

# Keysight X-Series EMI Receiver N9038A

## A.17.56 Version Information

|  |                                |
|--|--------------------------------|
| Released Date:   | June, 2016                     |
| Requirements category (e.g., operating system):            | Microsoft Windows 7            |
| Requirements category (e.g., instrument software version): | None                           |
| Requirements category (other):                             | None                           |
| File Name:   | XSA_Installer_A.17.56_Win7.exe |

## New Features

- None

## Enhancements

- None

## Issues Resolved

- Fixed an issue where the Wide-Band Digital I.F. FPGA code would not update properly during the instrument software install (458481)

## A.17.55 Version Information

|  |                                |
|--|--------------------------------|
| Released Date:   | April, 2016                    |
| Requirements category (e.g., operating system):            | Microsoft Windows 7            |
| Requirements category (e.g., instrument software version): | None                           |
| Requirements category (other):                             | None                           |
| File Name:   | XSA_Installer_A.17.55_Win7.exe |

## New Features

### N9060B, Signal Analyzer Mode

- Added a query to get the left and right frequencies from N dB points instead of just being able to get the width of the band (443564)
  - Width command = :CALCulate:BWIDth | BANDwidth:RESult?
  - Left Frequency = :CALCulate:BWIDth | BANDwidth:RLEFt?
  - Right Frequency = :CALCulate:BWIDth | BANDwidth:RRIGht?
- Added support for Korean localization (453480)
- Added the installation of Keysight IO Libraries v17.2 to the instrument software update (452506)
- Added support for SYSTem:PERSONa SCPI commands (350956)
- Added support for Zero Span in Trace Zoom (454543)

## Enhancements

### General X-Series

- Updated the maximum number of Sweep Points from 40,001 to 100,001 in Swept SA and RTSA modes
- Enhanced Display Line capability by adding (4) “Freq Line” in Swept Spans and (4) “Time Line” in Zero Span when in Swept SA and RTSA modes
- Increased the range of Trigger Delay to plus and minus 60 seconds in Swept SA; the delay can only go negative in Zero Span

### N6141A, EMI Measurement Application

- Updated Limit Lines where the default amplitude units were changed from dBm to the current Y-Axis unit. The affected SCPI commands are CALC:LIM:UPP, CALC:LLIN:UPP, CALC:FSC:LLIN:UPP (444500)

### N9069A, Noise Figure Measurement Application

- Updated the RBW auto rule to improve low frequency noise figure measurements being performed below 10 MHz (442389)

### IQ Analyzer Mode

- Added the ability to control the Trigger Holdoff Type when in IQ Analyzer (389349)

### Real-Time Spectrum Analyzer Mode

- Added Waterfall (Spectrogram) to User View in Swept SA and RTSA modes (435816)

## Issues Resolved

### N9060B, Signal Analyzer Mode

- Fixed an issue where the AC coupling was incorrectly set for N9038A's with option 544 (454561)
- Fixed an issue where pressing Restart twice when attempting to re-measure would cause the MXE to lock up (455565)
- Fixed an issue where performing a Clear/Write on Trace 2 deletes Trace 1 that was set to View (455566)
- Fixed an issue where Trace Recall stops meters function and recalling multiple traces did not update to the latest trace (452895)
- Fixed an issue on MXE's with option 544 where AC coupling was incorrectly set (454561)
- Fixed an issue where the ECalPathSystemGainAlgorithm alignment can intermittently fail when using a low level input signal (441019)
- Fixed an issue where the Stop Frequency readout is in error depending upon sweep time (441749)

- Fixed an issue where the 10 MHz reference signal can be interrupted during an alignment, which can cause a PSG, Signal Generator to go unlocked (443835)
- Fixed an issue with the Gate Delay setting resolution to disallow settings less than 100ns (446717)
- Fixed an issue where the sweeps are very slow when using External Mixing relative to internal sweeps (448826)
- Fixed an issue so the MMEM:STOR:SCR command will clear any on-screen message before performing the screen dump (449845)
- Fixed an issue where a glitch can appear at the start frequency when switching from Clear Write to Max Hold (453244)
- Fixed an issue where performing recordings is not dependent on having a DP2 license (455030)
- Fixed an issue where the error history was not cleared with \*CLS (364950)
- Improved Web Control right-click support and browser scrolling anomalies (373891)
- Fixed an issue where the GPIB failed to reconnect following a SYSTem:PUP command (438952)
- Fixed an issue where the application might close when LAN is disconnected (449019)
- Fixed an issue where USB Write Protect setting does not survive a power cycle (453636)
- Fixed an issue where the application would close when SYST:COMM:LAN queries encounter networking failure (454342)
- Refined start frequency displayed on screen when stop frequency is greater than 200 kHz (428610)
- Fixed an issue where the internal gain caused an ADC over range when using option EXM, External Mixing (450408)
- Fixed an issue where the displayed trace was not updated until the end of sweep when using negative trigger delay in Zero Span (446716)

#### N6141A, EMI Measurement Application

- Fixed an issue when using EMC32 software that causes the N6141A, EMI Receiver application to stop working (444802)
- Fixed an issue where the instrument would crashed when using the EMC32 software in ESU emulation mode (454426)
- Fixed an issue where EMC32 Prescan did not finish successfully (452312)
- Fixed an issue where changing Meter's resolution bandwidth to 10 Hz caused the measurement to stop (454249)

#### N9068A, Phase Noise Measurement Application

- Fixed an issue where Auto Tune did not operate with a high power input (454394)

#### N9069A, Noise Figure Measurement Application

- Updated RBW auto rule for Low Frequency measurements (442389)

#### APD Measurement

- Fixed an issue where different results were returned in SA mode versus the APD measurement (454523)

#### Frequency Scan Measurement

- Fixed an issue with Marker Min Search when in Frequency Scan (451899)

#### Channel Power

- Fixed an issue where the frequency offset value was not recognized by Channel Power (443870)

#### Harmonics

- Fixed an issue where Sense did not engage the microwave preselector when in the Harmonics measurement (451441)

#### Occupied Bandwidth

- Fixed an issue where the frequency offset value was not recognized by Occupied BW measurements (443870)

#### IQ Analyzer

- Fixed an issue where time averaging was enabled for BW (Span) >255 MHz when in IQ Analyzer (448992)
- Fixed an issue where the bottom graph annotation were not shown on the screen when in IQ Analyzer on multi-touch models (444447)

#### Real-Time Spectrum Analyzer Mode

- Fixed an issue where RTSA Density View shows incorrect spectrum when Level Trigger is selected (439382)
- Fixed an issue in RTSA where the PvT window did not display the trace after a state was recalled (430840)
- Fixed an issue in RTSA where stored limit lines would not load (452945)
- Fixed an issue in RTSA where PvT data is missing in Tri View (442596)
- Fixed an issue in RTSA in density display where white trace fell to bottom of screen when data acquisition was paused (452999)
- Fixed an issue in RTSA where RBW was inappropriately editable (454183)
- Fixed an issue in RTSA with Save/Recall where a state saved in View, Normal is recalled in View, Density, but only for the first recall (444718)
- Fixed an issue where stream marks would not turn off when using Streaming (449376)
- Fixed an issue where Log X Axis was not supported in the Spectrogram measurement (452781)

## A.17.05 Version Information

|  |                                |
|--|--------------------------------|
| Released Date:   | February, 2016                 |
| Requirements category (e.g., operating system):            | Microsoft Windows 7            |
| Requirements category (e.g., instrument software version): | None                           |
| Requirements category (other):                             | None                           |
| File Name:   | XSA_Installer_A.17.05_Win7.exe |

## New Features

### N6141A, EMI Receiver Mode

- Added Tune and Listen capability when all Meters are turned On in the Frequency Scan measurement
- Limit Lines in Meters can now use values from Trace Limits
- Added Measure at Meters in Monitor Spectrum measurement
- Added transducer set and breaks
- Added discontinuous Limit Lines

## Enhancements

- Added Frequency X Axis scale type to be Linear or Logarithmic

## Issues Resolved

### N9060B, SA Mode

- Fixed an issue where the trace did not update when using external trigger with a sweep time greater than 10 seconds (338589)
- Fixed web browser SCPI instrument control (400268)
- Fixed an instrument crash issue when the instrument was connected to a network switch, the network switch was not connected to LAN, and the instrument was powered up (425485)
- Fixed an issue where the Backlight intensity value did not survive a power cycle (437855)
- Fixed an issue where enabling Noise Floor Extension with a slow sweep time would cause the instrument to stop for several minutes (437884)
- Fixed inconsistent error message of INST:SEL <Mode> (438954)
- Fixed an issue where Quick Save generated an error, "File name not found" (440948)
- Fixed an issue where the Limit Line editor trace did not turn red when a signal was above the limit (382455)
- Fixed an issue in ZoneSpan where the marker annotation appeared in both windows (400389)
- Fixed an issue where List Sweep returned incorrect amplitude values when the frequency was >3.6 GHz (431252)

- Fixed an issue in the ACP measurement where changing the limit line did not recalculate the Pass/Fail status (394026)
- Fixed an issue in ZoneSpan where the marker annotation appeared in both windows (400389)
- Fixed an issue where inappropriate Zero Span Delay Compensation selection was removed from Trigger menus in IQ measurements (394920)
- Fixed power unit annotation of “x dB OBW Boundaries” (432781)
- Fixed an issue where Settings Alert message was cleared in situations where multiple settings were limited (213753)
- Fixed an issue where setting the External Reference frequency via SCPI caused a momentary reference oscillator unlock message (397285)
- Fixed an issue where the Freq Counter failed to count accurately within 500 Hz of 3.6 GHz (434135)

### **IQ Analyzer Basic Mode**

- Fixed an issue in IQ Analyzer (Basic) mode where the Fixed marker would jump to a different point when switching between Normal and Delta marker (353082)
- Fixed issue in IQ Analyzer in the Complex Spectrum measurement where a Fixed Marker jumps to a different point when switching between Normal and Delta Marker (353082)

### **Real-Time Spectrum Analyzer Mode**

- Fixed Spectrogram time fidelity of Z Marker when in Density View while in RTSA mode (438450)

## N6141A, EMI Receiver Mode

- Fixed an issue where an error could occur during auto test and single measurement when using EMC32 software (393217)
- Fixed an issue with a trace spike when connecting to an instrument via a USB to GPIB adaptor when using the EMC32 software (397656)
- Fixed an issue in Monitor Spectrum measurement when in single sweep every other sweep misses the signal (398427)
- Fixed an issue in Monitor Spectrum measurement where Frequency Scan graph Y-Axis values were all "0" (414614)
- Fixed an issue in Monitor Spectrum measurement where the trace was tested to the Limit Line when Test Limits were set to Off (414997)
- Fixed an issue in Frequency Scan measurement where limit line passed with Log Frequency scale type and failed with linear (419391)
- Fixed an issue where changing the Meters frequency selected inappropriate Limit Line point (434235)
- Fixed an issue where Peak Search above threshold line failed to find a peak at the last data point (435924)
- Fixed an issue in the Click measurement with RBW coupling (437319)
- Fixed an issue in Frequency Scan measurement where high level input signals with attenuator set to Auto resulted in discontinuous trace (438929)
- Fixed an issue in the Click measurement where the measurement did not stop when the timer reached zero when the power up mode was set to last state (444441)
- Fixed an issue where the application could close when using auto range and querying TRACe:SCAN? (445214)



## A.16.17 Version Information

|  |                                |
|--|--------------------------------|
| Released Date:   | November 2015                  |
| Requirements category (e.g., operating system):            | Microsoft Windows 7            |
| Requirements category (e.g., instrument software version): | None                           |
| Requirements category (other):                             | None                           |
| File Name:   | XSA_Installer_A.16.17_Win7.exe |

### New Features

- None

### Enhancements

- **N6141A – EMI Receiver Mode**
  - Frequency Scan Measurement
    - Greatly increased the overall scan speed for EMI detectors when using the Discrete Scan Type – Required option DP2 (#196373)

### Issues Resolved

- **N9060B – Spectrum analyzer Mode**
  - Fixed issue causing the color of the trace to change unexpectedly when in View and the display Theme is changed (#407381)
  - ACP Measurement
    - Fixed possible error in noise corrections if an external USB Preamp is not plugged in when the noise correction is turned on (#421239)
  - Harmonics Measurement
    - Fixed an issue that could cause the fundamental Sense search algorithm to not set the input attenuation correctly, occasionally causing an input overload (#396032)
  - TOI Measurement
    - Fixed an issue causing the phase to be unstable when corrections are turned on and off (#402961)
- **IQ Analyzer Basic Mode**
  - Fixed an issue causing the phase to be unstable when corrections are turned on and off (#402961)

- **N6141A – EMI Receiver Mode**
  - Frequency Scan Measurement
    - Fixed an issue causing limit lines to not look correct until a scan is taken when a state is recalled (#421260)
    - Fixed an issue causing multiple peaks to be reported for each signal if more than one limit line was turned on (#427427)
    - Fixed an issue causing the trace points on either side of a peak to be found with a search instead of the peak under certain conditions when subranges are used
    - Fixed issue causing meter levels to change unexpectedly under certain conditions (#427924)
    - Fixed an issue causing the scan to stop in the middle of the display when using time domain Scan type under certain conditions (#416061)
    - Fixed an issue causing the time before a scan would start to be excessive when using the time Domain Scan Type with Noise Floor Extension turned On under certain conditions (#402614)
    - Fixed an issue causing possible application crash when using Discrete Scan Type with Noise Floor Extension turned On (#430687)
    - Fixed an issue where EMC32 and MXE did not scan if the step size was too small (#331021)
    - Fixed an issue when Aux I/O control in the Service Menu returned an incorrect value (#400286)

- **N9069A – Phase Noise Mode**
  - Log Plot Measurement
    - Fixed an issue causing possible step in noise trace if adjacent signal is present and AM Rejection is On (#394731)

## A.16.05 Version Information

|  |                                |
|--|--------------------------------|
| Released Date:   | July 2015                      |
| Requirements category (e.g., operating system):            | Microsoft Windows 7            |
| Requirements category (e.g., instrument software version): | None                           |
| Requirements category (other):                             | None                           |
| File Name:   | XSA_Installer_A.16.05_Win7.exe |

## New Features

- Added support for 64 bit option PC6 Processor assembly
- Added support for option B85 - 85 MHz Analysis Bandwidth
- Added support for option RT1 - Real-Time Spectrum Analysis

## Enhancements

### General

- Added user control of AUX I/O rear panel interface - Requires option LSN

### N9060B – Spectrum Analyzer Mode

- Swept Spectrum Analyzer
  - Increased Max Mixer Level allowable maximum value from -10 dBm to 0 dBm
- Adjacent Channel Power Measurement
  - Added Power Reference options of Reference Carrier and Total Multicarriers
  - Increased Offset Freq maximum settable value to be equal to instrument maximum stop frequency
  - Increased Integration Bandwidth maximum settable value to be equal to instrument maximum stop frequency
- Occupied Bandwidth Measurement
  - Added table to report power level and frequencies at each occupied bandwidth and x dB bandwidth boundary
- Spectrum Emission Mask Measurement
  - Increased Offset Freq maximum settable value to be equal to instrument maximum stop frequency
  - Added Sweep Type Rules options for Speed or Dynamic Range

**N6141A – EMI Receiver Mode**

- Added ability to use the Quasi-Peak detector and Average detector simultaneously for meters
- Frequency Scan Measurement
  - Increased the maximum number of scan points to 4,000,001
  - Added ability to Pause a scan immediately at any point
  - Added column for composite amplitude corrections in signal list table
  - Added ability to use the Quasi-Peak detector and Average detector simultaneously for traces
  - Added the ability to use company Logos in report generator
- Strip Chart Measurement
  - Added maximum peak frequency readout to meters
- Monitor Spectrum Measurement
  - Added maximum peak frequency readout to meters

**N9068A – Phase Noise Mode**

- Added N9068A-BFP minor enhancement tier, which includes:
  - Minimum Carrier Level setting
  - Log Plot Measurement
    - Support for Gate functionality
    - Support for 4801 trace points per sweep (601 default)
    - The ability to Export the Marker Table data

**Issues Resolved****General**

- Fixed issue causing a USB preamp to not be recognized the first time it is plugged in (#380411)
- Fixed issue causing the Web Password to return to the default value when the instrument power is cycled (#336518)

**N9060B – Spectrum Analyzer Mode**

- Fixed issue causing the source power to drop when any changes to the measurement setup are made when using option ESC, External Source Control (#388071)
- Adjusted expected sweeptime values to reflect the source specification when option UNZ (Fast Frequency Switching) is not installed in the source being used with option ESC, External Source Control (#366198)
- Fixed issue causing the instrument application to crash in 44.0 GHz instruments when Auto Tune is selected after recalling a state file that was saved from an instrument with a different hardware configuration (#378695)

- Fixed miscellaneous issues with Gate Holdoff settings (#368785, 368779, 368777, 368776)
- Fixed miscellaneous issues with Marker Table updates (#316772, 326513)
- Fixed issue causing a state saved with Normalize turned On to not recall with Normalize On (#354018)

### **N6141A – EMI Receiver Mode**

- Fixed issue causing the Save and Recall functions not to include amplitude corrections 7 and 8 (#381956)
- Frequency Scan Measurement
  - Fixed issue causing the Meas Uncal message to be displayed for no valid reason when EMC Standard is set to MIL and multiple ranges are turned on (#381426)
  - Fixed an issues causing a scan to hang when using Discrete Scan Type with Autorange set to On at the point where the attenuation value changes (#380738)
  - Fixed issue causing trace data to be repeated onscreen under certain conditions when using very long scan times (#377748)
  - Fixed issue causing the Autorange and Auto Preamp settings not to be included in saved scan table files (#376723)
  - Fixed issue causing a possible instrument application crash when doing a (Re)measure sequence with Autorange turned On with All signals selected and many signals in the list (~20) (#375984)
  - Fixed issue causing the dwell time being used not to be the value set if the Dwell Time is changed after changing the start or stop frequency under the FREQ Channel menu (#369024)
  - Fixed issue causing the CALC1:DELT1:X? remote query to return the incorrect value (#373759)
- Strip Chart Measurement
  - Fixed issue causing measurement to not always restart under certain conditions (#378937)
- Disturbance Analyzer Measurement
  - Fixed issue causing trace data to be saved in reverse order (#363345)

### **N9063A – Analog Demod Mode**

- Fixed issue causing Y-axis scale to not be rescaled properly after the scale has been changed via remote command (#373283)
- Fixed issue causing the peak deviation and carrier frequency error to be incorrect when Signaling Notch filter is on under certain conditions (#363034)

### **N9068A – Phase Noise Mode**

- Log Plot Measurement
  - Fixed issue causing the Peak / Spur Search feature to not work (#365105)

- Fixed issue causing the instrument application software to crash when the Next Spur function is selected (#365105)
- Fixed issue causing Auto Tune to intermittently miss signals ~200 MHz and less (#385777)

#### **N9069A – Noise Figure Mode**

- Fixed issue causing not all markers to turn off when All Markers Off is selected (#387888)
- Fixed issue causing external source connectivity settings not to be included in saved instrument state files (#386975)
- Fixed issue causing the marker table colors to not properly follow the instrument color theme (#380943)
- Fixed issue causing the blue scroll bar not to be displayed in Table View display (#375497)
- Added missing remote command to turn on Marker Table (#373097)

:CALCulate:<meas>:MARKer:TABLE[:STATe] OFF|ON|0|1

#### **89601B – VSA Mode**

- Fixed issue causing the Maximize window button to be grayed out and non-functional (#352558)

## A.14.62 Version Information

|  |                                |
|--|--------------------------------|
| Released Date:   | April 2015                     |
| Requirements category (e.g., operating system):            | Microsoft Windows 7            |
| Requirements category (e.g., instrument software version): | None                           |
| Requirements category (other):                             | None                           |
| File Name:   | XSA_Installer_A.14.62_Win7.exe |

### New Features

None

### Enhancements

#### N9060B – Spectrum Analyzer Mode

- Added MXG N5183B and EXG N5173B as supported instruments for option ESC, External Source Control

### Issues Resolved

#### General

- Fixed issue causing changes to amplitude correction descriptions to be made on the wrong register when more than one correction is being used
- Fixed issue causing Auto Align to be set to Off and the Alert to be set to None when selecting Mode, 89601 VSA but not loading the application
- Fixed issue causing the default file Save and Recall folders to be incorrect
- Fixed and issue with the license manager losing installed licenses when an operating system upgrade is performed
- Updated typical amplitude correction files for the 11940A & 11941A near field probes to use antenna units of dB $\mu$ A/m

#### N9060B – Spectrum Analyzer Mode

- Fixed issue causing no trace data or measurement results to be available in measurements other than Swept SA when using the remote web server
- Fixed issue causing the source to reset whenever any setting is changed while using option ESC, External Source Control
- Fixed issue causing possible glitches in the trace data when the span is greater than 100 MHz when using FFT sweep type
- Spurious Emissions Measurement
  - Fixed issue causing the Phase Noise Optimization to not be automatically set properly

**N6141A – EMI Receiver Mode**

- Frequency Scan Measurement
  - Fixed an issue causing limit line margins to not turn on and off properly with certain recalled states
  - Fixed issue causing Max and Min Hold not to work under certain conditions
  - Fixed issue causing the resolution bandwidth in the scan table to not be set below 10 Hz
  - Fixed issue causing the X scale on the display not to be set correctly when the scan table values are set below 100 Hz
  - Fixed possible instrument application crash when the X-scale values in the scan table are set below 10 Hz
  - Fixed issue causing intermittent “File name not found” error when saving a report

**N9063A – Analog Demod Mode**

- Fixed issue causing demod volume to be greatly reduced when the center frequency is changed

**N9068A – Phase Noise Mode**

- Fixed issue causing possible intermittent step in the log plot results for very small offsets

**A.14.59 Version Information**

|  |                                |
|--|--------------------------------|
| Released Date:   | November 2014                  |
| Requirements category (e.g., operating system):            | Microsoft Windows 7            |
| Requirements category (e.g., instrument software version): | None                           |
| Requirements category (other):                             | None                           |
| File Name:   | XSA_Installer_A.14.59_Win7.exe |

**New Features**

None

**Enhancements**

None

**Issues Resolved****N9060B – Spectrum Analyzer Mode**

- Fixed issue causing possible application crash when Next Peak is selected



## A.14.58 Version Information

|  |                                |
|--|--------------------------------|
| Released Date:   | November 2014                  |
| Requirements category (e.g., operating system):            | Microsoft Windows 7            |
| Requirements category (e.g., instrument software version): | None                           |
| Requirements category (other):                             | None                           |
| File Name:   | XSA_Installer_A.14.58_Win7.exe |

### New Features

#### N9063A – Analog Demod Mode

- Added Video (IF Envelope) triggering when using Attack / Release Time view for FM measurement

### Enhancements

#### N9060B – Spectrum Analyzer Mode

- Spurious Emissions Measurement
  - Decreased the Abs Start Limit and Abs Stop Limit minimum allowable value from -150 dBm to -200 dBm

#### N6141A – EMI Receiver

- EMC32 Compatibility
  - Added B24 to \*OPT? and :SYST:OPT? response for compatibility with EMC32 software
  - Automatically set the EMC standard according to the resolution bandwidth selected when certain bandwidths are selected remotely
  - Automatically set the EMC standard to CISPR when time domain scan type is selected remotely
  - Automatically set the remote data format to Real 32 when :TRAC:DATA? Scan remote query is used
  - Don't display message about AC coupling not available with option 544 instruments when Mode IDN Response is set to ESU or ESL when selected remotely

### Issues Resolved

#### General

- Fixed issue not allowing the TDS alignment to remotely return proper Pass / Fail response

#### N9060B – Spectrum Analyzer Mode

- Fixed issue causing Trace (+State) softkey to be grayed out under the Recall menu
- ACP Measurement

- Fixed issue causing Offset F on the positive side to not be displayed correctly in the upper trace window when the Offset Freq Define setting is changed from its default value

#### **N6141A – EMI Receiver Mode**

- Fixed possible instrument application crash caused by out of memory condition when making repeated remote queries for meter values
- Frequency Scan Measurement
  - Fixed issue causing saved states with the Auto Rules set to Log % of Freq to recall set to Points / RBW
  - Fixed issue causing the :TRAC:DATA? SCAN query to return data for a different number of trace points than the EMC32 software was expecting, causing the scans to take more time than needed
  - Fixed issue causing certain states from older software revisions not to be recalled properly
- Monitor Spectrum Measurement
  - Fixed issue causing the meter values not to return to the exact same value after changing settings back to original values

#### **N9063A – Analog Demod Mode**

- Fixed issue causing the FM trace not to average properly

#### **N9068A – Phase Noise Mode**

- Fixed issue causing Ext Preamp value not to be used
- Fixed issue causing states saved in continuous sweep to be in single when recalled
- Fixed issue causing possible measurement hang when minimum offset frequency is below 30 Hz

## A.14.54 Version Information

|  |                                |
|--|--------------------------------|
| Released Date:   | August 2014                    |
| Requirements category (e.g., operating system):            | Microsoft Windows 7            |
| Requirements category (e.g., instrument software version): | None                           |
| Requirements category (other):                             | None                           |
| File Name:   | XSA_Installer_A.14.54_Win7.exe |

## New Features

### General

- First software released as Keysight Technologies
  - Branding changes made to reflect Keysight Technologies instead of Agilent Technologies
  - Instruments with this disk drive image will have the default administrator password changed to: **Keysight4u!**
  - The default password for the web server changed from **agilent** to **measure4u**
  - Added \*IDN? response selection for Agilent Technologies

## Enhancements

### N9060B – Spectrum Analyzer Mode

- Increased the maximum number of sweep points to what the source can handle when using option ESC, external source control
- Added support for 802.11.ac, 802.11n, and 3GPP LTE Radio Standards for applicable power suite measurements

### N6141A – EMI Receiver Mode

- Frequency Scan Measurement
  - Speed improvements for Time Domain Scans, option TDS
- Monitor Spectrum Measurement
  - Added on-screen Meters Resolution Bandwidth indicator bars

## Issues Resolved

### General

- Fixed issue causing the instrument application to hang after performing a software update due to invalid values in the PowerOnPersistents.bin file
- Fixed issue causing the RF Preselector alignment scheduler not to start for non-recurring alignments
- Fixed issue causing scheduled RF Preselector alignments to run multiple times

- Fixed issue causing the internal alignments to fail if RF Input 2 is being used when the alignment begins
- Fixed issue causing possible noise floor conflict between noise floor extension and a USB preamp
- Fixed issue causing control of ESH2Z5 LISN Protective Earth control to be inverted
- Fixed issue causing the state of the Protective Earth control for the ESH2Z5 LISN to be switched when changing modes between Spectrum Analyzer and EMI Receiver

### **N9060B – Spectrum Analyzer Mode**

- Fixed issue causing the start time for spectrogram measurements not to be saved properly in measurement results file
- Fixed issue causing the peak search marker not to use the active trace in spectrogram view
- Fixed issue causing state of external LISN not to change according to remote control until a sweep is initiated
- Reduced possibility of ADC overload when the internal preamplifier is turned on by increasing the default input attenuator setting from 30 to 46 dB

### **N6141A – EMI Receiver Mode**

- Fixed issue causing state of external LISN not to change according to front panel or remote control until a measurement is initiated
- Fixed issue causing the arrow keys not to increment the meter frequency properly
- Frequency Scan Measurement
  - Fixed issue causing the: status:operation:condition? query to change state before entire sequence was completed
  - Fixed issue causing the “Preamp: Accy unspec'd below 100 kHz” status message to appear even when the selected frequency range is above 100 kHz
  - Fixed issue causing the amplitude units saved in an html report when the amplitude units are set to dB $\mu$ A
  - Fixed issue when moving the marker on the trace with a mouse when X Scale Type is Log
  - Fixed issue causing the scan time not to update properly when Step Control is set to Step Size & Dwell Time
  - Fixed issue causing the minimum resolution bandwidth in the Scan Table to be 10 Hz instead of 1 Hz when the EMC Standard is set to None
  - Fixed issue causing the Scan Table “dB” annotation for the Atten setting to be display on the Int Preamp row
- Monitor Spectrum Measurement
  - Fixed issue causing RPG increment of Frequency not to follow the CF Step setting
  - Fixed issue causing an auto alignment to clear and restart a max hold or single sweep trace
- Disturbance Analyzer Measurement

- Fixed issue allowing the test Frequency to be set above 1 GHz when using RF Input 2

### N9063A – Analog Demod Mode

- Fixed issue causing status message not to appear when instrument is tuned below 10 MHz when the RF input is AC coupled
- Remote command for the Adjust Atten for Min Clip feature was missing
- Fixed issue causing the rear panel analog demod output signal level to deviate from expected value as AM rate goes to 10 kHz and above
- Fixed issue causing the AF Spectrum trace to disappear when the start frequency is increased
- Moved the Signaling Notch filter setting to the Mode Setup, Filters menu

### N9068A – Phase Noise Mode

- Fixed issue causing the :FETCH:LPLot6? query to not return all of the trace data tables with certain offset conditions

### N9069A – Noise Figure Mode

- Fixed issue causing user alignment status to not be reflected correctly when a user calibration is aborted

## A.14.06 Version Information

|  |   |
|--|---|
| Released Date:   | June 2014   |
| Requirements category (e.g., operating system):            | Microsoft Windows 7<br>Microsoft Windows XP                       |
| Requirements category (e.g., instrument software version): | None  |
| Requirements category (other):                             | None  |
| File Name:   | XSA_Installer_A.14.06_Win7.exe<br>XSA_Installer_A.14.06_WinXP.exe |

## New Features

### N9060B – Spectrum Analyzer Mode

- Added support for remote only LISN control – Requires option LSN

## Enhancements

### General

- Modified effect on the internal preamp state when a USB preamp is used – Spectrum Analyzer and Noise Figure modes only
  - Internal preamp will not be forced on when USB preamp is connected

- Internal preamp state can be changed when USB preamp is usedHeading 3 (if necessary)

### **N6141A – EMI Receiver Mode**

- Autorange for meters will start at 0 dB if Autorange Atten 10 dB Minimum is Off

## Issues Resolved

### **General**

- Fixed issue causing not enough sections of the internal alignments to be run if ESC is pressed to abort the instrument power on alignments
- Fixed issue that could cause USB preamp calibration data to not be loaded properly when the preamp is connected
- Fixed intermittent issue causing instrument application software to hang when saving files
- Fixed issue causing the instrument not to be recognized remotely when being controlled via the USB interface after the controlling computer wakes from sleep mode

### **N9060B – Spectrum Analyzer Mode**

- Fixed issue causing the Average Count in saved .csv trace files to always be 0
- Fixed issue causing the Detector value in saved .csv trace file to report NegPeak instead of Sample
- Fixed issue with Y-axis units in saved .csv trace files when trace is Normalized
- Channel Power Measurement
  - Fixed issue that could cause the measurement to freeze after running for an extended period of time
- Spectrum Emission Mask Measurement
  - Fixed issue that could cause the displayed sweeptime to be incorrect when using FFT Sweep Type

### **N6141A – EMI Receiver Mode**

- Fixed issue causing meters Peak Hold not to reset if set to Adjustable
- Fixed issue causing current EMC Standard setting to change when EMC Standard Preset To is changed
- Frequency Scan Measurement
  - Fixed issue allowing the Scan Time to be set to values that are invalid with other parameter settings, improving frequency accuracy of measurements
  - Fixed issue with Peak Search and Mkr -> List when first powered on with signals already in the signal list
  - Fixed issue causing the minimum meter frequency to be limited when using the up and down arrows
- Monitor Spectrum Measurement

- Fixed issue causing states using wider than default spans to not be recalled correctly
- Disturbance Analyzer Measurement
  - Fixed issue causing the response of the Quasi-Peak detector to not be in sync with the Peak detector
  - Fixed issue causing Marker and Delta Marker to go to the start of the trace instead of on the currently displayed portion of the trace
  - Fixed issue causing marker to not be the active function when Peak Search is selected

### N9069A – Noise Figure Mode

- Fixed issue causing Auto Scaling to be off after a state with Auto Scaling on is recalled
- Fixed issue causing state files to recall with the trace data appearing to be reversed
- Fixed issue causing input attenuator value to always be set to 0 dB after an alignment is run

## A.14.03 Version Information

|  |   |
|--|---|
| Released Date:   | April 2014  |
| Requirements category (e.g., operating system):            | Microsoft Windows 7<br>Microsoft Windows XP                       |
| Requirements category (e.g., instrument software version): | None  |
| Requirements category (other):                             | None  |
| File Name:   | XSA_Installer_A.14.03_Win7.exe<br>XSA_Installer_A.14.03_WinXP.exe |

## New Features

### General

- Added support for the Windows Embedded Standard 7 operating system (WES7P)
  - All new instruments from this point forward will ship with this operating system
  - An update to this version is also available for instruments with Windows XP
  - Added support for the 64 bit option PC4 processor assembly, Windows 7 only

### N6141A – EMI Receiver Mode

- Added the Disturbance Analyzer (Click) measurement
- Frequency Scan Measurement
  - Added the Display Line function to the View / Display, Display menu
- Monitor Spectrum Measurement
  - Added the Frequency Scan Graph view to the display. Can be turned on and off from the View / Display menu

**N9063A – Analog Demod Mode**

- Added support for N9063A-AFP with the following features:
  - Attack/Release view that provides RF envelope and FM demodulation on same T-axis
  - Marker Table on AF Spectrum to easily quantify multi-tone metrics
  - Eliminate clipping, scaling, and wrapping issues for FM and PM on analog output
  - Long demod waveform provides up to 3.6 MSa or >100 seconds at 25 kHz bandwidth

## Enhancements

**General**

- Added the SYST:LOFF remote command to log off the current user
- Added support for USB preamps in the Spectrum Analyzer and Noise Figure modes
- Increased the time between instrument auto alignments, especially during instrument initial warm-up time

**N9060B – Spectrum Analyzer Mode**

- Added PSG E8257D and E8267D as supported instruments for option ESC, External Source Control
- Modified Peak Table to have a white background and black text when the display theme is set to one of the flat themes
- Channel Power Measurement
  - Removed the 1 GHz limitation of the Integration Bandwidth

**IQ Analyzer (Basic) Mode**

- Added Avg Type Auto setting. This will cause it to use Power Average (RMS) when Noise Markers and Band Power Markers are activated

**N6141A – EMI Receiver Mode**

- Frequency Scan Measurement
  - Added a Meters Increment softkey to the FREQ Channel menu
  - Added view of other settings in the Scan Table
- Strip Chart Measurement
  - Freq Step softkey changes to Freq Incr and the Auto value is now equal to RBW/2

## Issues Resolved

**General**

- Fixed issue that was causing the instrument application to boot up with a blank screen if the display theme was changed from the default of 3D Color
- Fixed issue causing the highest digit in the displayed time to be distorted



**N9060B – Spectrum Analyzer Mode**

- Fixed possible instrument application crash when the :DISP:ENAB remote command is used
- Fixed the Open/Short graphic when multiple calibrations are performed with option ESC, External Source Control
- TOI Measurement
  - Updated the rules for phase noise optimization to correct a bow in the noise floor
- ACP Measurement
  - Fixed issue that could cause data errors when Min or Max Hold is used with Noise Corrections turned on

**N6141A – EMI Receiver Mode**

- Fixed issue causing Preset To setting for EMC Standard not to be saved in instrument state
- Fixed issue causing the \*IDN? response to be ESU26 instead of ESU44 in a 44 GHz MXE when the Mode IDN Response is set to R&S ESU
- Frequency Scan Measurement
  - Fixed issue that caused the wrong trace to be referenced when Meas at Mkr Results →List is used for a Measure at Marker that was performed on a trace other than 1
  - Fixed issue that could cause the noise floor to be too high at low frequencies when Discrete Scan Type is used
  - Fixed issue that could cause the actual scan time to be too long under certain conditions when Discrete Scan Type is used
  - Fixed issue causing a Peak Search while using marker delta to exit marker delta
  - Fixed issue that could cause EMC32 software to loose connection when an overload occurs when autoranging is used
  - Fixed issue that was causing the vertical scale not to be displayed properly if the Scale/Div setting was less than 1 dB
  - Fixed possible instrument application crash when :TRAC:FEED:CONT ALW remote command is used
  - Fixed possible instrument application crash when Time Domain Scan Type is selected under certain condition
- Strip Chart Measurement
  - Fixed issue causing all traces to be cleared when using the :FETC:SCH2|3|4? remote query after a measurement has completed using single sweep
  - Fixed issue that caused the trace not to be drawn all the way across the screen if the full screen X scale range is not an integer multiple of the dwell time

**N9069A – Noise Figure Mode**

- Fixed issue that could cause an offset in results when using Table Loss Compensation
- Changed DUT rule when external L.O. source control is activated

## A.13.60 Version Information

|  |                           |
|--|---------------------------|
| Released Date:   | March 2014                |
| Requirements category (e.g., operating system):            | Microsoft Windows XP      |
| Requirements category (e.g., instrument software version): | None                      |
| Requirements category (other):                             | None                      |
| File Name:   | MXE_Installer_A.13.60.exe |

### New Features

None

### Enhancements

None

### Issues Resolved

#### N6141A – EMI Receiver Mode

- Frequency Scan Measurement
  - Fixed issue that could cause errors in time domain measurements if option B25 is not present

## A.13.59 Version Information

|  |                           |
|--|---------------------------|
| Released Date:   | December 2013             |
| Requirements category (e.g., operating system):            | Microsoft Windows XP      |
| Requirements category (e.g., instrument software version): | None                      |
| Requirements category (other):                             | None                      |
| File Name:   | MXE_Installer_A.13.59.exe |

### New Features

None

### Enhancements

None

## Issues Resolved

### N6141A – EMI Receiver Mode

- Frequency Scan Measurement
  - Fixed possible instrument application crash when performing a search sequence for a multiple range scan
  - Fixed issue that could cause noise floor dropouts when using time domain scan type
  - Fixed issue that could cause noise floor extension to not work properly when using time domain scan at the low end of CISPR band B
- Amplitude Probability Distribution Measurement
  - Fixed possible instrument application crash if the data for a blank trace is remotely queried

## A.13.58 Version Information

|  |                           |
|--|---------------------------|
| Released Date:   | November 2013             |
| Requirements category (e.g., operating system):            | Microsoft Windows XP      |
| Requirements category (e.g., instrument software version): | None                      |
| Requirements category (other):                             | None                      |
| File Name:   | MXE_Installer_A.13.58.exe |

## New Features

### General

- Added support for option 544 – 44.0 GHz Frequency Range

### N6141A – EMI Receiver Mode

- Added Monitor Spectrum (IF Mode) measurement – Requires option DP2
- Added APD (Amplitude Probability Distribution) measurement – Requires option DP2
- Added support for option TDS – Time Domain Scan – Requires option DP2
- Added support for option LSN – External LISN Control

## Enhancements

### N6141A – EMI Receiver Mode

- When EMC Standard is changed to CISPR the Measure and Meter detectors will automatically change to Peak, Quasi-Peak, and EMI Average
- When EMC Standard is changed to MIL the Measure and Meter detectors will automatically change to Peak, Average, and Negative Peak
- Frequency Scan Measurement

- Increased the maximum number of Scan Points from 40,001 to 500,001

## Issues Resolved

### General

- Fixed intermittent RF alignment failure in instruments with option DP2
- Fixed issue causing wrong current temperatures for RF preselector assemblies in Alignment Statistics screen

### N9060B – Spectrum Analyzer Mode

- TOI Measurement
  - Fixed issue causing reported TOI values was incorrect when using narrow resolution bandwidths

### N6141A – EMI Receiver Mode

- Frequency Scan Measurement
  - Fixed issue causing the markers not to work on a copied trace
  - Fixed issue causing measurement report formatting issues when save as .pdf
  - Fixed issue causing measurement to not find signal peak when between trace points under certain conditions
- Strip Chart Measurement
  - Fixed issue causing Average detector to not work properly in CISPR Bands A and B

### N9069A – Noise Figure Mode

- Fixed issue causing the application to close when the Sweep/Control front panel key was pressed
- Fixed issue causing subsequent noise source calibrations to not function properly after cancelling out of a noise source calibration

### A.13.27 Version Information

|  |                           |
|--|---------------------------|
| Released Date:   | August 2013               |
| Requirements category (e.g., operating system):            | Microsoft Windows XP      |
| Requirements category (e.g., instrument software version): | None                      |
| Requirements category (other):                             | None                      |
| File Name:   | MXE_Installer_A.13.27.exe |

## New Features

### General

- Added support for option CR3 - Rear Panel 2nd IF Output
- Added support for option DP2 - High Performance Digital Processor

## Enhancements

### General

- Updated the System, Alignments, Align Now menu to include RF Preselector alignments (behavior of some alignment remote commands have been changed)

### N6141A – EMI Receiver Mode

- Added ability to use the Average detector throughout the mode
- Frequency Scan Measurement
  - Added ability to mark either upper or lower duplicates in the signal list
  - Added ability to couple the meters to the marker frequency
  - Added ability to save test report in .pdf format

## Issues Resolved

### General

- Fixed issue causing the Current Temperature values of the RF Preselector to not be displayed in the Align Statistics screen
- Fixed issue causing application not to run if Remote Language Compatibility is power-on application and GPIB Controller is set to Enabled
- Fixed issue causing .csv limit line files edited with Excel not to load
- Fixed issue causing limit lines not to be saved properly when Antenna Units are dB $\mu$ A
- Fixed issue causing antenna units of None in recalled states to not be applied

### N9060B – Spectrum Analyzer Mode

- Fixed an execution error when limit line 2 is turned on, without limit line 1 on, and no trace data

- Fixed issue with noise marker on and marker table on where the Y value was reported as dBm/Hz instead of dBm
- Fixed issue when storing a CISPR D state where the RBW annotation stated “Res BW (CISPR) 120 kHz”, yet when recalled stated “Res BW (-6 dB) 120 kHz”
- Fixed Input Overload message when stop frequency is >3.6 GHz, 0 dB input attenuation and sweep time is >262 ms
- Optimized resolution bandwidth switching uncertainty when using the EMI Average Detector or RMS Average Detector and the sweep time rules are set to Accuracy
- Fixed issue with the post trigger count for all detector types when doing negative trigger delays
- Adjacent Channel Power Measurement
  - Corrected the inability to configure the sweep for the non-required side of the offset by adding [:SENSe]:ACPower:SWEep:PARTial[:STATE]
- Channel Power & Occupied BW Measurements
  - Fixed .csv file to include mechanical and electronic attenuator metrics
- TOI Measurement
  - Fixed an issue where an incorrect dBc value was being reported

### **IQ Analyzer (Basic) Mode**

- Fixed issue that was causing WAV:SRAT? to return incorrect data
- Fixed issue with incorrect data with IQ pairs when using large pre-trigger delays

### **N6141A – EMI Receiver Mode**

- Fixed issue causing the amplitude unit terminators for the meter limits to be incorrect when the antenna units are dB $\mu$ A
- Frequency Scan Measurement
  - Fixed issue causing a trace in View to be distorted when the frequency range is changed
  - Fixed issue causing erroneous values being placed in the signal list when no values were available
  - Fixed issue causing the Dwell Time to be changed when Marker Zoom is used
  - Fixed issue causing the last data point to drop out when Discrete Scan Type and Noise Floor Extension is turned on
  - Fixed issue causing the signal list column configuration to not be saved in an instrument state file
  - Fixed possible application exception error when making a measurement at the first data point of the scan
  - Fixed issue causing the wrong resolution bandwidth to be used for the meters at CISPR band edges
  - Fixed issue causing the yellow “Saving...” window to appear in the screen capture of a test report

- Fixed issue causing the Search sequence to not find signals at range crossing points
- Fixed various autoranging issues when a scan is running with multiple ranges turned on
- Fixed issue causing signal level to limit line values in the scan table to be copied into undefined cells
- Fixed issue causing the amplitude unit terminators for the reference level setting to be incorrect when the antenna units are dB $\mu$ A
- Strip Chart Measurement
  - Fixed issue causing the strip chart measurement to draw the data one point off
  - Fixed issue causing no softkey terminators to be there for the reference level setting when an antenna unit was being used

#### **N9068A – Phase Noise Mode**

- Attenuator annotation is not updated after pressing Adjust Atten for Min Clip when in Log Plot

#### **N9069A – Noise Figure Mode**

- Fixed an issue where the noise source model and serial number entries will get updated when the ENR table is automatically filled
- Fixed an issue where the Stop Freq softkey frequency readout was represented differently than the displayed Stop frequency readout
- Fixed an issue where recalling a calibrated state file changed the cal state status from Cal to Uncal

#### **N9063A – Analog Demod Mode**

- Fixed an issue where an “Insufficient Data” error message was falsely stated on the analyzer display

## A.12.13 Version Information

|  |                           |
|--|---------------------------|
| Released Date:   | May 2013                  |
| Requirements category (e.g., operating system):            | Microsoft Windows XP      |
| Requirements category (e.g., instrument software version): | None                      |
| Requirements category (other):                             | None                      |
| File Name:   | XSA_Installer_A.12.13.exe |

### New Features

None

### Enhancements

None

### Issues Resolved

#### **N6141A – EMI Receiver Mode**

- Fixed issue where the application may close when switching between Spectrum Analyzer and EMI Receiver modes
- Frequency Scan Measurement
  - Fixed issue that was causing the Measure at Marker and Measurement to not use the selected resolution bandwidth when the EMC Standards is set to CISPR and the resolution bandwidth setting in the Scan Table was not left in Auto
  - Fixed issue that was not allowing saved states to perform a Search sequence
  - Fixed issue that was causing the Antenna Units to not be properly updated when a state is recalled



## A.12.09 Version Information

|  |                           |
|--|---------------------------|
| Released Date:   | March 2013                |
| Requirements category (e.g., operating system):            | Microsoft Windows XP      |
| Requirements category (e.g., instrument software version): | None                      |
| Requirements category (other):                             | None                      |
| File Name:   | XSA_Installer_A.12.09.exe |

### New Features

None

### Enhancements

None

### Issues Resolved

#### General

- Incorrect Antenna Units are used when an instrument state was recalled
- Additional EMC Limit Lines added for both EN 55015 and AS-NZS 4051 Conducted measurements
- Synchronized the front panel knob resolution to the scroll wheel on a mouse
- Updated the way the Display Theme parameter is handled
- Reporting issue between the trigger delay status query and the actual display readout

#### N9060B – Spectrum Analyzer Mode

- Center frequency spur issue in the Spectrum Emissions Mask measurement was not present

#### IQ Analyzer (Basic) Mode

- Sending WAV:SRAT? query returns the incorrect sample rate
- Sending CALC:SPEC:MARK[n]:CENT does not center the signal on the display

#### N6141A – EMI Receiver Mode

- Saved states always recall with dB $\mu$ V Y-Axis Units
- Frequency Scan Measurement
  - Limit line margin failures were called Limit Fails instead of Margin Fails
  - Execution Error when limit line 2 was turned on without limit line 1 being defined
  - Possible instrument crash caused when trying to edit a limit line after a Meas Preset is performed
  - Possible instrument hang when using a mouse to select checkboxes in the Scan Table

- Multiple issues with the Auto Range and Auto Preamp functions
- Up/Down arrows change the wrong setting in the Scan Table
- Reference level shows the incorrect value when Watts was selected as the Y-Axis units
- Increased the maximum Scan Time when the Discrete Scan Type is selected from 4 kS to 4 MS
- Strip Chart Measurement
  - Y-Axis indications are 0.0 when either Watts, Volts, or Amps were selected as the Y-Axis Units in the Strip Chart measurement
  - Display issue caused by too many digits being displayed for the Expanded Meters

### **N9063A – Analog Demod Mode**

- DTMF (two-tone signal) does not have all the same metrics being reported as the single tone demodulation measurement
- Analog Output signal on the rear panel can drop out

## A.11.04 Version Information

|  |                           |
|--|---------------------------|
| Released Date:   | December 2012             |
| Requirements category (e.g., operating system):            | Microsoft Windows XP      |
| Requirements category (e.g., instrument software version): | None                      |
| Requirements category (other):                             | None                      |
| File Name:   | XSA_Installer_A.11.04.exe |

### New Features

None

### Enhancements

None

### Issues Resolved

#### General

- The selected marker is not always made the active function

#### N6141A – EMI Receiver Mode

- Frequency Scan Measurement
  - Fixed an issue that was causing a Meas Uncal message with Discrete Scan Type

## A.11.03 Version Information

|  |                           |
|--|---------------------------|
| Released Date:   | November 2012             |
| Requirements category (e.g., operating system):            | Microsoft Windows XP      |
| Requirements category (e.g., instrument software version): | None                      |
| Requirements category (other):                             | None                      |
| File Name:   | XSA_Installer_A.11.03.exe |

### New Features

None

### Enhancements

#### General

- Added dBpW amplitude unit
- Added dBμA antenna unit
- Increased number of internal state save registers from 6 to 16
- Added the ability to name State registers
- Added Average/Hold Trace Legacy Compatibility function
- Added EXG N5171B and MXG N5181B as supported instruments for option ESC, External Source Control
- Added HiSLIP (High Speed LAN) support

#### N9060B – Spectrum Analyzer Mode

- Increased Spectrogram maximum number of trace points from 1,001 to 20,001
- Added Zero Span Delay Compensation function
- The highest peak per segment is now displayed when setting the Spur Report Mode to Minimum Margin in Spectrum Emission Mask measurement
- Spurious Emissions Measurement
  - Added Sweep Type selections of Auto and Swept. In Auto, either Swept or FFT sweep type will be selected, depending upon which sweep type results in faster sweep times

#### N6141A – EMI Receiver Mode

- Frequency Scan Measurement
  - Added Subrange option to search function
  - Added a "Save As..." selection on the Meas Result configuration menu
- Strip Chart Measurement
  - Added Expand Meter function

## Issues Resolved

### General

- Create New Folder softkey is not behaving properly
- Application will close when an SNS series noise source is connected
- CONF:CAT? returns unlicensed measurement names
- Unable to save a screen image obtained from the built-in web server
- LXI webpage incorrectly identifies the model/description of the analyzer
- ADC Overload inadvertently being displayed
- Synchronization issue causes a false error in the Event Log
- Hardware Initialization errors at boot up are now reported in the SA Event Viewer
- "Spike" on Analog Out when the display updates

### N9060B – Spectrum Analyzer Mode

- Peak Search reporting incorrect value when in Zero Span at low frequencies
- Harmonics Measurement
  - Missing Help text for Export Data: Measurement Results or Trace
  - Bursted signal error with certain input signal characteristics
- TOI Measurement
  - Missing Help text for Export Data: Measurement Results or Trace
  - Reporting error when in zero span and the RBW is <30 Hz
  - Timestamps for the individual traces are not available in the Spectrogram measurement results file, even though they are visible on the display
- Unable to set exact sweep time using the front panel keypad when in Zero span using 12,500 sweep points. Knob works fine

### N6141A – EMI Receiver Mode

- EMC Standard saved in a state will change to CISPR when the state is recalled
- Frequency Scan Measurement
  - When start frequency is changed by only 5 Hz, application may close
  - When the Restart key is pressed multiple times the application may close
  - Blank area in the trace between ranges fail the limit
  - Execution error when measurement window was resized
  - Inconsistent data is returned remotely when no value is in a cell of a signal list
  - Conflicting measurement results between Measure at Marker, Meters, and Measurement for very low level signals
  - Scan refresh rate too slow when a marker is turned on under certain conditions
  - Scan time increases when using Log % of Freq then manually setting step size
  - Entire peak trace moves up and down on the display under certain conditions
  - Correction data is displayed incorrectly in Report output
  - Incorrect data being returned when :TRACE? SCAN query is sent

- Select Limit under Meas Setup, Limits, Properties does not work
- Strip Chart Measurement
  - Autorange will not settle with impulsive signal

#### **N9063A – Analog Demod Mode**

- FM Demodulation metrics improved upon for various instrument conditions
- Overshoot/Glitch with FM Rates of <1 kHz

#### **N9068A – Phase Noise Mode**

- External Preamplifier gain entry causes step in Log Plot at 1 MHz offset

#### **N9069A – Noise Figure Mode**

- L.O. Unlock message appears when DUT is Downconverter under certain DUT setup settings
- Frequency resolution is inconsistent between front panel view and SCPI query

## A.10.53 Version Information

|  |                           |
|--|---------------------------|
| Released Date:   | May 2012                  |
| Requirements category (e.g., operating system):            | Microsoft Windows XP      |
| Requirements category (e.g., instrument software version): | None                      |
| Requirements category (other):                             | None                      |
| File Name:   | XSA_Installer_A.10.53.exe |

### New Features

None

### Enhancements

None

### Issues Resolved

#### General

- Cannot eject/stop a USB drive once you have accessed it
- Video out has glitch to 0V during retrace prior to “hold” period

#### N9060B – Spectrum Analyzer Mode

- Trace math function is not using Ref Level Offset and External Gain correctly
- When Trace 1-3 is in View and a user saves all trace data, Trace 1 data can be saved to trace 4, 5 and 6
- Increased Max Ref Channel Span limit in Spectrum Emissions Mask measurement

#### N6141A – EMI Receiver Mode

- Frequency Scan Measurement
  - Fixed possible instrument crash while reading meter values remotely with the :TRAC? SING query when not all meters are on
  - Fixed possible instrument crash when setting start and stop frequencies outside of scan table settings
  - Fixed issue that was causing limit lines to not turn on and off properly

#### N9051A – Pulse Measurement Application

- Unable to launch the pulse application using SCPI

#### N9069A – Noise Figure Mode

- :FETC:SCAL:CORR returns incorrect noise figure scalar results

## A.10.04 Version Information

|  |                           |
|--|---------------------------|
| Released Date:   | February 2012             |
| Requirements category (e.g., operating system):            | Microsoft Windows XP      |
| Requirements category (e.g., instrument software version): | None                      |
| Requirements category (other):                             | None                      |
| File Name:   | XSA_Installer_A.10.04.exe |

## New Features

### General

- Added support for the following Measurement Applications and Features
  - N9062A-2FP – SCPI Language Compatibility, R&S
  - N9063A-2FP – Analog Demod
  - N9063A-3FP – Analog Demod
    - FM Stereo Measurement
  - N9068A-AFP – Phase Noise Enhancements
    - Phase noise offset start from 1 Hz
    - Marker spurious search function
    - Marker functions including integrated band power marker in dBc/band Hz and averaged power marker in dBc/Hz
    - Delta marker functions including dB/decade scale, dB/octave scale
  - N9069A-1FP – Noise Figure
  - N9069A-AFP – Noise Figure Enhancements
    - Enhanced measurement views for making time varying noise figure measurements
    - Added meters and time trend analysis for DUT adjustments of noise figure performance over temperature
- Changed default Power On application to EMI Receiver

### N9060B – Spectrum Analyzer Mode

- Added support for option ESC – External Source Control
- Added support for TV Trigger

### N6141A – EMI Receiver Mode

- Added Autorange to Meters
- Frequency Scan Measurement
  - Added html Report Generator functionality
- Strip Chart Measurement
  - Added Single measurement capability



## Enhancements

### General

- Updated all EMC Limits and Ampcor Files
- Added new limit line files for multiple commercial and MIL EMC standards
- Changed all EMC Limits and Ampcor files provided to .csv file format
- Added a message to alert the user when the frequency entered is unavailable with the selected input
- Changed the status message from RF Preselector Overload to Input Overload;RF Preselector Overload

### N9060B – Spectrum Analyzer Mode

- Added spectrogram enhancements
- Changed default EMC Standard to CISPR

### N6141A – EMI Receiver Mode

- Added "Preset To" setting for EMC standard
- Added the ability to modify the Meter bandwidth filter type when EMC Standard is None
- Increased the maximum Meter Dwell Time from 1 to 100 seconds
- Added screen annotation for state of Noise Floor Extension
- Frequency Scan Measurement
  - Added comment field to signal list
  - Added CISPR Band E settings as default for Scan Table Range 6
  - Added Autorange to Scan Table settings
- Strip Chart Measurement
  - Added the ability to load saved traces
  - Increased the Strip Chart Max Duration from 20 minutes to 20 hours (72,000 seconds)

## Issues Resolved

### General

- Changed Instrument user directory permissions so that the restricted users can modify files in this file location
- Corrected menu issue that can be displayed when going between the Mode menu and the Utility menu
- Fast user switching can result in two instances of the instrument application running that will cause issues with Remote Desktop Connection

### N9060B – Spectrum Analyzer Mode

- Fixed zero span gating issue

- Improved the resolution of Gate Length and Gate Delay when in Gate View
- Enhanced Gate Delay compensation when sweep time is adjusted
- Spurious Emissions Mask Measurement
  - Added SCPI command to view each of the range results
  - Allow the Channel Span to be set higher than 50 MHz
- Adjacent Channel Power Measurement
  - Manually setting the RBW to  $\leq 100$  Hz in FFT mode causes the application to close
- Harmonics Measurement
  - Fixed the SENSE:POWER:RF:RANGE:OPTIMIZE IMM SCPI command

### **IQ Analyzer (Basic) Mode**

- Added a way to turn off the instantaneous trace
- Changed the IF gain default from Autorange to Low when

### **N6141A – EMI Receiver Mode**

- Fixed possible instrument crash caused by setting Antenna Unit back to None
- Fixed issue that was causing antenna unit not to be displayed properly in the limit line editor
- Fixed issue that was causing the System IDN Response setting not to work properly
- Frequency Scan Measurement
  - Fixed possible instrument crash while reading marker value remotely
  - Fixed possible instrument crash when selecting Log % of Freq with a recalled state
  - Fixed possible instrument crash when using Next Peak functions multiple times
  - Fixed possible instrument crash caused by selection a MIL preset when dB $\mu$ V are not the current amplitude unit
  - Fixed possible instrument crash caused by using the :TRAC:DATA? SCAN remote command
  - Fixed issue that was allowing Meas Uncal message for ranges not turned on
  - Fixed issue that was causing the Meas Uncal message to be dependent on order settings where changed
  - Fixed issue that was causing trace data to be lost when put into Blank state
  - Fixed issue that was causing the marker to be above the trace when using Discrete Scan Type
  - Fixed issue that was causing a Setting conflict error when whole part of value calculated by instrument is equal to value selected
  - Fixed issue that was causing the number of scans to not go beyond 100 when set higher
  - Fixed issue that was causing dB $\mu$ A units to not be displayed properly in the limit line editor
  - Fixed the Midspan Freq and Span remote commands

### **N9068A – Phase Noise Mode**

- Application can crash when in Log Plot, start offset 100 kHz, stop offset 100 MHz when in Continuous measurement

## A.08.54 Version Information

|  |                           |
|--|---------------------------|
| Released Date:   | September 2011            |
| Requirements category (e.g., operating system):            | Microsoft Windows XP      |
| Requirements category (e.g., instrument software version): | None                      |
| Requirements category (other):                             | None                      |
| File Name:   | XSA_Installer_A.08.54.exe |

### New Features

None

### Enhancements

#### General

- External Gain range increased to plus and minus 120 dB

#### N9060B – Spectrum Analyzer Mode

- Added Adjacent Channel Power using 18 multi-carriers

#### N6141A – EMI Receiver Mode

- External Gain added to the measure bar
- Max Ref Level increased to +100 dBm

### Issues Resolved

#### General

- Web Server image is obscured when operator selects a utility that brings a mouse controlled screen to the foreground

#### N9060B – Spectrum Analyzer Mode

- Marker Table reported incorrect value when Marker Functions are in use
- Internal Preamp on command was ignored after a :CONF:SAN is sent to the instrument

#### N6141A – EMC Receiver Mode

- External Gain applied to Max Ref Level
- Frequency Scan Measurement
  - Fixed problem where loading a state file followed by Sweep/Control, Start would change the step size to 500 kHz
  - Corrected Peak Trace level when another trace with Quasi-Peak or EMI Average detector is also on when using Discrete Scan Type

- Corrected the Sweep complete bit in the status register

#### **N9068A – Phase Noise Mode**

- Smoothed trace showed large step with 16% smoothing
- Rise in phase noise occurred between 600 kHz and 1 MHz offsets when option B25 is not present while in Log Plot

## A.08.03 Version Information

|  |                           |
|--|---------------------------|
| Released Date:   | May 2011                  |
| Requirements category (e.g., operating system):            | Microsoft Windows XP      |
| Requirements category (e.g., instrument software version): | None                      |
| Requirements category (other):                             | None                      |
| File Name:   | XSA_Installer_A.08.03.exe |

### Initial Release

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