users should use version 5.4.5 of the API with this release of firmware.

Defects fixed
- The input power setting has been fixed to match the 25 dBm value displayed on the front panel following a power-cycle.

Revision A.05.03.04 – January 25th 2008 - Feature release

Please note:
- Bluetooth® & Wireless LAN Options are supported in this release.
  - The Bluetooth improvements introduced in releases A.04.04.03, A.04.05.02, and A.04.05.03 have been included in this release.
- The latest Firmware Upgrade Utility (version 2.0.9) is required to install this firmware.
- WLAN Test Suite users should use version 5.4.4 of the API with this release of firmware.

New features
- WLAN RF frequency resolution has been improved from 1 MHz to 250 KHz.

Revision A.05.02.03 – August 27th 2007 - Feature release
Please note:
- Bluetooth® & Wireless LAN Options are supported in this release.
  - However, the Bluetooth measurement speed improvements introduced in release A.04.04.03 are not yet included with this release, but are scheduled for a subsequent build.
- The latest Firmware Upgrade Utility (version 2.0.9) is required to install this firmware.
- WLAN Test Suite users should use version 5.3.6 of the API with this release of firmware.

New features
- This firmware supports the new features implemented in the N4010A WLAN Test Suite Software (API). Refer to the N4010A Wireless Connectivity Test Set WLAN Test Suite Software Revision History document for more details.

Revision A.04.05.03 – May 16th 2007 - Feature release – Bluetooth Only

Please note that only Bluetooth® Options are supported in this release. Customers using WLAN Options 102, 103, 104 and 204 should not install this release.

The latest release supporting Wireless LAN options is A.05.01.01.

Please note:
- The latest Firmware Upgrade Utility (version 2.0.9) is required to install this firmware.

Defects fixed
- Variation in DeltaF2 measurement results now resolved.

Revision A.04.05.02 – March 27th 2007 - Feature release – Bluetooth Only

Please note that only Bluetooth® Options are supported in this release. Customers using WLAN Options 102, 103, 104 and 204 should not install this release.

The latest release supporting Wireless LAN options is A.05.01.01.

Please note:
- The latest Firmware Upgrade Utility (version 2.0.9) is required to install this firmware.

New features
- Measurement speed improvements.

Defects fixed
- Fixed hang up when activating/de-activating Headset Profile whilst disconnecting from a call.
• Fixed activate/de-activate and call/end call menu malfunction in Headset Profile Audio Gateway role.

Revision A.05.01.01 – January 29th 2006 - Maintenance release

Please note:
• Bluetooth® & Wireless LAN Options are supported in this release.
  o Please note that the Bluetooth measurement speed improvements introduced in release A.04.04.03 are not yet included with this release, but are scheduled for a subsequent build.
• The latest Firmware Upgrade Utility (version 2.0.7) is required to install this firmware.
• WLAN Test Suite users should use version 5.1.9 of the N4010A WLAN Test Suite with this release of firmware.

Defects fixed
• Fixed IQ balance calibration error

Revision A.05.01.00 – November 23rd 2006 - Feature release

Please note that only WLAN Options (102, 103, 104, and 108) are supported in this release. Customers using Bluetooth® Options 101, 105, 106, 107, 112, and 113 should not install this release.

Please note:
• The latest Firmware Upgrade Utility (version 2.0.7) is required to install this firmware.
• Version 5.1.6 of the N4010A WLAN Test Suite should be used with this release of firmware.

New features
• Support added for 802.11n MIMO

Revision A.04.04.03 – November 23rd 2006 - Feature release

Please note that only Bluetooth® Options are supported in this release. Customers using WLAN Options 102, 103, 104 and 204 should not install this release.

Please note:
• The latest Firmware Upgrade Utility (version 2.0.7) is required to install this firmware.
New features
- Overall measurement speed improvements
- Predefined Test Plans (PTP) for EDR added
- Changed RPOW setting parameter to enable single power level measurement
- Changed default POLL interval to ‘2’ from ‘40’

Defects fixed
- Fixed hang up when Stop button pressed during Predefined Test Plan ‘0’
- Fixed SCAN incorrectly active after *RST when Headset Profile active
- Removed 2 and 3 slot EDR packets
- Disabled the effect of RPOW Max and Min Power parameter when not performing Max or Min Power Control

Revision A.04.03.04 – Sept 4th 2006 - Feature release

Please note:
- Bluetooth® & Wireless LAN Options are supported in this release.
- The latest Firmware Upgrade Utility (version 2.0.7) is required to install this firmware.
- WLAN Test Suite users should use version 4.0.2 of the N4010A WLAN Test Suite with this release of firmware.

New features
- Impairments for EDR packets added
- Whitening for EDR packets added

Other enhancements/changes
- Support for WLAN API version 4.0.2

Revision A.04.02.01 – June 15th 2006 - Maintenance release

Please note:
- Bluetooth® & Wireless LAN Options are supported in this release.
- The latest Firmware Upgrade Utility (version 2.0.7) is required to install this firmware.

New features
- None.

Defects fixed
- Fixed an observed measurement speed reduction issue.

Other enhancements/changes
- Support added for new mainboard.
Revision A.04.01.02 – May 17th 2006 - Feature release

Please note:
- Bluetooth® & Wireless LAN Options are supported in this release.
- The latest Firmware Upgrade Utility (version 2.0.2) is required to install this firmware.
- WLAN Test Suite users should use version 3.1.6a of the N4010A WLAN Test Suite with this release of firmware.

New features
- Bluetooth Enhanced Data Rate (EDR) Loopback test capability (Option 107).
- Bluetooth Headset Profile (Option 112).
- Bluetooth Audio Analyzer/Generator (Option 113 – includes and supercedes Option 111).

Defects fixed
- None.

Other enhancements/changes
- Added support for new Link Sub-system hardware (N4010-60012).
- Added support for new Frequency Extension hardware (N4010-61049).
- Option 110 extended connectivity now included.

IMPORTANT NOTE:
If an instrument contains either or both of these new assemblies it should not be downgraded to a firmware revision earlier than A.04.01.02; doing so may affect the operation of the instrument. Instrument hardware information can be displayed on the front panel by pressing the following keys:
System → Service → Hardware Info

Revision A.03.01.02 – November 23rd 2005 - Maintenance release

Please note:
- Bluetooth® & Wireless LAN Options are supported in this release.
- The latest Firmware Upgrade Utility (version 2.0.1) is required to install this firmware.
- WLAN Test Suite users should use version 3.1.3a of the N4010A WLAN Test Suite with this release of firmware.

New features
- None.

Defects fixed
- Fixed an issue that occurred when MaxSymbolsUsed was set to more than 770.
- Fixed an issue that resulted in no return from cataloguing the test set memory used for marker files.
- New Bluetooth address-based correlator to improve bit Po synchronization.
Other enhancements/changes

- None.

Revision A.03.01.01 - November 16th 2005 - Feature release
All customers are advised to upgrade to this release.

Please note that all Bluetooth® & Wireless LAN Options are supported in this release.

New feature
(All the following new features are included to support version V3.0.5 WLAN Test Suite DLL)

- Automatic scaling of different segment files in a complex sequence file.
- Non-volatile file-storage of Arbitrary (ARB) Waveform Segment & Sequence files.
- RF Blanking (blanking of carrier feed-through during segment file idle time).
- Default 802.11 specification WLAN files now in non-volatile RAM (eight OFDM data rates & 11Mbps DSSS). Also associated simple sequence files (play 1000 times).
- Marker file download to volatile or non-volatile storage.

Defects fixed
- Fixed a firmware upgrade issue that could leave the test set in an unstable state.

Revision A.02.00.25 - October 4th 2005 - Feature release
All customers are advised to upgrade to this release.

Please note that all Bluetooth® & Wireless LAN Options are supported in this release.

New feature

- *Bluetooth* Enhanced Data Rate (EDR) Tx/Rx test capability (Option 105).
- *Bluetooth* Enhanced Data Rate (EDR) Tx-Only test capability (Option 106).

Defects fixed
- Fixed a hang-up issue that could occur if the 'QoS' response was delayed.
- Fixed a burst-negative-edge triggering issue. This issue tended to generate a 'Bit p0 not found error'.

Other enhancements/changes

- Added support for N4017A (Graphical Measurement Application) Option 205.

Revision A.02.00.19 - June 27th 2005 - Maintenance release
Customers using only Bluetooth options are advised to upgrade to this release. Customers using WLAN (Wireless LAN) options, or a combination of Bluetooth and WLAN options, are advised not to upgrade to this release, as it has not been fully qualified for WLAN use. WLAN customers who upgrade to this release do so at their own risk.

New feature
Defects fixed

- Fixed a measurement synchronization issue that occurred when significant power steps or spikes were detected ahead of the packet envelope. This issue tended to generate a 'Bit p0 not found error'.
- Fixed an issue that occurred when the device under test did not support the 'QoS_setup' function. Previously the N4010A would not allow connection to these devices, reporting an 'Unsupported LMP Parameter Value' error, or a 'QoS is not supported' error. This has been resolved, and the N4010A can now connect to these devices.

Other enhancements/changes

- None.

Revision A.02.00.12 - April 22nd 2005 - Maintenance release
All customers are advised to upgrade to this release.

Please note that all Bluetooth® & Wireless LAN Options are supported in this release.

Defect fixed
Fixed a defect where Bluetooth opt 101 Testmode connections could occasionally hang and lock up the N4010A.

Revision A.02.00.11 - April 7th 2005 - New Features Added
All customers are advised to upgrade to this release.

Please note that all Bluetooth & Wireless LAN Options are supported in this release.

Earlier versions of firmware than A.00.02.11 should not be installed in instruments with options 102 / 103 from Serial Number GB45140101 and above. Installation of earlier firmware results in a loss of calibration data and re-calibration is required.

N4010A Instrument: The following features are added with this release:
- Quick calibration routine added
- Improved temperature correction

Bluetooth– Option 101: The following Bluetooth features are added with this release:
- RF Analyzer – use the test set as a tuned receiver to perform frequency and power measurements. For SCPI commands see the operating guide.
- RF Generator – use the test set as a signal generator to output a signal of specified frequency and power. For SCPI commands see the operating guide.
- Support for the N4017A Graphical Measurement Application (requires option 110).

WLAN – Options 102/103: The following WLAN features are added with this release through the N4010A WLAN Test Suite Software (API):
- Optional external 10 MHz Reference source
• CW Frequency Offset Measurement
• Test time improvements

Revision V2.0.1 or later of the N4010A WLAN Test Suite Software (API) is required to access these features and can be downloaded from http://www.agilent.com/find/n4010a.

Revision A.01.17.02 - February 4th 2005 - New Feature Added
Customers using Option 101 Bluetooth are advised to upgrade to this release. Please note that WLAN Options 102, 103, 104 and 204 are NOT supported in this release. The following Bluetooth feature is added with this release; refer to the operating guide for more information:

- The Page Scan Repetition Mode (PSRM) parameter to the remote and front panel UIs
- SCPI command, LINK:EUT:PSRMode R0|R1|R2 default R1

Revision A.01.16.05 - December 1st 2004 - Maintenance release
Customers using Option 101 Bluetooth are advised to upgrade to this release. Please note that WLAN Options 102, 103, 104 and 204 are NOT supported in this release.

Revision A.01.16.04 - November 22nd 2004 - New Features Added
Customers using Option 101 Bluetooth are advised to upgrade to this release. Please note that WLAN Options 102, 103, 104 and 204 are NOT supported in this release. The following Bluetooth features are added with this release; refer to the operating guide for more information:

- Bluetooth 1.2 identification and fast connect
- Test Groups

Revision A.01.15.05 - October 18th 2004 - New Features Added
Customers using Option 101 Bluetooth are advised to upgrade to this release. Please note that WLAN Options 102, 103, 104 and 204 are NOT supported in this release. The following Bluetooth features are added with this release; refer to the operating guide for more information:

- Bluetooth Audio I/O - Licensed Option 111 required for audio I/O.
- Pairing - Licensed Option 111 required for pairing.
- Global Power Control
- Averaging Measurements
- Test speed improvement - varies with test plan.

Defects fixed

- Test set does not respond to the INITiate command after changing the link type.
- Front panel locked after pressing the Preset key.
- Following a large number of test sequence cycles the test sequence halts presenting: Error -310 “System error ” and Error 808,”Connection timeout”. 
**Revision A.01.14.12** - December 1\(^{st}\) 2004 - Maintenance release
Customers using WLAN Options 102, 103, 104 and 204 are advised to upgrade to this release. Please note that Option 101 *Bluetooth* operation up to and including release A.01.14.02 are supported in this release.

**Revision A.01.14.11** - November 16\(^{th}\) 2004 - New Options Added
The following features are added with this release:

WLAN measurement capability provided in the following licensed options:

- Option 102 - 802.11b and 802.11g 2.4GHz WLAN tests
- Option 103 - 802.11b, 802.11g (2.4GHz), and 802.11a (5GHz) WLAN tests
- Option 104 - Arbitrary Waveform File Download

Option 101 *Bluetooth* operation up to and including release A.01.14.02 are supported in this release.

Option H01 WLAN - This firmware revision, or above, is not compatible with N4010A#H01 you should not attempt to upgrade to this version.
For H01 compatible firmware please contact PLPN_Support@agilent.com.

**Revision A.01.14.02** - September 17\(^{th}\) 2004 - Maintenance release
Customers using Option 101 *Bluetooth* are advised to upgrade to this release.

**Defect fixed**
Improvements to in-band spur performance of receiver measurements when using Agilent VSA software with connectivity option 110.

**Revision A.01.12** - August 19\(^{th}\) 2004 - Maintenance release
Customers using Option 101 *Bluetooth* are advised to upgrade to this release.

**Revision A.01.07** - June 10\(^{th}\) 2004 - Maintenance release
Customers using Option 101 *Bluetooth* are advised to upgrade to this release.

**Defect fixed**
Erroneous burst triggering when using Agilent VSA software with connectivity option 110.

**Revision A.01.02** - April 22\(^{nd}\) 2004 - First release
This is the firmware revision shipping with the Test Set at launch. *Option 101 Bluetooth* and *Option 110 Connectivity* are the only options supported by this release.

**Known Issues in this Release**
The following issues are present in this release of firmware. Future firmware updates are planned to resolve these, available to download from http://www.agilent.com/find/N4010A. To receive notification of updates, please subscribe to the Agilent e-mail update service at http://www.agilent.com/find/emailupdates.

**Transmitter Testmode Operation**
• **Behaviour** - Test sequence halts when testing in Transmitter Testmode presenting: Error 412 “measurement timeout”.
  **Recommendation** - Use only Loopback Testmode for unattended manufacturing test.

**Loopback Testmode Operation**

• **Behaviour** - Connection does not release after performing ACL tests following Testmode tests.
  **Recommendation** - Place ACL tests ahead of Loopback Testmode tests in your sequence.

• **Behaviour** - Test set does not respond to the INITiate command after changing the link type.
  **Recommendation** - Place a *WAI command in your program immediately after the LINK:TYPE command.

**General Operation**

• **Behaviour** - Front panel locked after pressing the Preset key.
  **Recommendation** - This condition occurs if the test set is preset during ‘page’. Do not preset the test set when the Status Indicator displays ‘Page’.

• **Behaviour** - Erroneous Packet Error Rates when using HV3 packets in a sensitivity test.
  **Recommendation** - Avoid the use of HV3 packets for sensitivity tests.

• **Behaviour** - Test sequence halts presenting: Error 804 “page timeout”.
  **Recommendation** - Restart the test or test sequence.

• **Behaviour** - Test sequence halts presenting: Error 402 “Max measurement retries”.
  **Recommendation** - Restart the test or test sequence.

• **Behaviour** - Failures of Power Control Test.
  **Recommendation 1** - Avoid use of BS00 and BSFF payloads.
  **Recommendation 2** - Set the test set Input Power level to 5 or 10 dBm when testing class 1 EUTs.

• **Behaviour** - Following a large number of test sequence cycles the test sequence halts presenting: Error -310 “System error ” and Error 808,”Connection timeout”.
  **Recommendation** - Power cycle the EUT.

• **Behaviour** - Error -222,”Data out of range” presented when setting the poll period to the default or lower setting.
  **Recommendation** - Query the setting using the LINK:CONF:POLL? command to ensure your setting has been accepted.

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