

## Instrument Software Revision History

This revision history document is relevant for the following Keysight products:

Product Number	Description
N9040B	UXA Signal Analyzer
N9030A	PXA Signal Analyzer
N9020A	MXA Signal Analyzer
N9010A	EXA Signal Analyzer
N9000A	CXA Signal Analyzer
N/W6141A	EMI Measurement Application
N6149A	iDEN/WiDEN/Moto Talk Measurement Application
N/W6152A	Digital Cable TV Measurement Application
N/W6153A	DVB-T/H/T2 Measurement Application
N/W6155A	ISDB-T/Tmm Measurement Application
N/W6156A	DTMB (CTTB) Measurement Application
N/W6158A	CMMB Measurement Application
N/W6171A	MATLAB® Software
N9051A	Pulse Measurement Software
N9061A	Remote Language Compatibility Application
N/W9062A	SCPI Language Compatibility
N/W9063A	Analog Demodulation Measurement Application
N/W9064A	VXA Vector Signal Analysis Measurement Application
N/W9068A/C	Phase Noise Measurement Application
N/WN9069A	Noise Figure Measurement Application
N/W9071A	GSM/EDGE/Evo Measurement Application
N/W9072A	cdma2000 Measurement Application
N/W9073A	W-CDMA/HSPA+ Measurement Application
N9074A	Fixed WiMAX™ Single Acquisition Combined Measurement Application
N/W9075A	Mobile WiMAX™ Measurement Application
N/W9076A	1xEV-DO Measurement Application
N/W9077A	WLAN 802.11a/b/g/n/ac Measurement Application
N/W9079A	TD-SCDMA/HSPA Measurement Application
N/W9080A	LTE FDD Measurement Application
N/W9081A	Bluetooth® Measurement Application
N/W9082A	LTE TDD Measurement Application
N/W9083A	Multi-Std. Radio (MSR) Measurement Application

It is recommended that all instruments be kept up to date by installing the most recent version for the given model number. The most current version with update instructions, is accessible via the web and can be downloaded from [http://www.keysight.com/find/xseries\\_software](http://www.keysight.com/find/xseries_software)

To see the version that is currently installed in your instrument press [**System**], {**Show**}, {**System**} on the instrument and look for the Instrument S/W Revision entry on the display.

Downgrading the instrument software to an earlier version is not supported. Go [here](#) for detailed information about the downgrade risks.

The table below lists each version of instrument software and the instrument model numbers for which each version is 100% compatible (i.e. support **all options** of that model number at that time). Each version listed in the table has at one point been posted to the web. Due to option flexibility from product to product within the X-series, there have been times where manufacturing has shipped a version that was not posted to the web.

## X-Series Instrument Software Versions versus Model Number

Instrument Software Version	Model Number				
	N9040B (UXA)	N9030A (PXA)	N9020A (MXA)	N9010A (EXA)	N9000A (CXA)
A.15.09	X	--	--	--	--
A.15.06	X	--	--	--	--
A.14.62		X	X	X	X
A.14.60		--	--	--	X
A.14.59		X	X	X	--
A.14.58		X	X	X	X
A.14.54		X	X	X	X
A.14.07		X	X	--	--
A.14.06		--	--	X	--
A.14.05		--	--	--	X
A.14.04		X	--	X	--
A.14.03		--	X	--	--
A.13.15		--	X	--	--
A.13.12		X	X	X	--
A.13.09		X	--	--	--
A.13.07		X	X	X	--
A.13.06		X <sup>2</sup>	X <sup>2</sup>	X <sup>2</sup>	--
A.12.15		--	--	--	X
A.12.13		X	X	X	--
A.12.09		X	X	X	--
A.11.04		X	X	X	--
A.11.03		X	X	X	--
A.10.53		--	--	X	--
A.10.52		X	X	X	X
A.10.05		--	X	X	--
A.10.04		X	-- <sup>1</sup>	-- <sup>1</sup>	X
A.08.55		--	--	--	X
A.08.54		X	X	X	
A.08.04		X	--	--	--
A.08.03		X	X	X	X
A.07.06		X	X	X	X
A.07.04		X	X	X	X
A.06.06		X	X	X	X
A.04.29		X	--	--	--
A.04.26		--	X	X	X
A.04.05		X	--	--	--
A.03.08		--	X	X	X
A.03.06		--	X	X	--
A.02.07		--	X	X	--

A.01.74		--	X	X	--
A.01.64		--	X	X	--
A.01.58		--	X	X	--
A.01.50		--	X	X	--
A.01.44		--	X	X	--
A.01.43		--	X	X	--
A.01.31		--	X	X	--
A.01.24		--	X	X	--
A.01.15		--	X	--	--
A.01.14		--	X	--	--
A.01.05		--	X	--	--

X = Used by this model

X = Initial release for this model

-- = Either unsupported or does not support all option combinations

<sup>1</sup>. A.10.04 is not compatible with EXA's and MXA's with Option B40, CR3, CRP, DP2, or MPB. For EXA's and MXA's with any of these options, use A.10.05 or later

<sup>2</sup>. A.13.06 is not compatible with EXA's, MXA's, and PXA's running the N9069A, Noise Figure Measurement Application.

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## Version A.15.09 (Release Date April, 2015)

### Enhancements:

#### General X-Series Analyzer

- Added support for options SF1 and SF2

#### Real Time Analysis options RT1 or RT2:

- Added a Pause button in the Meas Bar dropdown
- Added internal preamplifier control in the Amplitude → Signal Path Menu
- Optimized the speed of the Multi-Touch responsiveness when in the Frequency Mask Trigger editor
- Added Multi-Touch gestures for the Spectrogram View
- Optimized the speed of Spectrogram Peak Search All feature
- Optimized the speed when using Speed Density View

### Issues Resolved:

#### General X-Series Analyzer:

- Fixed issue where the pinch gesture was not working in zero span
- Fixed issue where the application would close when using specific multiple screen setups
- Fixed issue where one of the alignments may fail when option B2X, 255 MHz Analysis Bandwidth or option B5X, 510 MHz Analysis Bandwidth is installed
- Fixed a graphical issue with full screen dialogue boxes
- Fixed issue where the marker symbol did not follow the trace when the Reference Level is changed in Single sweep
- Fixed issue where the trace color did not indicate a failure in the limit margin area
- Fixed issue where the graph did not update or refresh when the color Adjust Panel is active
- Fixed several issues with the External Mixer Setup editor
- Fixed issue where the application closed during a Save/Recall when using external mixing
- Fixed issue with I.F. Correction when using external mixing when in the 25 MHz I.F. path.
- Fixed issue where the Measure at Marker window does not display after a Measure at Marker is performed when using option EMC, Basic EMC Functionality
- Fixed issue where the application would close after selecting Restore Screen Defaults
- Fixed issue where the application can throw an error while using the limit line editor
- Fixed issue where the application would close when using the Correction editor

- Fixed issue in IQ Analyzer where the Settings Diagram was empty in the Complex Spectrum measurement
- Fixed issue in IQ Analyzer where the FCAP SCPI command closed the application

#### Burst Power

- Fixed issue where trace could freeze when analysis BW is above 255 MHz on instrument with option B5X, 510 MHz Analysis BW

#### CHP, Channel Power Measurement

- Fixed issue where the bandwidth display would not update at the first time measurement Restart, but did update the second time

#### Power Stat CCDF Measurement

- Fixed issue where the instrument would display a Windows exception error because the acquisition points were increased beyond 4M samples when the I.F. bandwidth was  $\leq 40$  MHz

#### Real Time Analysis options RT1 or RT2:

- Fixed issue where adding a second measurement tab caused the application to close
- Fixed time step size issue when span is  $> 255$  and using Time Qualified Trigger
- Fixed issue where the Power versus Time in Spectrum View locked out the Trace Average
- Fixed issue in Power versus Time view that caused the application to close when toggling between Pause and Resume while in Continuous measurement
- Fixed display update issue when using the Periodic Trigger in Density View

#### Frequency Masked Trigger options FT1 or FT2:

- Fixed incorrect trigger issue when using the Frequency Mask Trigger with the VSA software
- Fixed issue with the Frequency Mask trigger "Enter" condition
- Fixed issue in Frequency Mask Trigger editor where circle did not work in Single sweep
- Fixed issue in Frequency Mask Trigger editor where the frequency values were not updating in the mask graphic

#### N9068C, Phase Noise Measurement Application

- Fixed issue in Monitor Spectrum where the "dirty" marker appeared when the marker mode was changed or moving the marker position
- Fixed issue with the DANL trace response when the offset is from 1 Hz to 100 Hz
- Fixed issue where the Peak Search function was missing in the Peak Search Settings Panel

- Fixed issue where an inadvertent ADC Over Range message can appear when the input signal is  $\leq 100$  MHz CW at +10 dBm
  - Fixed issue where the Autotune function failed to find input signals  $\leq 100$  MHz
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### Version A.15.06 (Release Date January, 2015)

#### Enhancements:

Initial N9040B, UXA Signal Analyzer release

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### Version A.14.62 (Release Date April, 2015)

#### Enhancements:

General X-Series Analyzer:

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

N/W9073A-EFP, W-CDMA Measurement Application

- Added RUI to report I Offset & Q Offset values in modulation analysis and combined W-CDMA measurements

N9080B/N9082B-AFP, LTE/LTE-Advanced FDD and TDD Measurement Application

- Added RUI to report I Offset & Q Offset values in modulation analysis and conformance EVM measurements

N9081A, *Bluetooth* Measurement Application

- Added support for BBIQ inputs, option BBA

#### Issues Resolved:

General X-Series Analyzer:

- 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
- Fixed an issue when using the Frequency Mask Trigger where it requires two trigger events to get RTSA or VSA to trigger
- Fixed an issue where the fast sweep capability in option FS1 is disabled when mode switching from the N9063A, Analog Demodulation Measurement Application to SA 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 possible glitches in the trace data when the span is greater than 100 MHz when using FFT sweep type
- Fixed issue causing the signal source to reset whenever any setting is changed while using option ESC, External Source Control
- Fixed issue where the LXI Web Server does not allow getting Meas Results
- Fixed issue when mode switching between RTSA, SA, and IQ Analyzer and then power cycling, the instrument can hang in RTSA mode. This only happens when you have Power On Last State set
- Fixed issue where the incorrect file folder was opened when recalling a trace file
- Fixed issue where spikes occur on the analyzer when Sweep Type = FFT, Span  $\geq$ 100 MHz, and RBW  $\leq$ 10 Hz

#### Spurious Emissions Mask

- Fixed issue causing the Phase Noise Optimization to not be automatically set properly

#### N6141A – EMI Receiver Measurement Application

- Frequency Scan Measurement
  - Fixed an issue causing limit line margins to not turn on and off properly with certain recalled states
  - 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 Max and Min Hold not to work under certain conditions

#### N9063A – Analog Demod Measurement Application

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

#### N9064A, VXA Vector Signal Analysis Measurement Application

- Fixed an issue where a saved state was not being recalled correctly



## N9068A – Phase Noise Measurement Application

- Fixed issue causing possible intermittent step in the log plot results for very narrow offsets (1 Hz to ~4 Hz)
- The carrier power search algorithm while in Log Plot was updated to be able to measure low carrier power levels when using the 11970-series external mixers on an analyzer with option EXM, External Mixing

## N9080A/N9082A, LTE FDD and LTE TDD Measurement Application

- POWER:RANGE:OPTimize IMMEDIATE command when in Transmit On/Off Meas is not working

## N9080B/N9082B, LTE/LTE-Advanced FDD and TDD Measurement Application

- POWER:RANGE:OPTimize IMMEDIATE command when in Transmit On/Off Meas is not working
- Fixed an issue where the Xsa application will shut down when a saved state file is recalled, then the system bandwidth is modified
- Fixed an issue where the Xsa application will shut down when the CRI-RS measurements is activated and the measurement time is adjusted
- Fixed an issue where the absolute power levels shown in the Frame Summary table are 3 dB too low

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### Version A.14.60 (Release Date November, 2014)

#### Enhancements:

None

#### Issues Resolved:

- Fixed a defect where the analyzer application closes if the span is narrowed and then Peak Search and Next Peak are performed
- Fixed an issue where the analyzer can go into and display L.O. Unlock

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### Version A.14.59 (Release Date November, 2014)

#### Enhancements:

None

**Issues Resolved:**

- Fixed an issue where the analyzer application closes if the span is narrowed and then Peak Search and Next Peak are performed

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**Version A.14.58 (Release Date November, 2014)**

**Enhancements:**

N9051B, Pulse Measurement Software

- Added Deep Capture in the N9051B-5FP

**Issues Resolved:**

General X-Series Analyzers:

- Fixed an issue where amplitude corrections adjust the trigger level incorrectly on instruments with an analysis BW <40 MHz
- Fixed an issue where InfiniMax probes were not properly identifying themselves when plugged into instruments with option BBA, Baseband I/Q inputs
- Fixed an issue where the LTE Time Offset Value was incorrect (1.744us versus ~9ns) in instruments that were upgraded with wide analysis BW options B85, B1A or B1X
- Fixed an issue where the saved state file would not load properly and caused most of the front panel hard keys to not function
- Fixed issue causing Trace (+State) and Trace (under Data (import)) softkeys to be grayed out under the Recall menu

ACP, Adjacent Channel Power

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

SEM, Spurious Emissions Mask

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

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 certain states from older software revisions not to be recalled properly
  - Fixed a Meters increment resolution issue when using the left/right arrow keys

- Monitor Spectrum Measurement
  - Fixed issue causing the meter values not to return to the exact same value after changing settings back to original values

#### N6152A, Digital Cable TV Measurement Application

- Added missing POW:UNIT command for setting Y-axis units

#### N9061A, Remote Language Compatibility Application

- Added missing AMPCOR command for 856x models
- Fixed an issue in the 8566A compatibility mode where the analyzer would not always return the expected "0" in the status byte register unless the sweep was single
- Fixed several 8568B issues such as marker peak, AC/DC coupling, RBW/VBW ratio, and Span/RBW ratio

#### N9063A – Analog Demod Mode

- Fixed issue causing the FM trace not to average properly
- Fixed an issue with Video (IF Envelope) triggering when using Attack / Release Time view for FM measurement

#### N9064A, VXA Vector Signal Analysis Measurement Application

- Fixed an intermittent issue where the xSA application stops running when accessing VXA via SCPI

#### N9068A, Phase Noise Measurement Application

- Large spur at a ~6 MHz offset only when the stop offset frequency is set to 40 MHz
- Modified Peak Search criteria and on-screen messaging when spurs are not above the peak excursion value
- Fixed issue causing Ext Preamp value not to be used
- Fixed issue when recalling a state file set up for Log Plot with Continuous sweep where the sweep unexpectedly is in Single
- Fixed an issue where the N9010A, EXA Signal Analyzer was not able to make a measurement down to 1 Hz offset; only went down to ~40 Hz offset

#### N9069A, Noise Figure Measurement Application

- Added the mechanical attenuator value in the noise figure measurement uncertainty calculation

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**Version A.14.54 (Release Date August, 2014)**

## Enhancements:

### General X-Series:

- First software release as Keysight Technologies
- Instruments with this disk drive image will have the default administrator password changed to: **Keysight4u!**
- Added \*IDN? response selection for Agilent Technologies
- For the N9020A and N9030A Signal Analyzers, added the following features for options RT1 and RT2:
  - Time qualified triggers
  - Support for density display in spans >160 MHz
  - Combination of density/spectrogram display
  - External Mixing compatibility, Option EXM

### N9060B, Spectrum Analyzer Measurement Application

- Increased the number of sweep points when using option ESC, External Source Control
- Added support for 802.11ac, 802.11n, and 3GPP LTE Radio Standards for applicable measurements into the Meas menu (Power Suite)
- Supports all Windows 7 instruments

### NW6141A, EMI Receiver Measurement Application

- Added Disturbance Analyzer (Click) Measurement
- Added Monitor Spectrum Measurement – Requires Option DP2
- Added APD (Amplitude Probability Distribution) Measurement – Requires Option DP2
- Frequency Scan Measurement
  - Added support for Option TDS, Time Domain Scan – Requires Option DP2

### NW6153A, DVB-T/H Measurement Application

- Added Amplitude Correction support

### NW6155A, ISDB-T Measurement Application

- Added Amplitude Correction support

### NW6156A, DTMB Measurement Application

- Added Amplitude Correction support

#### N/W6158A, CMMB Measurement Application

- Added Amplitude Correction support

#### N9064A, VXA Vector Signal Analysis Measurement Application

- Added the ability to access extended frequency range with option EXM, External Mixing on the N9010A, N9020A, and N9030A Signal Analyzers with the N9064A
- Added Amplitude Correction support

#### N/W9073A, W-CDMA/HSPA+, Measurement Application

- Added amplitude correction support

#### N/W9079A, TD-SCDMA/HSPA Measurement Application

- Added RRC filter support in the demodulation advanced setting for the N/W9079A-BFP

#### N9080B, LTE/LTE-Advanced FDD Measurement Application

- Added the following features for the N9080B:
  - Merged the N9080A-1FP functionality into a new menu structure of the N9080B-1FP and combined with the N9080B-2FP into single mode.
  - Added LTE-A SEM and ACP preset mask recall
  - Added Amplitude Correction support

#### N/W9081A, *Bluetooth* Measurement Application

- Added amplitude correction support

#### N9082B, LTE/LTE-Advanced TDD Measurement Application

- Added the following features for the N9082B:
  - Merged the N9082A-1FP functionality into a new menu structure of the N9080B-1FP and combined with the N9080B-2FP into single mode.
  - Added LTE-A SEM and ACP preset mask recall
  - Added Amplitude Correction support

## Issues Resolved:

### General X-Series:

- Fixed an issue on instruments with option BBA to be able to independently adjust the I and Q offset values
- Fixed an issue where there was no initial trace, reference level value, and other annotations when initially going into the TOI measurement
- Fixed an issue causing possible noise floor conflict between noise floor extension and a USB preamplifier
- “Out of Memory” failure can occur on the N9020A with option BBA due to the coupling rules between I.F. Bandwidth and Sample Rate.
- Fixed an issue where Complex Spectrum was using a maximum Sample Rate of 100 MHz, when it should be the maximum I.F. Bandwidth of 80 MHz
- Fixed an issue where the Res BW 4 softkey was not working correctly when using option RT1 or RT2, Real-Time Analysis
- Fixed an issue where the Spectrogram start time was incorrect when saving data to the measurement results file
- Fixed an issue causing the peak search marker not to use the active trace in spectrogram view
- Fixed an issue in the ACP measurement when using noise corrections where a “noise floor step” could cause an error in the measurement results. The issue had dependencies on span and non-auto coupled sweep time settings
- Reduced possibility of ADC overload when the internal preamplifier is turned on by increasing the default input attenuator setting from 30 to 46 dB
- Fixed an issue to improve the analyzers long term phase drift
- Fixed an issue with the N9010A, N9020A, and N9030A with option FP2, Fast Power where a signal in band 0 disappears after taking a measurement in band 1 then returning to band 0

### N/W6141A, EMI Receiver

- 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 an issue in the Frequency Scan measurement where an html report with dBµA as the Antenna Units will have strange characters for amplitude units in the trace data
  - 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

#### N/W9063A, Analog Demodulation Measurement Application

- Fixed issue where a status message will appear when the 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 where the rear panel Analog Out Demod Audio signal level would deviate from the expected value as the 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

#### N/W9068A, Phase Noise Measurement Application

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

#### N/W9069A – Noise Figure Mode

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

#### N/W9077A, WLAN Measurement Application

- Fixed an issue where the XSA application will crash when the WLAN standard is set to 802.11b/g and then Modulation Analysis softkey is pressed

#### N/W9079A, TD-SCDMA/HSPA Measurement Application

- Fixed an instability issue with the EVM results when a phase shift is added to a channel

#### N9080A/B, LTE/LTE-Advanced FDD Measurement Application

- Fixed an instability issue in the demodulation metrics when demodulating an LTE signal in the presence of a lower adjacent carrier



- Added Limit Line masks for Adjacent Channel Power and Spurious Emissions Mask measurements

#### N/W9081A, *Bluetooth* Measurement Application

- Fixed a limit line issue from going back to the default when a measurement is triggered
- Fixed an I/Q offset compensation On/Off switching issue
- N9082A/B, LTE/LTE-Advanced TDD Measurement Application  
Fixed an instability issue in the demodulation metrics when demodulating an LTE signal in the presence of a lower adjacent carrier
- Added Limit Line masks for Adjacent Channel Power and Spurious Emissions Mask measurements

#### N9082A/B, LTE/LTE-Advanced TDD Measurement Application

- Fixed an instability issue in the demodulation metrics when demodulating an LTE signal in the presence of a lower adjacent carrier
- Added Limit Line masks for Adjacent Channel Power and Spurious Emissions Mask measurements

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### **Version A.14.07** (Release Date June, 2014)

#### **Enhancements:**

- Identical to A.14.05, yet fully supports the N9020A, MXA Signal Analyzer and the N9030, PXA Signal Analyzer

#### **Issues Resolved:**

- Fixed an issue to assure Option B85, 85 MHz Analysis Bandwidth I.F. Flatness adjustment using the Agilent N7814A Calibration and Adjustment software will run properly.

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### **Version A.14.06** (Release Date June, 2014)

#### **Enhancements:**

- Identical to A.14.05, yet fully supports the N9010A, EXA Signal Analyzer

#### **Issues Resolved:**

- None

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**Version A.14.05 (Release Date June, 2014)**

**Enhancements:**

General X-Series (N9000A, N9010A, N9020A, N9030A)

- Modified effect on the internal preamp state (Optional) 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 used

N/W6141A, EMI Receiver Measurement Application

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

**Issues Resolved:**

General X-Series (N9000A, N9010A, N9020A, N9030A)

- 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 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
- 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
- Fixed issue causing Quasi-peak detector to not function properly when option FS1 is present – Only when option EMC or N6141A installed
- Fixed issue when using the marker table where the noise marker in the Y column contains units of dBm/Hz or dB/Hz when they should be dBm or dB.

CHP, Channel Power Measurement

- Fixed issue that could cause the measurement to freeze after running for an extended period of time

SEM, Spectrum Emission Mask Measurement

- Fixed issue that could cause the displayed sweeptime to be incorrect when using FFT Sweep Type

#### N/W6141A, EMI Receiver Measurement Application

- 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
- Fixed issue on the N9000A with option 503 only where an instrument state file had to be recalled two times to fully recall
- 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

#### N/W9069A, Noise Figure Measurement Application

- 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

#### N/W9071A, GSM/EDGE/Evo Measurement Application

- Fixed issue causing intermittent MAX phase error spike in PFER measurement

#### N9080B, LTE/LTE-Advanced FDD Measurement Application

- Fixed issue in the SEM measurement where a Fail is reported even though the measured trace does not exceed the limit lines in Offset C.

#### N/W9081A, Bluetooth Measurement Application

- Fixed issue causing trial licenses not to be recognized as valid

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**Version A.14.04** (Release Date April 4, 2014)

**Enhancements:**

- Identical to A.14.03, yet fully supports the N9010A, EXA Signal Analyzer and the N9030A, PXA Signal Analyzer

**Issues Resolved:**

- None

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**Version A.14.03** (Release Date April 4, 2014)

**Enhancements:**

General X-Series (N9010A, N9020A, N9030A)

- Added support for option EXM, External Mixing on the N9020A.
- Added support for option NFE, Noise Floor Extension on the N9010A and N9020A.
- Added support for U7227A, U7227B, and U7227F, USB Preamplifiers on the N9010A, N9020A, and N9030A, and N9069A, Noise Figure measurement application
- Added support for J7203A, Atomic Frequency Reference on the N9010A, N9020A, and N9030A
- Added support for option SF2, Security features on the N9010A, N9020A, and N9030A
- Added support for option FP2, Fast Power on the N9010A, N9020A, and N9030A for the following measurements:
  - Channel power
  - Adjacent channel power
  - Band density
  - Occupied bandwidth
  - X-dB measurement

N6141A, EMI Receiver Measurement Application

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

N6152A, Digital Cable TV Measurement Application

- Added N6152A-AFP, Digital Cable TV Enhancements (orderable via N6152A-MEU), Minor Enhancements Update to enable the following feature:
  - 1024 QAM modulation analysis for DVB-C(J.83/A) and J.83/C standards

N9063A, Analog Demodulation Measurement Application

- Added N9063A-AFP, Analog Demod Enhancements (orderable via N9063A-MEU), Minor Enhancements Update to enable the following features:
  - Tx Attack/Release view that provides a display of RF carrier power and post demodulation FM waveform versus time on the same X-axis

- Marker Table on AF Spectrum to easily quantify multi-tone metrics
- Analog out scale adjustment to eliminate clipping, scaling, and wrapping issues for FM and PM measurements
- Extended bandwidth support to 160 MHz
- Exporting of lengthy full-rate post demodulation waveforms i.e. up to 3.6 MSA or >100 seconds at 25 kHz bandwidth
- Post demodulation audio filters were added to support legacy 89xxA/B instruments

#### N9064A, VXA Vector Signal Analysis Measurement Application

- Added N9064A-AFP, VXA Vector Signal Analysis Enhancements (orderable via N9064A-MEU), Minor Enhancements Update to enable the following feature:
  - 2FSK modulation analysis to support 802.15.4g, Wi-SUN© standard

#### N9068A, Phase Noise Measurement Application

- Added N9068A-AFP, Phase Noise Enhancements (orderable via N9068A-MEU), Minor Enhancements Update to enable the following features:
  - 1 Hz measurement offset support
  - Marker spurious search function
  - Marker functions such as integrated band power marker in dBc/band Hz and average power marker in dBc/Hz
  - Delta marker functions; dB/decade scale and dB/octave scale

#### N9069A, Noise Figure Measurement Application

- Added N9069A-AFP, Noise Figure Enhancements (orderable via N9069A-MEU), Minor Enhancements Update to enable the following features:
  - Enhanced measurement views for making time varying noise figure measurements
  - Easy to read meter and time trend analysis for DUT adjustments or noise figure performance over temperature

#### N9071A, GSM/EDGE/Evo Measurement Application

- Added N9071A-BFP, GSM/EDGE/Evo Enhancements (orderable via N9071A-MEU), Minor Enhancements Update to enable the following features:
  - GSM/EDGE Tx Band Spur measurement has the band span extension setting enhanced
  - Limit exception function update on MCBTS ORFS for EDGE Evo

#### N9073A, W-CDMA Measurement Application

- Added N9073A-DFP, W-CDMA Enhancements (orderable via N9073A-MEU), Minor Enhancements Update to enable the following features:
  - IQ Imbalance Frequency Compensation for EVM calculation & equalizer mode setting was added to the Modulation Accuracy (EVM) measurement
  - Equalizer mode setting added for Code Domain measurement

#### N9079A, HSPA Measurement Application

- Added N9079A-AFP, HSPA Enhancements (orderable via N9079A-MEU), Minor Enhancements Update to enable the following features:
  - IQ imbalance Frequency Compensation for EVM calculation & equalizer mode setting in Modulation Accuracy (EVM) measurement
  - Equalizer mode setting available for Code Domain Power measurement

#### N9081A, *Bluetooth* Measurement Application

- Added N9081A-AFP, *Bluetooth* Enhancements (orderable via N9081A-MEU), Minor Enhancements Update to enable the following features:
  - Sweep points can be changed as necessary for ACP, EDR In-Band Spurious Emissions measurement
  - 99% DEVM rate added and an indicator for the burst number
  - Min/Max/Ave calculation for RMS DEVM and Peak DEVM simultaneously

Added support for the N9080B, LTE-Advanced FDD measurement application

Added support for the N9082B, LTE-Advanced TDD measurement application

Added support for the N/W9077A-4FP, WLAN EVM and speed enhancements for 802.11ac

#### Issues Resolved:

##### General X-Series (N9010A, N9020A and N9030A)

- Removed Minimize, Restore Down, and Exit softkeys with option SF1 Security Features, Exclude Launching Programs
- Added Avg. Type Auto/Man in IQ Analyzer (Basic) mode to automatically switch to RMS power average when Noise Markers and Band Power Markers are activated
- Added SCPI command to remotely log the instrument off (SYST:LOFF)
- Spectrum Analyzer measurement application may close down due to DISP:ENAB handling issue
- Undefined header error when trying to store a spectrogram file via SCPI on instruments with option RT1 or RT2, Real Time Spectrum Analysis and not option EDP, Enhanced Display Package

- The first digit in the clock readout on the display can have a 0 and a 1 written at the same time
- Instrument will not boot into SA mode if the Display Theme is other than 3D Color (default setting)
- Modified Peak Table to have a white background and black text when the System Display Settings had the theme set to flat monochrome
- Fixed the Open/Short graphic when multiple calibrations are performed when using option ESC, External Source Control
- Gated Sweep causes higher sidebands on the N9030A, PXA Signal Analyzer when measuring APCO 25 signals using L.O. Gating
- 30 dB V-Shaped noise floor issue when in RTSA, Real Time Spectrum Analysis, Spans >140 MHz, without option MPB, Microwave Preselector Bypass
- Intermittent issue when using :MMEM:DATA? command

#### TOI, Third Order Intercept

- Updated the rules for Phase Noise Optimization settings

#### ACP, Adjacent Channel Power

- Min and Max Hold trace data error occurs when Noise Correction is turned On

#### CHP, Channel Power Measurement

- Expanded the Integration BW to exceed 1 GHz

#### N6141A, EMI Receiver Measurement Application

- Preset To setting for EMC Standard was not being saved in instrument state
- Frequency Scan Measurement
  - Wrong trace referenced when Meas at Mkr Results → List is used after a Measure at Marker was done with a marker on a trace other than trace 1
  - Noise floor may be too high at low frequencies when Discrete Scan Type is used
  - Actual scan time may be too long under certain conditions when Discrete Scan Type is used
  - Peak Search while using marker delta will exit marker delta
  - Vertical scale will not be displayed properly if the Scale/Div setting was less than 1 dB
  - Application may close when :TRAC:FEED:CONT ALW remote command is used
- Strip Chart Measurement
  - All traces will be cleared when using the :FETC:SCH2|3|4? remote query after a measurement has completed using single sweep.



- The trace is not drawn all the way across the screen if the full screen X scale range is not an integer multiple of the dwell time

#### N9061A, Remote Language Compatibility Application

- “M2E1” remote command for RBW/VBW coupling is not working the same on X-Series as it did on the legacy 8566 and 8568

#### N9063A, Analog Demodulation Measurement Application

- When measured using the Demod Audio output, Signal-to-Noise Ratio is 10 dB worse on the N9030A, PXA versus the N9020A, MXA or N9010A, EXA

#### N9069A, Noise Figure Measurement Application

- Offset in noise figure results when using Table Loss Comp; Fixed Loss Comp was fine
- Changed DUT rule when external L.O. source control is activated

#### N9071A, GSM/EDGE

- READ:EPVT20? does not work correctly with an Access timeslot

#### N9077A, WLAN Measurement Application

- Intermittent WLAN EVM crash
- Intermittent instrument hang related to Display Enable properties, RF Burst Trigger and the Gate function during Channel Power measurement

#### N9081A, Bluetooth Measurement Application

- EDR signal could not be detected

#### N9080A, LTE FDD Measurement Application

- Modified External Trigger level to be 1.2V by default instead of 0V

#### N9082A, LTE TDD Measurement Application

- Modified External Trigger level to be 1.2V by default instead of 0V

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**Version A.13.15 (Release Date December 10, 2013)**

**Enhancements:**

- None

**Issues Resolved:**

- Fixed an issue on the N9020A with frequency range option 503 and option B1A or B1X or B85 wide analysis bandwidths.

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**Version A.13.12** (Release Date September 20, 2013)

**Enhancements:**

- Updated support for option RT1, Real Time Analyzer to allow basic detection up to 160 MHz real time analysis on PXA/MXA. (Maximum real time analysis bandwidth is determined by PXA/MXA option B1X or B85, or MXA option B1A)
- Updated support for option RT2, Real Time Analyzer to allow optimum detection up to 160 MHz real time analysis on PXA/MXA (Maximum real time analysis bandwidth is determined by PXA/MXA option B1X or B85, or MXA option B1A)

**Issues Resolved:**

General X-Series (N9010A, N9020A and N9030A)

- Fixed an issue where the “Settings Conflict; Function not available in this view” message appears when adjusting the display trace value when the instrument has option RT1 or RT2, Real Time Spectrum Analyzer and does not have option EDP, Enhanced Display Package
- Fixed intermittent power on RF alignment failure on PXA and MXA that have option B1X or B85 installed
- Fixed intermittent auto align where RF alignment failure occurs on instruments with option DP2
- Fixed N9030A, PXA Signal Analyzer I.F. Flatness issue that occurs above 3.6 GHz when all of the following PXA instrument configurations are true:
  1. Instrument software version A.13.06 through A.13.09
  2. Option MPB, Microwave Preselector Bypass is installed
  3. Any wide analysis bandwidth option such as B25, B40, B1X or B85 is not installed

TOI, Third Order Intercept

- Fixed an issue where the reported TOI value was incorrect when the analyzer was in narrow resolution bandwidths

N9069A, Noise Figure Measurement Application

- Fixed an issue when cancelling out of the noise source calibration when the analyzer frequency range is above 3 GHz and before the sweep begins. Once the instrument is in this state, subsequent noise source calibrations do not function correctly.

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**Version A.13.09** (Release Date August 5, 2013)

**Enhancements:**

- Added support for option FS1, Fast Sweep to the N9030A, PXA Signal Analyzer

**Issue Resolved:**

- None

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**Version A.13.07 (Release Date July 23, 2013)**

**Enhancements:**

- None

**Issue Resolved:**

N9069A, Noise Figure Measurement Application

- Fixed an issue where the XSA application would close when the Sweep/Control front panel key was pressed and the analyzer did not have the N9069A-2FP license

N9073A, W-CDMA Measurement Application

- Added N9073A-CFP W-CDMA enhancements to the Modulation Accuracy (EVM) measurement:
  - Ability to compensate for I/Q imbalance in W-CDMA EVM and Rho error results
  - I/Q gain imbalance and I/Q quad error results added to Peak/Average metrics window
  - Enables up to 16 frames of consecutive acquisitions from code domain measurement to be used in EVM measurement. EVM is measured over one frame at a time by using timing offset (in units of slots) in the capture buffer

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## **Version A.13.06 (Release Date July 11, 2013)**

**Note:** A.13.06 is not compatible with EXA's, MXA's, and PXA's running the N9069A, Noise Figure Measurement Application.

### **Enhancements:**

#### General X-Series (N9010A, N9020A, N9030A)

- Added support for Windows 7 operating system on the N9030A, PXA Signal Analyzer
- Added support for option B85 on the N9030A, PXA Signal Analyzer
- Added support for options B1X, B85, B1A on the N9020A, MXA Signal Analyzer
- Added support for options P13 and P26 on the N9010A, EXA Signal Analyzer

#### Real Time Spectrum Analyzer

- Added support for Real Time Spectrum Analyzer measurement, licenses N9020A-RT1, N9020A-RT2, N9030A-RT1, and N9030A-RT2
- Added support for Frequency Mask Trigger feature, licenses N9020A-FT1, N9020A-FT2, N9030A-FT1, and N9030A-FT2

Added support for Option FS1, Fast Sweep Capability for N9010A, EXA Signal Analyzers and N9020A, MXA Signal Analyzers equipped with either option B40, MPB, or DP2

#### N6141A, EMI Receiver

- 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

#### N9069A, Noise Figure Measurement Application

- Added Multi-stage converter as a DUT (requires N9069A-2FP)
- Added external L.O. source control (requires N9069A-2FP)

#### N9071A, GSM/EDGE/Evo Measurement Application

- Added SCPI command to set a list of exception bands for MCBTS in EDGE ORFS measurement

### **Issue Resolved:**

- XSA application fails to boot up if Remote Language Compatibility is power-on application and GPIB Controller is set to Enabled
- Fixed an execution error when limit line 2 is turned on, without limit line 1 on, and no trace data.

- Fixed issue that was 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 dBμA
- Fixed issue causing antenna units of None in recalled states to not be applied
- Fixed issue with noise marker on and marker table on where the Y value was reported as dBm/Hz instead of dBm
- WAV:SRAT? returns incorrect data in IQ Analyzer
- Fixed issue with PREAMP/LNP enunciator refresh
- 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 incorrect data with IQ pairs when using large pre-trigger delays
- Fixed issue with the post trigger count for all detector types when doing negative trigger delays

#### ACP, Adjacent Channel Power

- 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

- Fixed .csv file to include mechanical and electronic attenuator metrics

#### TOI, Third Order Intercept

- Fixed an issue where an incorrect dBc value was being reported

#### N6041A, EMI Receiver

- Fixed issue causing the amplitude unit terminators for the meter limits to be incorrect when the antenna units are dBμA
- Frequency Scan Measurement:
  - 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 that was 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

#### N9061A, Remote Language Compatibility Application

- Fixed an issue where SCPI commands related to saving and recalling limit lines would accept the “%” symbol
- Fixed an issue to match the documentation SCPI with the instrument SCPI when using the LIMTFL (Limit Line Flat) and LIMTSL (Limit Line Slope) commands

#### N9068A, Phase Noise Measurement Application

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

#### N9069A, Noise Figure Measurement Application

- 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

#### N9071A, GSM/EDGE/Evo Measurement Application

- Modified the GMSK Power vs. Time lowest level mask as per the standard from -59 dBc or -54 dBm to -59 dBc or -36 dBm, whichever is the highest for bands other than DCS 1800 and PCS 1900
- Fixed issue with ORFS measurement at ARFCN 852 and 853 due to spectrum asymmetry

#### N9072, cdma2000 Measurement Application

- Fixed issue of inconsistent time offset results (2  $\mu$ sec gap) in Mod Accuracy and Code Domain measurements between MXA and EXA



#### N9077A, WLAN Measurement Application

- Fixed auto range issue when instrument parameter change causes increased acquisition times

#### N9063A, Analog Demodulation Measurement Application

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

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**Version A.12.15 (Release Date September 20, 2013)**

**Enhancements:**

- None

**Issue Resolved:**

- Fixed RF Flatness issue on the N9000A, CXA Signal Analyzers with option C75, 75Ω Input

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**Version A.12.13 (Release Date May, 2013)**

**Enhancements:**

- Added support for Windows 7 operating system in EXA and MXA

**Issue 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

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**Version A.12.09** (Release Date March, 2013)

**Enhancements:**

N9010A, EXA Signal Analyzer

- Added support for the following options on EXA instruments that have options 532 or 544 already installed:
  - N9010A-B40 Analysis Bandwidth, 40 MHz
  - N9010A-MPB, Microwave Preselector Bypass
  - N9010A-DP2, Digital Processor with 2 GB Capture Memory

N9010A, N9020A, N9030A Signal Analyzers

- Added cdma2000 and 1xEV-DO for N9083A & W9083A-1FP, Multi-Standard Radio Measurement Application
- The N5172B and N5182B, Vector X-Series Signal Generator models are supported for option ESC, External Source Control

**Issue Resolved:**

General X-Series (N9010A, N9020A, N9030A)

- 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
- Sending WAV:SRAT? query returns the incorrect sample rate in IQ Analyzer (Basic) mode
- Sending CALC:SPEC:MARK[n]:CENT does not center the signal on the display in IQ Analyzer (Basic) mode
- Updated the way the Display Theme parameter is handled
- Reporting issue between the trigger delay status query and the actual display readout
- Changed the maximum stop frequency in analyzers with option 513 to sweep to 13.7 GHz in various sweep modes
- Amplitude issue when changing the Span from 10.01 MHz to 10 MHz when the center frequency is in the preselected bands on the N9030A, PXA Signal Analyzers with frequency range above 26.5 GHz
- Frequency response issue on the N9000A, CXA Signal Analyzer

Spurious Emissions Mask

- Center frequency spur issue in the SEM measurement was not present in Spectrum Analyzer mode

N6141A, EMI Receiver Mode

- 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
  - Saved states always recall with dB $\mu$ V Y-Axis Units
  - Increased the maximum Scan Time when the Discrete Scan Type is selected from 4 kS to 4 MS
- Strip Chart Measurement
  - Display issue caused by too many digits being displayed for the Expanded Meters
  - Y-Axis indications are 0.0 when either Watts, Volts, or Amps were selected as the Y-Axis Units

#### N9063A, Analog Demodulation Measurement Application

- 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

#### N9071A, GSM/EDGE/EDGE Evolution Measurement Application

- Updated the MCBTS Class default from 1 to 2 as per the 3GPP specification change
- Synchronizing issue causes the analyzer to intermittently hang when mode switching into the application
- The “ $\Delta$  from Ref” value in the EDGE ORFS Modulation measurement was using the incorrect Meas BW to calculate the result.

#### N9075A, Mobile WiMAX Measurement Application

- Recalling an OFDMA Modulation measurement state file where an external reference was used, will cause an execution error if the external reference is not connected when the state file is recalled

#### N9077A, WLAN Measurement Application

- Application closes when testing ~4mS long burst in the Modulation Analysis measurement
- Disabled the Sync Training Seq when Radio is DSSS-OFDM

## N9080A/82A, LTE TDD & FDD Measurement Application

- Added more .csv results to be returned in the Spurious Emissions Mask measurement

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**Version A.11.04 (Release Date December, 2012)**

**Enhancements:**

N6141A, EMI Receiver Mode

- Frequency Scan Measurement
  - Added support of Discrete Scan Type for all X-Series instruments and all options (CXA excluded)

**Issue Resolved:**

N6141A, EMI Receiver Mode

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

N9079A, TD-SCDMA & N9082A, LTE-TDD Measurement Applications

- When the View/Display hardkey is pressed in CCDF measurement, the application will close.

Many Measurement Applications

- The selected marker is not always made the active function

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**Version A.11.03 (Release Date November, 2012)**

**Enhancements (Analyzers):**

N9030A and N9010A, Signal Analyzers

- Added support for M1970E, E-band mixer.

N9060A-7FP, Spectrum Analyzer Measurement Application

- Added the ability to name State registers
- Added Zero Span Delay Compensation function
- Spurious Emissions
  - 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

General X-Series (N9010A, N9020A, N9030A)

- Added dBpW amplitude unit
- Added dB $\mu$ A antenna unit
- Increased number of internal state save registers from 6 to 16
- 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
- Added 2 GB deep capture memory in IQ Analyzer (Basic) mode for the following analyzers:
  - All N9030A, PXA Signal Analyzers
  - N9020A, MXA Signal Analyzers with option B40 or DP2 or MPB or BBA when Input/Output is set to IQ
  - N9010A, EXA Signal Analyzers with option B40 or DP2 or MPB

Spectrum Emission Mask

- The highest peak per segment is now displayed when setting the Spur Report Mode to Minimum Margin

**Enhancements (Measurement Applications):**

N6141A, EMI Measurement Application

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



- Added Expand Meters function

#### N6153A, DVB-T/H/T2 Measurement Application

- Added DVB-T2 MISO support
- Added SFN and BER measurements

#### N9061A, Remote Language Compatibility Application

- Added dBpW into Y-Axis units

#### N9071A, GSM/EDGE/EDGE Evolution Measurement Application

- Added N9071A-AFP, Reference Power Max Hold in ORFS switching
- N/W9071A– 3FP, Added AVMOS and AQPSK Multi-test limits in EDGE EVM measurement

#### N9073A-BFP, W-CDMA Measurement Application

- Added Pre-Scramble code auto detection in Code Domain Power measurement
- Added automatic loading of mask file in the Spurious Emission Mask measurement
- W-CDMA downlink auto scramble code detection in Code Domain Power measurement

#### N9077A, WLAN Measurement Application

- Added N9077A-4FP, 802.11ac capability on the PXA, MXA and EXA
- Added N9077A-5FP, List Sequence on the MXA and EXA with option B40, 40 MHz analysis bandwidth

#### N9080A, LTE-FDD Measurement Application

- Added support for MBMS
- Added support for P-RS
- Added support for PvT for UE

#### N9082A, LTE-TDD Measurement Application

- Added support for MBMS
- Added support for P-RS
- Added support for PvT for UE

#### N9083A, Multi-Standard Radio (MSR) Measurement Application

- Added Offset Range
- Added Report Mode and FFT Sweep for LTE-FDD, GSM and W-CDMA

#### [Issue Resolved \(Analyzers\):](#)

## N9020A, MXA Signal Analyzer

- Attenuation ratio cannot be adjusted when the passive probe status is “unknown” when using option BBA, Baseband I/Q Inputs
- When the display is turned off and a mode switch is sent via SCPI, the softkey menu is not present after selecting Local

## N9030A, PXA Signal Analyzer

- Trigger jitter issue in swept mode

## General X-Series (N9010A, N9020A, N9030A)

- Create New Folder softkey is not behaving properly
- XSA 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
- AUS license is not enabling Amplitude Corrections and Limit Lines
- Peak Search reporting incorrect value when in Zero Span at low frequencies
- 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.
- 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

## 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

## [Issue Resolved \(Measurement Applications\):](#)

### N6141A, EMI Measurement Application

- 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

- Error when the :FSC:SCAN1:FEED:RF:PORT RFIN remote command was sent to a non-MXE instrument
- Blank area between ranges fail the limit
- Execution error when measurement window is 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
- EMC Standard saved in a state will change to CISPR when the state is recalled
- 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” function under [Meas Setup], {Limits}, {Properties} does not work
- Strip Chart Measurement
  - Autorange will not settle with impulsive signal

#### N6152A, Cable TV Measurement Application

- J.83/B BER function is not working

#### N9061A, Remote Language Compatibility Application

- Analyzer does not work correctly when N9061A is the selected Power-On Application

#### N9063A, Analog Demodulation Measurement Application

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

#### N9064A, VXA Vector Signal Analyzer Measurement Application

- Improper “Waiting for Trigger” window

#### N9068A, Phase Noise Measurement Application

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

#### N9069A, Noise Figure Measurement Application

- 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

#### N9071A, GSM/EDGE/EDGE Evolution Measurement Application

- Changing the sweep time from 1 slot to 2 slots, then back to 1 will change the sweep time for 1 slot from 640 $\mu$ S to 840 $\mu$ S
- Widened the IFBW when channel filter type is Gaussian for Burst Power/Tx Power measurements
- The Min/Max resolution bandwidth values are incorrectly returned via a SCPI query when in Custom Offset List
- ORFS and Demod on GMSK is slow after a zero span measurement
- Incorrect data in Multi-Carrier ORFS measurement with a ~6 MHz offset when using swept method

#### N9079A, TD-SCDMA Measurement Application

- Power versus Time X-Scale adjustment caused a crash

#### N9080A, LTE-FDD Measurement Application

- Y-axis unit for RB Power Spectrum and RB Power Time changed to Log Mag (dB)
- Demod starts to fail with manual synchronization of PUSCH

#### N9081A, Bluetooth® Measurement Application

- IBS measurement requires RBW delay compensation when in swept mode

#### N9082A, LTE-TDD Measurement Application

- Changing the ILDL configuration takes too long
- Using a low range causes Spurious Emissions measurement to freeze
- Changed Y-axis unit for RB Power Spectrum and RB Power Time to be Log Mag (dB)
- Demod starts to fail with manual synchronization of PUSCH

#### N9083A, Multi-Standard Radio (MSR) Measurement Application

- Offsets F and G are set to “On” in the SEM measurement when a user recalls specific mask files

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**Version A.10.53** (Release Date May, 2012)

**Enhancements:**

- Added Support for N9010A-532, 32 GHz Frequency Range and N9010A-P32, Internal Preamplifier, 32 GHz

**Issue Resolved:**

- None

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**Version A.10.52 (Release Date April, 2012)**

**Enhancements:**

- Added Support for N9010A-544, 44 GHz Frequency Range and N9010A-P44, Preamp, 44 GHz

**Issue Resolved:**

Adjacent Channel Power

- N9030A, PXA Signal Analyzer only; input attenuator change causes incorrect ACP results when noise corrections are turned on.

General X-Series (N9000A, N9010A, N9020A, N9030A)

- 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
- Cannot eject/stop a USB drive once you have accessed it
- Video out has glitch to 0V during retrace prior to "hold" period.
- Increased Max Ref Channel Span limit in Spectrum Emissions Mask

N/W6141A, EMI Measurement Application

- 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
  - Fixed issue that was causing the phase noise optimization to not be properly set during a final measurement when using CISPR Band B in PXA

N9051A, Pulse Measurement Application

- Unable to launch the pulse application using SCPI

N9061A, Remote Language Compatibility Application

- SAVET not working

N/W9069A, Noise Figure Measurement Application

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

N9081A, Bluetooth® Measurement Application

- Low energy IBS measurement is slow

N/W9082A, LTE-TDD Measurement Application

- Frame trigger signal arriving one symbol (70 $\mu$ S) earlier than RF Burst

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**Version A.10.05** (Release Date March, 2012)

**Enhancements:**

- None

**Issue Resolved:**

- Absolute amplitude error out of tolerance. Issue only occurs on EXA and MXA with instrument software version A.10.04, Front End Controller with Hardware ID of 75, and one or more of the following options: B40, CR3, CRP, DP2, or MPB. To check Front End Controller Hardware ID, press **System, Show, Hardware** on the analyzer. Locate Assembly Name "Front End Controller" and check the entry in the Hw Id column.



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**Version A.10.04 (Release Date February, 2012)**

**Enhancements (Analyzers):**

N9000A, CXA Signal Analyzer

- Added support for option CR3, Connector, Wideband I.F. output

N9010A, EXA Signal Analyzer

- Added support for option PC4, High performance dual core, 8 GB RAM and removable solid state drive

N9020A, MXA Signal Analyzer

- Added support for option PC4, High performance dual core, 8 GB RAM and removable solid state drive

N9030A, PXA Signal Analyzer

- Added support for 160 MHz analysis bandwidth
- Added support for option N9030AK-BU3, Upgrade kit to extend option B1X from 140 MHz to 160 MHz
- Added support for option PC4, High performance dual core, 8 GB RAM and removable solid state drive
- Added support for option ESC, External Source Control
- Added support for IQ Analyzer and 89600 VSA software when using option EXM, External Mixing
- Updated option EXM, External Mixing setup editor with frequency offset and amplitude corrections

N9060A-6FP

- I/Q Analyzer update
- Added support for TV Trigger on the N9000A, N9010A, N9020A and N9030A

General X-Series (N9000A, N9010A, N9020A, N9030A)

- 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 to .csv file format
- Added spectrogram enhancements on option EDP, Enhanced Display Package

**Enhancements (Measurement Applications):**

Added support for the following Measurement Applications on the N9000A, CXA Signal Analyzer

- W9062A-2FP, SCPI Language Compatibility, RS
- W9080A-1FP, LTE-FDD
- W9082A-1FP, LTE-TDD

Added feature updates and/or support for the following Measurement Applications on the N9010A, N9020A and N9030A Signal Analyzers

- N9080A-1FP, LTE-FDD
- N9082A-1FP, LTE-TDD
- N9077A-XFP, WLAN
  - Combined WLAN measurements for transmit power, transmit output spectrum, and modulation accuracy

Added support for the following Measurement Applications on the N9000A, N9010A, N9020A and N9030A Signal Analyzers

- N/W6153A-2FP, DVB-T/H/
- N/W6153A -3FP, DVB-T2
- N/W9064A-2FP, VXA Vector Signal Analysis
  - Flexible digital demodulation analysis
- N/W9071A-3FP, EDGE Evolution
- N/W9073A-3FP, W-CDMA
  - HSPA+
- N/W9077A-2FP, WLAN
  - 802.11a/b/g
- N/W9077A-3FP, WLAN
  - 802.11n
- N/W9083A-1FP, Multi-Standard Radio (MSR)

Added feature update to the following Measurement Application on the N9010A, N9020A, N9030A Signal Analyzers

- N9062A-2FP, SCPI Language Compatibility, RS

Added feature updates for the following Measurement Applications on the N9000A, N9010A, N9020A, N9030A Signal Analyzers

- N/W9063A-3FP, Analog Demodulation
  - FM Stereo Measurement
- N/W9068A-AFP, Phase Noise
  - 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

- N/W9069A-AFP, Noise Figure
  - 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

#### N/W6141A, EMI Measurement Application

- Added "Preset To" setting for EMC standard
- Added Autorange to Meters
- Increased the maximum Meter Dwell Time from 1 to 100 seconds
- Added the ability to modify the Meter bandwidth filter type when EMC Std is None
- Frequency Scan Measurement
  - Added html Report Generator functionality
  - 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
  - Added Single measurement capability
  - Increased the Max Duration from 20 minutes to 20 hours (72,000 seconds)

#### N9073A-AFP, W-CDMA Measurement Application

- W-CDMA downlink auto scramble code detection in Modulation Accuracy measurement
- W-CDMA uplink PRACH preamble EVM in Modulation Accuracy measurement

#### Issues Resolved (Analyzers):

##### 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 and in FFT mode causes the XSA application to close

##### Harmonics Measurement

- Fixed the SENSE:POWER:RF:RANGE:OPTIMIZE IMM SCPI command

#### General X-Series (N9000A, N9010A, N9020A, N9030A)

- Changed D:\Agilent\Instrument 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.
- Added a way to turn off the instantaneous trace in IQ Analyzer mode
- Fixed zero span gating issue
- Improved the resolution of Gate Length and Gate Delay when in Gate View
- Eliminated unwanted spurious signals at specific center frequencies and spans
- Changed the IF gain default from Autorange to Low when in IQ Analyzer mode
- Enhanced Gate Delay compensation when sweep time is adjusted
- Fast user switching can result in two instances of XSA application running that will cause issues with Remote Desktop Connection

### Issues Resolved (Measurement Applications):

#### N/W6141A, EMI Measurement Application

- 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 possible instrument crash caused by setting Antenna Unit back to None
  - 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 antenna unit not to be displayed properly in the limit line editor
  - Fixed issue that was causing dB $\mu$ A units to not be displayed properly in the limit line editor
  - Fixed issue that was causing "AC Coupled Accy Unspec'd <10 MHz" in CXA
  - Fixed the Midspan Freq and Span remote commands

#### N6153A, DVB-T/H/T2 Measurement Application

- Added Kilometer as an X-axis unit for channel impulse response measurement
- Improved the synchronization in the 0 dB echo profile measurement
- Added normalization function
- Fixed an automatic coupling issue on the J.83B Radio Standard
- Fixed J.83B crash when doing a Bit Error Rate measurement

#### N6155A, ISDB-T Measurement Application

- Fixed channel frequency response by allowing normalization of reference signal

#### N6156A, DTMB Measurement Application

- Incorrect results are returned when :FETC:CHP7? SCPI is sent

#### N9061A, Remote Language Compatibility Application

- Invalid block data error occurs
- ID? not responding correctly

#### N9063A, Analog Demodulation Measurement Application

- Fixed data error message when in Single sweep and Average is Off

#### N9064A, VXA Vector Signal Analyzer Measurement Application

- Irregular display after multiple VXA states are recalled
- SEM measurement cannot recall a preset mask file (.mask)
- EVM results degrade when the frequency error is >20 kHz

#### N9068A, Phase Noise Measurement Application

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

#### N9069A, Noise Figure Measurement Application

- Fixed “spikes” in noise figure response after performing a noise figure calibration followed by an Align Now, All on the N9010A
- Noise figure measurement error when the frequency span is 3~3.6 GHz

#### N9071A, GSM/EDGE/EDGE Evolution Measurement Application

- Fixed an unstable EDGE EVM synchronization issue with an AQPSK signal only at a specific SCPIR power level
- Changed detection logic when burst sync is set to RF Amptd and Mod Scheme Auto detection is true

- Added new SCPI command so a user can specify the number of consecutive bursts in a burst interval
- Aligned sample rates for 25 and 40 MHz analysis bandwidths in the Transmit Power measurement

#### N9072A, cdma2k Measurement Application

- Fixed crash issue in the Modulation Accuracy measurement

#### N9073A, W-CDMA Measurement Application

- Added “Global Center Freq” coupling functionality

#### N9079A, TD-SCDMA Measurement Application

- Fixed phase shift auto detection failure

#### N9080A, LTE FDD Measurement Application

- Fixed allocation issue when two RB's are at the edge of the bandwidth
- When SC-SCDMA RB is transmitted on either side of the BW, the adjust attenuator for minimum clip is not working for 20MHz BW LTE uplink
- Increased the center frequency resolution in Monitor Spectrum
- Added “Global Center Freq” coupling functionality
- Added SCPI to support average count in LTE CEVM measurement
- When in UL and pre-setting to Standard, the analysis boundary cannot be set to Slot via SCPI or manually via the front panel
- Fixed an API issue where an invalid frequency hopping value can cause the application to crash

#### N9081A, Bluetooth® Measurement Application

- Dependency of Radio and Packet Type resolved so that the IQ Offset Compensation softkey operates correctly
- IQ Offset Compensation softkey is always grayed out
- Error generated if the sweep time is >140 mS
- Added Time Offset capability to compensate for cable delays

#### N9082A, LTE TDD Measurement Application

- Fixed failure when both UL and DL are present
- When SC-SCDMA RB is transmitted on either side of the BW, the adjust attenuator for minimum clip is not working for 20MHz BW LTE uplink
- Added “Global Center Freq” coupling functionality
- 89600, VSA Software
- Fixed intermittent issue when recalling a state file

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**Version A.08.55 (Release Date October, 2011)**

**Enhancements:**

- None

**Issues Resolved:**

N9000A, CXA Signal Analyzer with options 507, 9 kHz – 7.5 GHz Frequency Range and P07, 7.5 GHz Internal Preamplifier

- Internal Preamp softkey status is On, yet the internal preamplifier hardware is turned Off when the following instrument conditions are met:
  - When in Noise Figure mode (N9069A)
  - When the N9000A is tuned between 3.2 GHz and 3.5 GHz

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**Version A.08.54 (Release Date September, 2011)**

**Enhancements:**

N9060A-5FP

- Added Adjacent Channel Power using 18 multi-carriers

N9068A, Phase Noise Measurement Personality

- Supports option EXM, External Mixing

N9081A, Bluetooth®

- Added IQ Offset in the user interface

N9030A, PXA Signal Analyzer

- Support for the M1970 V/W, Harmonic Mixers with option EXM, External Mixing
- Support for option EXM, External Mixing on frequency range options 503, 508, 513 and 526

Support for option BBA, I/Q Baseband Inputs, in the following measurement applications for the N9030A, PXA Signal Analyzer:

- 89601B, Vector Signal Analysis
- N9064A, VXA
- N9071A, GSM/EDGE/Evo without –XFP, Single Acquisition Combined Measurement application
- N9072A, cdma2k
- N9073A, W-CDMA without –XFP, Single Acquisition Combined Measurement application
- N9075A, 802.16 OFDMA
- N9076A, 1xEV-DO
- N9079A, TD-SCDMA
- N6152A, Digital CATV
- N6153A, DVB-T/H
- N6155A, ISDB-T
- N6156A, DTMB
- N6158A, CMMB

General X-Series

Added support for option EXM, External Mixing to the following measurements:



- Channel Power
- Occupied BW
- Adjacent Channel Power
- CCDF
- Burst Power
- Spurious Emission
- Spectrum Emission mask
- TOI
- List Sweep

### Issues Resolved:

#### N9030A, PXA Signal Analyzer

- Noise Floor Extension (NFE) enunciator implemented

#### General X-Series

- MXA/EXA/CXA reported “Meas Uncal” when in narrow resolution bandwidth sweeps in FFT 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
- :SENS:POW:RF:RANGE:OPT IMM was different between CXA and MXA
- Web Server image is obscured when operator selects a utility that brings a mouse controlled screen to the foreground
- External Gain range increased to plus and minus 120 dB

#### N6141A, EMC Measurement Application

- Frequency Scan Measurement
  - External Gain applied to Max Ref Level
  - External Gain added to the measure bar
  - Max Ref Level increased to +100 dBm

#### N6153A, DVB-T/H with T2 Measurement Application

- Save/Recall is now recalling the correct channel number

#### N9061A, Remote Language Compatibility Application

- Sending “IP” created an error
- SPOLL command returned incorrect status byte after a SRQ command

#### N9063A, Analog Demodulation Measurement Application

- Help text for Analog Demod View selections
- Corrected SCPI for SINAD/Distortion THD On/Off command

#### N9064A, VXA Vector Signal and WLAN Modulation Analysis Measurement Application

- Fixed Power on last state when in VXA Analog Demodulation measurement

#### N9068A, Phase Noise Measurement Application

- 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

#### N9069A, Noise Figure Measurement Application

- Cal State message changed to Uncal when it should remain as ~Cal

#### N9071A, GSM/EDGE/EDGE Evolution Measurement Application

- Corrected the limit mask is incorrect for PCS1900 MS in Power vs. Time measurement

#### N9079A, TD-SCDMA Measurement Application

- Corrected limits for SEM measurement
- Corrected 64QAM demodulation error

#### N9080A, LTE Measurement Application

- Fixed LTE Uplink crash when DUT is turned off or significant power level (>30 dBm) change occurs

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**Version A.08.04 (Release Date June, 2011)**

**Enhancements:**

- None

**Issues Resolved:**

N9030A, PXA Signal Analyzers with option EXM, External Mixing

- Frequency accuracy of the instrument is incorrect when in wide spans of V Band
- When in the Swept SA measurement, the analyzer stops sweeping

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**Version A.08.03 (Release Date May, 2011)**

**Enhancements:**

Support for the following options on the N9030A, PXA Signal Analyzer

- 543, 43 GHz Frequency Range
- 544, 44 GHz Frequency Range
- 550, 50 GHz Frequency Range
- NFE, Noise Floor Extension to 50 GHz
- P43, 43 GHz Internal Preamplifier
- P44, 44 GHz Internal Preamplifier
- P50, 50 GHz Internal Preamplifier
- EXM, External Mixing on frequency range options 543, 544 and 550

All existing, new and updated measurement applications are supported up to 50 GHz on the N9030A, PXA Signal Analyzer

Added Tracking Generator Peak function to option ESC, External Source Control on the N9000A, CXA Signal Analyzer

Added support for the following Measurement Applications on the N9030A, PXA Signal Analyzer

- N9072A, cdma2000®/cdmaOne
- N9076A, 1xEV-DO

Added support for the following Measurement Applications on the N9000A, CXA Signal Analyzer

- W9073A-3FP HSPA+
- W9071A-3FP EDGE Evolution
- W9072A cdma2000®/cdmaOne
- W9076A 1xEV-DO

N6155A, ISDB-T Measurement Application added three functions:

- ISDB-Tmm Standard support and AC decoding
- ISDB-T/Tsb AC bits view
- 7 and 8 MHz Bandwidth support for ISDB-T

Added two options to the N9051A Pulse Measurement software: Phase/Frequency measurements and Extended Analysis and Statistics

## Issues Resolved:

### General X-series

- Last trace point has a large amplitude error when using 2001 sweep points
- Trace spikes appear with no input signal every 15-20 hours
- Spurious responses present when a 477.25 MHz input signal is applied
- The sweep stops in zero span with sweep times  $\geq 522.4$  seconds
- Sweep stops when sweep time  $\geq 340$  s with Quasi-peak detector selected
- Input Overload: ADC Over Range status message may not clear when proper conditions are met
- Vector Signal Analyzer recording could not work with IF Mag Negative Trigger Delay on the N9020A with option BBA, Baseband I/Q Inputs
- EMC Limit Line File names need to be updated from "EN55022" to "EN 55022"
- Added FCC Part 15, Class A Rad (3m) EMC Limit Line
- SCPI to load "After DUT" Loss compensation table loads into "Before" table
- dBm Amplitude units fully functional in option ESC, External Source Control
- Plugging in an N400xA, SNS Noise Source while in SA mode causes instrument software version A.07.04 to close the XSA application
- Recalling trace data should put the trace in View, however the trace was in Write mode
- I/Q Analyzer with Time Avg  $>1$  and RBW  $<300$  kHz widens displayed signal width
- Save Trace, Multiple trace results in .csv format does not correctly save all traces in dB $\mu$ V amplitude units
- Internal Preamplifier SCPI command is ignored when a user switches to Channel Power measurement via SCPI then sends :CONF:SAN command
- Status Annotation shows "Meas Uncal" for narrow RBW FFT sweeps
- Instrument hang when switching from the Spectrogram measurement to the EMI Receiver measurement application
- Corrections were able to be set via SCPI even though the Corrections feature was not licensed
- Adjacent Channel Power with NCORR On and LO feed through on screen, the noise pedestal appears
- Monitor Spectrum measurement is calculating the Band Power incorrectly
- ACP data is not rendered properly in most display themes

### N/W6141A, EMI Measurement Application

- Meters peak hold line resets when the meter frequency is changed
- Unable to move meter frequency smoothly using the front panel knob
- Frequency Scan Measurement
  - Slow for discrete scan when EMI Average detector is used
  - Next Peak is not operating correctly in Frequency Scan
  - Search fails when the limit spans across two ranges
  - Incorrect data when sending :TRACE:SCAN? Trace 1

- Frequency Scan stops after setting up range 5 and pressing the Restart key
- Correction factors increased from 4 to 6 in the Save and Recall menu
- Meas Uncal error does not clear after the instrument settings have returned to Auto couple
- The marker intermittently disappears when Trace View is selected
- Scan freezes when using EMI Average detector
- XSA application closes when doing a Marker Zoom then Zoom Out quickly and repeatedly
- Strip Chart Measurement
  - At 150 kHz the strip chart noise level is ~ 10 dB higher compared to Freq Scan meter and Swept SA measurement results

#### N/W6155A, ISDB-T/Tmm Measurement Application

- DVB-T Save/Recall of an instrument state file not working with channel number
- NTSC-J Channel Table updated for ISDB-T

#### N/W9061A, Remote Language Backward Compatibility

- End Of Sweep bit will not be set in VXI-11 connection
- Limit Line segment order sorted unexpectedly when LIMIREL ON SCPI command was sent
- MKPT (Marker Threshold) activates TH (Threshold) unexpectedly
- SPOLL returns wrong status byte after SRQ

#### N/W9063A, Analog Demod Measurement Application

- Turning on preamp and pressing Meas, FM Demod closes the XSA application
- Help text for Analog Demod View selections are not available

#### N/W9068A, Phase Noise Measurement Application

- N9030A will not auto tune in Log Plot at 154-155 MHz carriers only
- Smoothed trace shows a large step with 16% smoothing

#### N/W9069A, Noise Figure Measurement Application

- SCPI command used to load the After DUT loss compensation table is actually loading the Before DUT loss compensation table instead
- :CALCulate:MARKer1:Y? returns one marker value by default. Refer to the :CALCulate:MARKer:COMPAtible ON and OFF commands
- N400xA, SNS ENR data does not automatically download when the sensor is connected to the analyzer with the power off, then power is turned on to the analyzer
- Added a SCPI command to clear all data from Loss Compensation table
- Loss Comp softkey label does not change when importing Loss Comp data

#### N9079A, TD-SCDMA Measurement Application

- TD-SCDMA SEM signal response is different between the PXA and the MXA with identical Gating parameters

#### N/W9080A, LTE FDD Measurement Application

- Trace and Marker results do not update when the display is turned off via SCPI
- Sync error happens when the signal bandwidth equals 15 MHz

#### N/W9081A, Bluetooth® Measurement Application

- If a signal has a ramp up of 1 $\mu$ S, the synchronization will fail
- Added amplitude values with the channel numbers in the ACP measurement
- Added Pause key to ACP and IBS measurements

#### N/W9082A, LTE TDD Measurement Application

- Analyzer screen will stop updating when 2 users are added in Manual configuration under the Edit User Mapping menu. Automatic configuration works fine
- Sync error happens when the signal bandwidth equals 15 MHz

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**Version A.07.06 (Release Date January, 2011)**

**Enhancements:**

- None

**Issues Resolved:**

General X-series

- Amplitude units when saving multiple traces using .csv format is not consistent
- User entered IDN via the front panel does not survive a power cycle
- Sending the Local Lockout command via SCPI does not lock out the front panel operation
- Permissions allowed on the C:\Temp folder
- For Option ESC, fixed SCPI error when controlling N5181A/82A signal generator option without modulation option installed

N9000A, CXA Signal Analyzer

- Spur at 1.63 GHz during TG Power Sweep function
- 5 dB amplitude drop at 9 kHz during fast sweep in DC coupled mode
- Tracking Generator L.O. feedthrough amplitude issue
- Corrected start frequency setting of the tracking generator from 0 Hz to 9 kHz

N9030A, PXA Signal Analyzer

- Noise floor issue when recalling a state when the noise floor extension is invoked

N6141A, EMC Measurement Application

- Limit units disappear when Corrections are turned on

N9069A, Noise Figure Measurement Application

- Changed Marker Compatibility default to Off

N9071A, GSM/EDGE/EDGE Evolution Measurement Application

- Changed MCBTS carrier spacing limit from 8 MHz to 100 MHz to comply with 3GPP conformance tests



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**Version A.07.04 (Release Date January, 2011)**

**Enhancements:**

Supports the following Measurement Applications on the N9000A, CXA Signal Analyzer:

- W6141A-2FP, EMC Pre-compliance
- W6152A-2TP, -2FP, -3TP and -3FP, DVB-C, J83 Annex A/C and DVB-J.83 Annex B
- W6153A-3FP, DVB-T2

Supports the following Measurement Applications on the N9010A, N9020A and N9030A Signal Analyzers:

- N6141A-2TP and -2FP, EMC Pre-compliance
- N6152A-2TP, -2FP, -3TP and -3FP, DVB-C, J83 Annex A/C and J.83 Annex B
- N6153A-3TP and -3FP, DVB-T2

Supports the following Measurement Application on the N9030A, Signal Analyzer:

**General X-series**

- Added option EDP, Enhanced Display Package for N9000A, N9010A, N9020A and N9030A Signal Analyzers
- Added option ESC, External Source Control for N9000A, CXA Signal Analyzer
- Added 40 MHz analysis bandwidth options for N9010A, EXA Signal Analyzers and N9020A, MXA Signal Analyzers by adding options DP2, Digital Processor with 2 GB Capture Memory, B40, 40 MHz Analysis Bandwidth and MPB, Microwave Preselector Bypass.
- Added 25 MHz analysis bandwidth options to the N9000A, CXA Signal Analyzer
- Added option PFR, Precision Frequency Reference to the N9000A, CXA Signal Analyzer
- Added options T03, 9 kHz to 3 GHz and T06, 9 kHz to 6 GHz internal tracking generator option to the N9000A, CXA Signal Analyzer
- Added option CR3, 2<sup>nd</sup> I.F. Output and option CRP, Arbitrary I.F. Output to the N9010A, EXA and N9020A, MXA Signal Analyzers
- Added option P07, 7 GHz internal preamplifier to the N9010A, EXA Signal Analyzer
- Moved the UI controls for Minimize, Maximize, and Close (Exit) to softkeys in the File Menu. Provided softkey to launch Internet Explorer.

N6149A, iDEN/WiDEN/MotoTalk Measurement Application

N9071A-3FP, EDGE Evolution Measurement Application

- EDGE EVM measurement: added support for SCPIR [dB] parameter setting for VAMOS demod, previously was “Alpha [arctan]”
- EDGE ORFS (output RF spectrum) measurement: added support to the following for multi-carrier GSM (MC-GSM):
  - Non-Contiguous carrier allocation support
  - Contiguous frequency allocation with equal or un-equal carrier spacing support
  - IM product calculation order setting selection: “3rd”, “3rd+5th”, or “3rd+5th+7th”

#### N9073A-2FP, HSPA+ Measurement Application

##### Uplink:

- Power control measurement (Meas Type = Slot Phase): added “Mag Err (%)” and “IQ Offset (dB)” to the list of error metrics.
- Added E-DPCCH (C8(1):I) sync type to the modulation accuracy measurement

##### Downlink:

- Added predefined Test Models (TM1/3/5) for Home NB to modulation accuracy measurement

#### N9073A-3FP HSPA+ Measurement Application

##### Downlink:

- Added Predefined Test Model 6 for Home NB to modulation accuracy measurement
- Added MBSFN S-CCPCH 16QAM code/symbol detection and analysis support to modulation accuracy measurement

### Issues Resolved:

#### General X-series

- After recalling a file, remain at the recall register menu
- Power On, Last State issue when powering down in a measurement application
- Changed the display theme when Monochrome display is selected
- Peak Table numbered annotations are now present
- Modified the Auto Atten SCPI command to enable a user to know when the command has actually finished the operation
- N9010A Characterize Preselector function fails on option 507, 9 kHz-7 GHz instruments only
- N9030A "File Replace" error window appears when updating instrument software from A.04.29 to A.06.06
- N9030A Input / ADC Over range appears with IF BW at 140 MHz, no input signal, in I/Q Analyzer mode
- N9030A Bursted signals not correct when in the "slow" LO gating mechanism (delay < min fast) and when the 1<sup>st</sup> L.O. is in dual loop narrow mode

#### N9061A, Remote Language Compatibility Measurement Application

- System/User Option→Preference softkey to address \*IDN? query issue regarding instrument options

#### N9062A, SCPI Command Language Compatibility Measurement Application

- Added Amplitude Correction related commands
- Added “Watt” in power units
- Added SCPI to return multiple peak values

#### N9063A, Analog Demodulation Measurement Application

- Analog output on the rear panel is clipped in FM demodulation and spans  $\leq 50$  kHz
- Disabled Internal Preamplifier ON/OFF softkey if preamplifier option is not installed

#### N9068A, Phase Noise Measurement Application

- 1 MHz “Glitch” issue when using the AM rejection and Noise Floor Extension functions on the N9030A, PXA Signal Analyzer only

#### N9069A, Noise Figure Measurement Application

- If the LossAfterDUT is not set to 0; 3dB for example, the Phot and Pcold results will be incorrect
- Modified the Uncal Cal State rules when changing sweep modes (Swept, Fixed, List)

#### N9073A, W-CDMA/HSPA/HSPA+ Measurement Application

- Option 1FP fixed Transient Period Include/Exclude to uplink power control measurement (Meas Type = Slot Phase) to be consistent with PSA W-CDMA option
- Option 2FP fixed measurement interval of 0.5 slot for uplink power measurement (Meas Type = Slot Phase) to be consistent with PSA W-CDMA option

#### N9071A, GSM/EDGE/EDGE Evolution Measurement Application

- Modified the Optimize Reference Level remote SCPI command
- Modified the ORFS measurement behavior at the offset frequency of 1.8 MHz following the updated 3GPP specification
- Power vs. Time measurement is not reliable when using Training Sequence 6
- Averaging iteration was very slow because the average counter was not being updated when the carrier power was measured in the Output RF Spectrum measurement

#### N9076A, 1xEV-DO Measurement Application

- Modulation Accuracy time offset units change from nS to mS when saving a screen image; the display is correct

#### N9077A, Single Acquisition Combined WLAN Measurement Application

- No response and softkeys blank when selecting Modulation Accuracy. Trying to return to the Parameter list the spectrum analyzer application shuts down

#### N9079A, TD-SCDMA Measurement Application

- Fixed phase shift SCPI
- Modified the Gate dependency information in Spectrum Emission Mask measurement
- Added a warning dialogue box when Continuous sweep key is pressed in Power vs. Time measurement
- Boundary check modified to avoid the application from closing when entering more than six values as the number of offsets for resolution bandwidth

#### N9080A, LTE-FDD Measurement Application

- LTE Uplink SyncCorr issue with power levels --40 dBm to--60 dBm

#### N9081A, Bluetooth® Measurement Application

- Capture Buffer did not function correctly
- Added SCPI for DEVM vs. time or DEVM block vs. Time trace

#### N9082A, LTE-TDD Measurement Application

- CF Step frequency function not operating correctly
- Added a warning dialogue box when Continuous sweep key is pressed in Power vs. Time measurement

#### SEM Measurement (All Modes)

- Table calculation is incorrect when flattop filter is selected
- Lowered the minimum value of offset stop frequency

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**Version A.06.06** (Release Date September, 2010)

**Enhancements:**

Supports the following Measurement Applications on the N9000A, CXA Signal Analyzer:

- W9071A-2FP, GSM/EDGE
- W9073A-1FP, W-CDMA and -2FP, HSPA
- W9075A-2FP, 802.16 OFDMA
- W6153A-2FP, DVB-T/H
- W6155A-2FP, ISDB-T
- W6156A-2FP, DTMB
- W6158A-2FP, CMMB
- W9064A-1FP and -2FP, VXA Vector Signal and WLAN
- W9079A-1FP and -2FP, TD-SCDMA
- W9081A-2FP, Bluetooth®

Supports the following Measurement Applications on the N9030A, PXA Signal Analyzer:

- N9063A-2TP and -2FP, Analog Demodulation
- N9071A-2TP, -2FP, 3TP and 3FP, GSM/EDGE/EDGE Evolution
- N9075A-2TP and 2FP, 802.16 OFDMA
- N9079A-1FP, -2FP, -1TP, -2TP, TD-SCDMA
- N6156A-2TP and -2FP, DTMB
- N6158A-2TP and -2FP, CMMB

Supports the following Measurement Applications on the N9010A, N9020A and N9030A Signal Analyzers:

- N9062A-2FP, SCPI Language Compatibility
- N9064A-1FP, -2FP, -3FP, -1TP, -2TP, -3TP, VXA Vector Signal & WLAN Modulation Analysis
- N9064A-1FP, -1TP Vector Signal Analysis added support for N9020A BBIQ inputs, option BBA
- N9081A-2FP, Bluetooth®

**General X-series**

- Added option ESC, External Source Control on N9010A and N9020A Signal Analyzers
- Improved absolute trigger accuracy on N9030A, PXA Signal Analyzer

**N6153A, DVB-T/H Measurement Application**

- Added Modulation Error Rate Monitor View and Peak Table View in Channel Impulse Response measurement in N6153A-2FP and W6153A-2FP
- Added Noise Floor Extension and Wideband I.F. support in N6153A-2FP on N9030A, PXA Signal Analyzer

#### N6155A, ISDB-T Measurement Application

- Added Peak Table View in Channel Impulse Response measurement in N6155A-2FP and W6155A-2FP
- Added Noise Floor Extension and Wideband I.F. support in N6155A-2FP and -2TP on N9030A, PXA Signal Analyzer

#### N6156A, DTMB Measurement Application

- Added Peak Table View in Channel Impulse Response measurement in N6156A-2FP and W6156A-2FP
- Added Noise Floor Extension and Wideband I.F. support in N6156A-2FP and -2TP on N9030A, PXA Signal Analyzer

#### N6158A, CMMB Measurement Application

- Added Peak Table View in Channel Impulse Response measurement in N6158A-2FP and W6158A-2FP
- Added Noise Floor Extension and Wideband I.F. support in N6158A-2FP and -2TP on N9030A, PXA Signal Analyzer

#### N6171A, MATLAB® Software for X-series and PSA

- Pre-downloaded on all X-series analyzers

#### W/N9069A, Noise Figure Measurement Application

- Added Overlaid Graph and Marker backward compatibility

#### N9071A, GSM/EDGE/EDGE Evolution Measurement Application

- Added Multi Carrier BTS support in GMSK ORFS and EDGE ORFS measurements in N9071A-3FP and -3TP on N9010A, N9020A, N9030A Signal Analyzers
- Added Adaptive QPSK (AQPSK) demodulation support for Voice Services Over Adaptive Multi-User Channels on One Slot (VAMOS) in N9071A-3FP and -3TP on EVM and Power vs. Time measurements on N9010A, N9020A and N9030A Signal Analyzers
- Added GMSK RMS and Peak Phase error test limits under EDGE EVM measurement in N9071A-2FP and -2TP and W9071A-2FP

#### N9079A, TD-SCDMA Measurement Application

- Added RRC filter for time domain measurements, low noise path, microwave preselector bypass path and noise floor extension in N9079A-1FP, -1TP, -2FP, -2TP on N9030A, PXA Signal Analyzer

- Added amplitude corrections, periodic timer trigger in demodulation measurements and periodic timer gate source in frequency domain measurements in N9079A-1FP, -1TP, 2FP, 2TP on N9010A, N9020A and N9030A Signal Analyzers

#### N9080A, LTE FDD Measurement Application

- Added Signal Studio configuration file import, 89600 setup file import, speed enhancements and a new conformance EVM measurement in N9080A-2FP and -2TP
- Support for PDCCH-based auto detection of downlink allocations
- New decoded channel information for PBCH, PCFICH, PDCCH and PDSCH
- Information bits from downlink control and shared channels at different points in the receiver chain (such as after descrambling, derate matching, decoding, etc.)
- Descrambled channel information for PUSCH
- New uplink In-band emissions test
- Multi-carrier filter for both uplink and downlink

#### N9082A, LTE TDD Measurement Application

- Added Signal Studio configuration file import, 89600 setup file import, speed enhancements and a new conformance EVM measurement in N9082-2FP and -2TP on the N9010A, N9020A and N9030A Signal Analyzers
- Support for PDCCH-based auto detection of downlink allocations
- New decoded channel information for PBCH, PCFICH, PDCCH and PDSCH
- Information bits from downlink control and shared channels at different points in the receiver chain (such as after descrambling, derate matching, decoding, etc.)
- Descrambled channel information for PUSCH
- New uplink In-band emissions test
- Multi-carrier filter for both uplink and downlink
- Transmit On/Off power measurement incorporates the PXA's noise floor extension technology
- Support for user equipment (UE) specific reference signal (RS)

#### 89601X, VXA Signal Analyzer Measurement Application

- Changed 89601X product number to N9064A and W9064A

### Issues Resolved:

#### General X-series

- Putting Trace 1 in View caused Trace 2 to restart the sweep
- Recalling an instrument state file causes the Save State softkey menu to appear
- Improved the FFT sweep time in the N9030A, PXA Signal Analyzer
- Repaired last trace point issue on the N9030A, PXA Signal Analyzer
- Repaired Auto Align issue on N9030A, PXA Signal Analyzer that caused the instrument application to freeze

- N9030A, 3.6 GHz (option 503) analyzers may freeze when recalling a 89601X or N/W9064A VXA state file only after initial power up. Subsequent recalls of the same state file after power up has completed or performing a mode switch, the recall will operate fine

#### N6153A, DVB T/H Measurement Application

- MER vs. time logging and alarming with data capture for monitoring purposes
- Changed Y axis unit from  $\mu\text{s}$  to ns when in group delay trace in frequency response view of modulation accuracy measurement
- dBmV and dB $\mu$ V unit added for channel power measurements
- Fixed group delay issue at both sides in the channel frequency response view

#### N6155A, ISDB-T Measurement Application

- MER vs. time logging and alarming with data capture for monitoring purposes
- Changed Y axis unit from  $\mu\text{S}$  to nS in group delay trace in frequency response view
- dBmV and dB $\mu$ V unit added for channel power measurement

#### N6156A, DTMB Measurement Application

- MER vs. time logging and alarming with data capture for monitoring purposes
- Changed Y axis unit from  $\mu\text{S}$  to nS in group delay trace in frequency response view
- dBmV and dB $\mu$ V unit added for channel power measurement

#### N9068A, Phase Noise Measurement Application

- Low Noise Path does not work if the span is >400 MHz

#### N9069A, Noise Figure Measurement Application

- Recall state now recalling CAL vs. UNCAL state properly after a power cycle
- Changed the way Auto Scaling works
- Marker enhancements
- Cal State goes Uncal when recalling a known Cal'd state

#### N9071A, GSM / EDGE Measurement Application

- Mask Lower Limit cannot be set correctly in the EDGE Power vs. Time measurement
- Triggering issue in Output RF Spectrum if BTS Gain  $\langle \rangle$  ~0 dB
- Changed the Avg. Type default to Log as per the standard

#### N9072A, cdma2000 Measurement Application



- Added spectrum trace curve

#### N9075A, 802.16 OFDMA Measurement Application

- Added ability to set Avg. Tx power over entire subframe period
- Changed error message to inform the user to increase the burst number when required for the SEM measurement
- SEM causes ACP measurement offset list to go back to default values

#### N9079A, TD-SCDMA Measurement Application

- Multi-carrier demodulation does not work properly for even carrier numbers
- Limit State under SEM measurement setup default value is Manual
- Periodic Trigger added for modulation analysis

#### N9080A/N9082A, LTE Measurement Applications

- SEM measurement is using the incorrect Phase Noise Optimization

#### N9082A, LTE TDD Measurement Application

- Repaired instrument hang after multi-day SCPI use
- Power vs. Time pass/fail criteria should be based on average power, not instant power
- Transient period measurement now compliant with the standard
- Power vs. Time slot power is not consistent to channel power

#### ACP Measurement (All Modes)

- Incorrect ACP results when Noise Correction is On and Update is Off in the Trace/Detector menu
- Recalling saved state with Noise Correction On does not perform the Noise Correction
- Multi Carrier does not work properly when Radio Standard is W-CDMA and the device is MS

#### Channel Power Measurement (All Modes)

- Incorrect results given when trace is in Max Hold

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**Version A.04.29 (Release Date July, 2010) N9030A Only**

**Enhancements:**

Adds the following measurement apps for PXA:

- N6153A-2FP DVB-T/H Measurement Application
- N6155A-2FP ISDB-T Measurement Application
- N9073A-1FP 2FP, 3FP W-CDMA Measurement app, HSDPA / HSUPA, and HSPA+ Measurement App
- N9080A-1FP LTE-FDD
- N9082A-1FP LTE-TDD

**Issues Resolved:**

General X-series

- Softkey Help update
- Added a memory monitoring feature that opens an "Insufficient Resources" dialogue window when there is not enough memory to load a selected Mode.
- Fixed issue causing long FFT sweep time in narrow spans such as 2 kHz
- Marker issues when recalling a state file
- Video Trigger level does not include Ref Level Offset
- Band Adjust (under Marker Function) issue when the band is set to Full Span and the frequency is changed

N9069A, Noise Figure Measurement Application

- Application closes when recalling a state file
- Save Meas Results does not save all the data
- ENR data from an N400xA SNS will not automatically download into the analyzer when the SNS is connected
- Recalling a Cal'd state file does not always result in a Cal'd state

N9068A, Phase Noise Measurement Application

- In Log Plot mode, intermittent glitches sometimes a decade wide appeared

ACP Measurement (All modes)

- NCORR incorrect if carrier spacing is 5 MHz and the BW is 18 MHz

Channel Power (All Modes)

- Fixed discrepancy in Phase Noise optimization menu between PSA and X-Series.
- Exits SA App intermittently. Event Log shows "MeasStateMachine.Abort"

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**Version A.04.26 (Release Date May, 2010) N9000A, N9010A, N9020A Only**

**Enhancements:**

N9060A-4FP

- TOI and Harmonics measurements available for MXA/EXA/CXA with option R2C. Select the product link below for R2C details.
  - [N9020A \(MXA\)](#)
  - [N9010A \(EXA\)](#)
  - N9000A (CXA) contains N9060A-4FP. Simply update the instrument software to enable the measurement enhancements and receive current updates. R2C is not needed for this model.

**Issues Resolved:**

General X-series

- Application closes when the Printer key is pressed while in the System menu
- Option version number is blank when in Show System
- Auto Align OFF and PARTIAL do not stay persistent after a power cycle
- Characterize Preselector statistics do not survive a power cycle
- Screen image could not be captured when in Web Control SA
- Visual indication of Volume & Mute keys fixed
- Softkey Help update
- Marker issues when recalling a state file
- Video Trigger level does not include Ref Level Offset
- Band Adjust (under Marker Function) issue when the band is set to Full Span and the frequency is changed
- dBmV units are not maintained for measurements in the Meas menu
- Video Trigger level issue when External Gain is not 0 dB in IQ Analyzer mode
- Amplitude error at 3 GHz after pressing Align Now, RF
- LO Unlock error not being captured in error log
- Recovery from A.03.06 to A.01.57 causes a hardware start failure
- Auto Align causes an amplitude change on a measured signal
- Added a memory monitoring feature that opens an “Insufficient Resources” dialogue window when there is not enough memory to load a selected Mode

N9051A, Pulse Measurement Application

- Web Server would not start up correctly

N/W9068A, Phase Noise Measurement Application

- Save data function does not have enough resolution in frequency results

N/W9069A, Noise Figure Measurement Application

- Application closes when recalling a state file
- Save Measurement Results does not save all the data
- ENR data from N400xA SNS will not automatically download into the analyzer when the SNS is connected
- Recalling a Cal'd state file does not always result in a Cal'd state

#### N9071A, GSM/EDGE/EDGE EVO Measurement Application

- Harmonics measurement does not change/use attenuation correctly when IQ acquisition measurement is enabled
- Pressing Preset sets Mod Scheme to 8PSK instead of AutoDet
- Power vs. Time shows the incorrect TSC number (3 instead of 0)
- NSR 32 QAM PN9 signal may cause Burst Not Found error in Power vs. Time
- Performance degradation at 600 kHz of Multi-Offset during ORFS measurement
- Wideband Noise On in ORFS measurement does not cover all required ranges of relevant band

#### N9072A, cdma2K Measurement Application

- Spectrum Emission Mask stop frequency is not consistent between Abs Pwr View and Rel Pwr view

#### N9073A, WCDMA Measurement Application

- Combined WCDMA measurement, during ACP measurement portion, may exhibit degraded performance without option B25

#### N9075A, 802.16 OFDMA Measurement Application

- Time Offset issue when using a specific Preamble Index and Zone/Det Burst Map

#### N9080A, LTE FDD Measurement Application

- Recalling an instrument state file does not set all parameters
- Saving a user edit for UL PRACH measurement turns off the RB Auto Detect

#### N9082A, LTE TDD Measurement Application

- Changed the off power presentation to  $-xxdBm/MHz$  in Power vs. Time measurement
- Remove Beta status

#### ACP Measurement (All modes)

- RRC filter setting in carrier configuration is not copied with multi-carrier ACP
- NCORR incorrect if carrier spacing is 5 MHz and the BW is 18 MHz
- Total Carrier Power results are not readable in the metrics window

### Channel Power (All Modes)

- Fixed discrepancy in Phase Noise optimization menu between PSA and X-Series.
- Exits SA App intermittently. Event Log shows "MeasStateMachine.Abort"

### SEM Measurement (All Modes)

- Reference channel limit lowered to 1 kHz

### Burst Power Measurement (All Modes)

- Analyzer exits application when querying RF Burst trigger type
- Illegal Parameter error when setting RF Burst type to RELative

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**Version A.04.05 (Release Date January, 2010) N9030A Only**

**Enhancements:**

- Support for N9030A, PXA Signal Analyzer

**Issues Resolved:**

- None

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**Version A.03.08** (Release Date November, 2009)

**Enhancements:**

- Support for N9000A, CXA Signal Analyzer

**Issues Resolved:**

- None

**Enhancements:**

- N6155A, ISDB-T Measurement Application
- N6158A, CMMB Measurement Application
- N9073A-3FP, HSPA+ Measurement Application
- N9082A, LTE TDD Beta Measurement Application
- N9080A, LTE FDD Measurement Application updates including:
  - Channel Power
  - OBW
  - ACP
  - CCDF
  - Spurious Emissions
  - Spectrum Emissions
  - I/Q Waveform
  - RSTP
  - Pre-defined Test Model support
  - UL Auto Detect
  - March 2009 Std. Update

**Issues Resolved:**

General X-series (MXA/EXA)

- Zero span trace update issue in slow sweep times
- Average and RMS detectors only work across part of the trace on Option EMC only
- The :CALC:DATA:COMP? DME SCPI command takes longer to execute
- Unable to change the Web Server password
- Reference Level Offset ignored in single sweep with trace averaging turned on
- Gate View not set when instrument state is recalled

N6156A, DTMB Measurement Application

- Added “Shoulder Offset” softkey

N9061A, Remote Language Compatibility Application for 856xE/EC

- Corrected MKRL, Marker to Reference Level command

N9063A, Analog Demod Measurement Application

- Signal drops out on the Analog Out connector on the rear panel

N9068A, Phase Noise Measurement Application

- Log Plot response when the carrier is drifting



## N9069A, Noise Figure Measurement Application

- Incorrect frequency range check for external LO source when LO Multiplier is not 1.
- Communication error when connecting the SNS series noise sources
- Mode switch times unacceptable when going from Spectrum Analyzer to Noise Figure then back again

## N9071A, GSM/EDGE/EDGE EVO Measurement Application

- The upper limit behaves like a 2<sup>nd</sup> timeslot is on at high input power levels
- Unable to change views via SCPI when in Power vs. Time measurement
- 2 dB difference in ORFS measurement at a 1.20 MHz offset
- POW:RANGE:OPT IMM SCPI command does not set Mechanical Attenuator correctly

## N9072A, cdma2K Measurement Application

- “mHz” unit of Frequency Error in Modulation Accuracy is replaced with Hz at the print screen

## N9073A, WCDMA Measurement Application

- Peak EVM limit changed from 100% to 200%
- “mHz” unit of Frequency Error in Modulation Accuracy is replaced with Hz at the print screen
- Modification to use 25 MHz I.F. Bandwidth

## N9076A, 1xEV-DO Measurement Application

- “mHz” unit of Frequency Error in Modulation Accuracy is replaced with Hz at the print screen
- When channels are spaced closer than 5 MHz the Rho & CDP results are incorrect

## N9079A, TD-SCDMA Measurement Application

- POW:RANG:OPT IMM SCPI command not functioning as defined

## N9080A, LTE FDD Measurement Application

- UI consistency between FDD and TDD
- Averaging counter is slow
- Softkey label changes incorporated

## ACP Measurement (All modes)

- Minimum clip function not adjusting correctly on a bursted signal
- Trace update issue in various trace modes (View/Blank and Clear Write)
- Trace update issue when using certain remote operation sequences

### OBW Measurement (All Modes)

- OBW minimum limit value changed to 1 kHz

### SEM Measurement (All Modes)

- Changed sweep time auto couple rules
- “Integrated Power” did not fit on softkey

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**Version A.02.07** (Release Date May, 2009)

**Enhancements:**

- N6149A, iDEN/WiDEN/MotoTalk Measurement Application
- N6153A, DVB-T/H Measurement Application
- N6156A, DTMB Measurement Application
- N9071A-3FP, EDGE Evolution Measurement Application
- N9074A, Single Acquisition Combined Fixed WiMAX™ Measurement Application
- N9077A, Single Acquisition Combined WLAN Measurement Application
- Option ALL upgrade, Amplitude Corrections & Limit Lines
- Added support for option PC2, Dual Core Processor
- Added support for rear panel removable disk drive
- Added support for option SSD, Solid state disk drive
- Added support for option EMC, Basic EMC Functionality
  - EMC Detectors and Resolution Bandwidths
  - Measure at Marker

**Issues Resolved:**

General X-series (MXA/EXA)

- GPIB as controller selection
- Alignment data backup wizard

N9069A, Noise Figure Measurement Application

- Auto Scaling default changed from On to Off

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**Version A.01.74 (Release Date December, 2008)**

**Enhancements:**

- Option B25, Analysis Bandwidth, 25 MHz available on N9010A, EXA Signal Analyzer

**Issues Resolved:**

General X-series (MXA/EXA)

- Pressing System, Show, System causes front panel key lock up
- Web access broken when upgrading to A.01.58 & A.01.64
- First time instrument software unsealing process hung up with "Unable to Locate Run as process" error
- Screen Image file with the same filename is not being overwritten when told to do so
- Sweep stops at 3.6 GHz when sweep time is above 1.57seconds on analyzers with option 503, 508 and 513

N9061A, Remote Language Compatibility for 856xE/EC

- SRQ command does not work

N9063A, Analog Demodulation Measurement Application

- AM Demod does not work in Tune & Listen when in Spectrum Analyzer mode
- Analog Out does not output the "demodulated signal" and it changes to a ramp signal after a few minutes

N9068A, Phase Noise Measurement Application

- Signal Tracking is not functioning properly
- Application closes when measuring unstable or noisy signal

N9073A, W-CDMA Measurement Application

- Pressing preset after recalling an instrument state does not work in the Monitor Spectrum measurement

N9075A, 802.16 OFDMA Measurement Application

- When going into Single Burst mode to set up burst information, such as sub channel, symbol offset, the Spectrum Analyzer application will terminate in Mobile mode only. Operation is normal in BTS mode

OBW Measurement (All Modes)

- The results in the left column changes units to Hz from MHz/kHz without changing the number when you press the Save key

#### ACP Measurement (All Modes)

- Pressing Meas Setup→More 2 of 3→Offset RRC Weighting to On Meas Setup→Offset/Limits→Offset BW→Res BW to 10 kHz causes the spectrum analyzer application to close

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**Version A.01.64 (Release Date October 14, 2008)**

**Enhancements:**

- Option BBA, Analog baseband IQ Inputs (N9020A only)
- N9061A, Remote Language Compatibility Application (856xE/EC only)
- N9071A-XFP, Single Acquisition Combined Measurement Application (GSM/EDGE)
- N9073A-XFP, Single Acquisition Combined Measurement Application (W-CDMA)
- N9080A, LTE Measurement Application

**Issues Resolved:**

General X-series (MXA/EXA )

- Y-Axis unit read back incorrectly on softkey
- Added Monitor Spectrum trace annotation to the Trace Annotation on/off
- Channel Power & Occupied BW keep updating display trace even if there is no longer new trace data
- Changed Video trigger key label
- RBW/VBW ratio coupling incorrect for Peak Detector
- Delta marker does not move with knob in zero span and X-Axis scale is in Inverse Time
- Graticule shifts to the right with some Y-Axis Unit settings
- Video Trigger Level is lost on a scale/div change
- ADC Over Range not displayed and IF Gain is set too high in IQ waveform
- Sweep Time error in Zero Span
- Trigger Delay enabled when Trigger Source is Free Run
- Delta Markers jump to value X=0 when switching span from time domain to frequency domain
- Trace Math set to off when selecting a detector
- Analyzer errors are going to the application event log instead of the SA event log
- Pre-FFT bandwidth auto couples to 10 MHz when span is 10 MHz even when B25 option is enabled
- :SYSTem:SHOW command does not show system view
- SCPI \*RST? command is generating multiple errors
- Signal Analyzer window not "in focus" after boot-up
- Front panel speaker controls do not function
- Recalling a state file does not work and no error messages are displayed
- LO Unlock on N9010A at high temperature testing
- RF Burst Trigger level incorrect for the N9010A
- Center Freq arrow keys do not work correctly
- FM Demod output distorts when span is changed
- Traces are not loading in Trace View

N9063A, Analog Demodulation Measurement Application

- CF Step is not honored the first time Center Freq is changed
- Markers not properly assigned

#### N9068A, Phase Noise Measurement Application

- Step of Carrier Freq via SCPI not working properly
- L PLOT cannot auto tune to signal below 155 MHz if a signal is present at a lower amplitude at >155 MHz
- Video trigger softkey is not disabled for Log Plot and Spot Freq
- Log Plot trace is discontinuous when start offset is 10 Hz

#### N9071A, GSM / EDGE Measurement Application

- Pressing the Return key goes to the wrong place in Mode Setup menu
- Power vs. Time has incorrect marker delta behavior
- Power vs. Time mask comes and goes with -30 dBm external gain
- Default center frequency changed to 935.2 MHz
- ARFCN not working correctly
- Frame Trigger Sync does not work when Trigger Source is anything other than Frame
- Option EA3, Electronic Attenuator 3.6 GHz should be required to access electronic attenuation functionality

#### N9073A, W-CDMA Measurement Application

- Rho measurement coupled marker not working correctly
- Changing Ext Gain requires restart the of Rho measurement
- Scroll up key does not work properly
- No trace on the Slot CDE/EVM view
- QPSK EVM% Peak Search hard key doesn't enable markers

#### N9075A, 802.16 OFDMA Measurement Application

- EVM% difference between N9075A and 89601A
- Wrong key appears in Amptd Y Scale of Modulation Analysis measurement
- Added PhNoiseOpt key in Modulation Analysis
- Analyzer closes when Single Burst is pressed after Auto Detect Map is performed
- RCE results get worse when step Info BW increased from 1 MHz to 5 MHz
- Symbol Clock Err and Time offset are incorrect
- Option EA3, Electronic Attenuator 3.6 GHz should be required to access electronic attenuation functionality

#### ACP Measurement (All Modes)

- Pass/Fail result is shown with opposite color in the bar graph
- Noise data not re-acquired on PhNoiseOpt changes when Noise Correction is on
- Erroneous measurement results when sending :CONF:ACP?

#### CCDF Measurement (All Modes)

- Measurement results on display are not initialized at the start of the measurement
- Markers including marker delta does not follow the assigned trace on measurement curves
- Analyzer closes when AMPTD Y Scale hard key is pressed
- CCDF preset value of the Trigger Source should be RF Burst

#### SEM Measurement (All Modes)

- The reference value raises the redrawing of the trace in Single mode
- Changing the gate length does not trigger a restart
- Corrected trace showed up after switching the Gate View on/off
- “Meas Uncal” message

#### Gated Video and Gated L.O. related

- Cannot select Periodic Timer Trigger source
- In the Control/Sweep menu the Gate View Sweep Time has impact on the Gate start position in Gate view window
- Spectrum Analyzer application does not select Periodic Trigger correctly in Gated LO Mode
- Gated measurement update rate changes when Gate method is switched to FFT and back to LO



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**Version A.01.58 (Release Date July 29, 2008)**

**Enhancements:**

- N6171A, Matlab® Software
- N9076A, 1xEV-DO Measurement Application
- 14 day free trial licensing for X-Series measurement applications enabled with this instrument software revision. For more information go to [www.agilent.com/find/xseries\\_trial](http://www.agilent.com/find/xseries_trial)

**Issues Resolved:**

- Improved robustness against signal with AM-AM distortion in OFDMA measurement application.
- Fixed Device Clear over GPIB
- Fixed several issues with Licensing
- Fixed several issues with display or graphical user interface
- Fixed several issues with the MMEMory SCPI commands
- Fixed Waiting for Trigger status and message
- Web pages: remove password protection from Get Image & Get Data
- INST:CAT? Command returns unlicensed applications
- Power On preset set to user preset crashes the XSA application
- Recall- Recalling state files causes trace to behave oddly
- Align Now needed comes up after alignments with AA set to Off and Alert Time and Temp
- Analog demod application Analog Output is inconsistent
- Adjust Min Clip does not work on Bursted Signals
- Sending "ACP:OFFSET:LIST:STATE 1,1" crashes XSA application
- Root of D: partition does not permit instrument user to save files
- Missing virtual front panel in web remote server
- Updated Help Documentation
- Updated Agilent I/O Libraries version 15.0.1
- Corrected averaging in absolute spectral flatness of OFDMA modulation analysis

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**Version A.01.50 (Release Date March, 2008)**

**Enhancements:**

- N9069A, Noise Figure Measurement Application
- 89601X, VXA Vector Signal Analyzer Application

**Issues Resolved:**

- OFDMA Modulation Analysis can measure 20 MHz profile signals
- Uplink OFDMA softkey label correction
- Auto-detected zone map referred to correctly after mode switching
- Marker Amplitude “misbucketized” in Analog Demod waveform
- Right arrow does not scroll Peak Table consistently in Analog Demod
- Pk-Pk Search does not work with markers on 2 different traces
- Peak Search in Analog Demod does not work if audio frequency start frequency  $\leq 0$  Hz
- IQ data in Meas Results do not agree with marker values in Complex Spectrum measurement
- Misc. Elapsed time indicator
- Embedded web server page generates an error
- IQ Analyzer lockup
- TRIG:SEQ:RFB:LEV? functions as expected in all measurement applications
- Intermittent Freq Ref Unlocks when 13 MHz reference is removed then reapplied
- Gated Sweep Sync trace misalignment on long sweeps causing a +/- 0.2 dB glitch

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**Version A.01.44 (Release Date December, 2007)**

**Enhancements:**

- None

**Issues Resolved:**

- Manufacturing specific defect with model/serial number entry. This version was never posted to Agilent.com website

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**Version A.01.43 (Release Date December, 2007)**

**Enhancements:**

- N9063A, Analog Demod Measurement Application
- N9072A, cdma2000 Measurement Application
- N9079A-1FP, TD-SCDMA Measurement Application
- N9079A-2FP, HSDPA/8PSK Measurement Application
- 89601A VSA Software Version 8.0 (Req's A.01.43 Instrument Software)

**Issues Resolved:**

- Peak Table sorting
- FFT Gate in Zero Span
- Enhanced Noise Correction for ACP measurements
- Fixed unit selection in ACP Power Spectrum Density measurement for dBm/Hz & dBm/MHz.
- Mechanical & Electronic Attenuator input values allowed
- 802.16 OFDMA mode switch will not reset the Zone/Burst Map
- Repaired Next Peak Right/Left functionality in cdma2K Spurious Emissions measurement
- Bus timeout repaired in :FETC:PST0? In Power Stat CCDF measurement
- TETRA ACP enabled via front panel keys
- Align message will not appear when Auto Align is off and Alert None is selected
- Phase Noise - Pause resumes on a Resume after pressing Restart

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**Version A.01.31 (Release Date October, 2007)**

**Enhancements:**

- N9071A, GSM/EDGE Measurement Application

**Issues Resolved:**

- Modulation Analysis measurement in the OFDMA Mode, the uplink OMF causes an exit
- Modulation Analysis measurement in the OFDMA Mode misunderstands .omf file interpretation if the file contains UL "rectangular" burst.
- Monitor Spectrum measurement doesn't restart when PeriodicTimerSyncHoldoff is changed
- Spurious Emissions measurement takes 2 key presses of the "Delta" softkey to turn on the delta marker
- Spurious Emissions measurement, the Marker is in an unexpected location after switching back to spurious emissions measurement
- W-CDMA Mode SCPI command CDP/RHO/QPSK: Rel RFBurst Trigger Level may not set correctly.
- CALC:DATA:COMP? returns the same result for the optional soffset, length, roffset, rlimit parameters

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**Version A.01.24 (Release Date September, 2007)**

**Enhancements:**

- Support for N9010A, EXA Signal Analyzer
- Support new Signal Studio file type

**Issues Resolved:**

- OFDMA Flatness error during excessive phase rotation
- OFDMA detected modulation type added to exported map
- IF frequency response at 10 MHz
- Marker readings near LO feedthrough improved
- License interface using full screen display
- RBW inappropriately set to manual after zero span use
- Copy trace issue in long sweep times
- RF Burst Trigger initialization
- ACP noise correction with preamplifier
- Online HELP updated
- Phase Noise marker default trace
- Marker Count in gated measurements
- Spikes on Max Hold traces with multiple detectors

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**Version A.01.15 (Release Date July, 2007)**

**Enhancements:**

- None

**Issues Resolved:**

- "L.O. Unlock" error may appear in a limited number of instruments

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**Version A.01.14 (Release Date June, 2007)**

**Enhancements:**

- Time Gating in Signal Analysis and 802.16G OFDMA Applications
- N9068A Phase Noise Measurement Application

**Issues Resolved:**

- Restore Input/Output Defaults was not resetting the AC/DC Coupling.
- User Preset when a user preset had not been saved
- Increased maximum external gain setting from 50 dB to 100 dB
- Channel bandwidths issues in several of the wireless standards
- Increased sample depth of N9060A I/Q Analyzer's Waveform measurement to 1 MSample from 250 kSample
- Burst Trigger method for wide band signals
- OFDMA Mode Zone Map Auto Detect
- Fixed OFDMA Mode Modulation Accuracy measurement speed
- Keycodes for Remote Desktop or External Keyboard updated



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**Version A.01.05 (Release Date January, 2007)**

Initial N9020A, MXA Signal Analyzer release