

# Instrument Software Revision History

Keysight M8920A Radio Test Set

## Version M.36.25 (Release Date Feb, 2024)

### Issues Resolved:

- Incorrect frequency of audio signal
- “Audio Level Offset” in Audio Generator window doesn’t work as expected
- “Ref Level Offset” doesn’t work as expected in Radio Test Mode
- Incorrect parameter recorded in SCPI Recorder
- User Menu doesn't survive after a power cycle

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## Version M.36.22 (Release Date Oct, 2023)

### Enhancement:

- IQ Analyzer Enhancements
  - Support Spectrum Inversion
- LTE-Adv FDD Enhancements
  - SEM to support Outer & Inner offset measurements at once.
  - Support lteModAndTBSIndexTable parameter in LTE EVM.
  - Support NPDSCH CRC decoding for Tx Diversity (2 ports).
  - Support demodulation LTE signals with non-3GPP DMRS
- LTE-Adv TDD Enhancements
  - SEM to support Outer & Inner offset measurements at once.
  - Support lteModAndTBSIndexTable parameter in LTE EVM.
  - Support demodulation LTE signals with non-3GPP DMRS
- WLAN enhancements
  - Implement "switch" setting for different BBIQ behavior in WLAN.
  - Support non-HT duplication mode in preamble puncture PPDU.
  - Add a new demod parameter Burst Detect Window Length to handle signals with less than 1us idle part
  - [Optimize EVM] avoid phase distortion in R10 path.

- Support Preamble Puncture Measurement for 802.11ax.
- Support the number of MPDU subframes more than 9.
- Add support for HE masked HE-LTF sequence mode for Trigger-based PPDU.
- Change default value of Gamma Phase Rotation to keep BWC with initial release.
- Support Preamble Power
- SCPI Recorder Enhancements
  - Save the recording as a Text.\*.txt file and Python script, Play Selected, Navigation to SCPI Recorder dialog.

### **Issues Resolved:**

- User Menu doesn't survive after a power cycle.

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## **Version M.35.05 (Release Date May, 2023)**

### **Enhancement:**

- SCPI command to track waveform revision
- E License Support on M8920A • VMA Enhancements
  - Add DAB Mode 2/3/4 presets
  - Add CDR Tx Mode1, Spectrum 9 preset
  - MIMO based on recording playback
- WLAN 11be Enhancements
  - Support non-HT duplication mode in preamble puncture PPDU
- WLAN Enhancements
  - Modulation Format preset to "Auto" for 802.11a/b/g/j/p; "SIG Syms" for others
  - Meas Internal preset to 2794 chips for 802.11b/g (DSSS/CCK/PBCC); 16 symbols for others
  - Result Length and Max Result Length presets to 2816 chips for 802.11b/g

- (DSSS/CCK/PBCC); 16 symbols for others
- Symbol Clock Error Compensation coupling setting to OFF when switching to 11n/ac, ON when switching to 11ax/be
  - [WLAN 11ax/11be] Use common name for 11ax/be Demod Info file template for manual RU allocation configuration
  - Add a new demod parameter Burst Detect Window Length to handle signals with less than 1us idle part

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### **Version M.31.03 (Release Date Nov, 2021)**

#### **Enhancement:**

- LTE/LTE-Advanced FDD (N9080EM0E)  
Support Interfering Signal exclude range setting
- LTE/LTE-Advanced TDD (N9082EM0E)  
Support Interfering Signal exclude range setting
- Bluetooth (N9081EM0E)  
Support Bluetooth AoA test with CTE

#### **Issues Resolved:**

- Audio spectrum averaging not working with certain ranges
- Auto scaling function can't be performed under ADEMod of radio test

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### **Version M.29.02 (Release Date June, 2021)**

#### **Enhancement:**

- Add Power Stat CCDF measurement for radio test
- Add Burst Power measurement as standard for radio test

- Change Audio Level Offset from linear to dB in Audio Generator
- Support Exponential mode in Average Mode for Burst Power, Occupied BW, ACP Graph, Rise/Fall Time, RF Spectrum

### **Issues Resolved:**

- Acquisition truncated error display in the radio test

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### **Version M.28.04 (Release Date Jan, 2021)**

### **Issues Resolved:**

- Vrms setting doesn't work properly in Audio Generator
- M9470A could not load reference cal data

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### **Version M.27.03 (Release Date Sep, 2020)**

### **Enhancement:**

- Support PAVT with VMA Touch UI mode (N9054EM0E)
- VMA Digital Demodulation (N9054EM0E)  
Support IQ Symbol Group Delay vs Time trace, Support Wi-SUN MR-OQPSK presets)
- WLAN 802.11ax measurement application (N9077EM1E)  
SEM to support FFT spectrum w. one-shot IQ acquisition with WBW digitizer
- Bluetooth measurement application (N9081EM0E) Support NFE in ACP and other power measurements
- Radio Test measurement (N9093EM0E)  
Improve T/R High Power Atten Bypass warning  
RF Generator, support amplitude increment unit: mV unit.  
RF Generator, enable user set increment of AM rate  
Audio Analyzer, extend the frequency from 80 kHz to 90 kHz

Audio Generator, enable audio frequency and level increment  
Audio Generator, support RMS setting on level of audio generator

### **Issues Resolved:**

- "User Preset" doesn't work as expected after setting the "Set Reference power"
- Power Ref On/Off control is missing for Amplitude Setup
- Failed to output low level signal when Mod On

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### **Version M.26.02 (Release Date Apr, 2020)**

### **Enhancement:**

- IQ Analyzer: support saving IQ data in a various file formats (such as .mat)
- Radio Test Measurement (N9093EM0E): support setting "Steps for changing Audio Freq"
- Sweep Time Refactoring: reconcile Sweep Time between Swept, FFT, and Stepped Bucket cases
- Bluetooth Measurement (N9081EM0E): support initial frequency drift for BT 5.0
- WLAN Measurement (N9077EM1E):  
Support Common Pilot Error in EVM metrics, 4096 QAM demodulation  
Support analysis of 11ax PPDU of NDP Feedback  
Support power over symbol trace in EVM
- VMA Digital Demodulation Measurement (N9054EM0E):  
Support custom IQ constellation save/recall  
Support OQPSK IQ Alignment for constellation display  
Support DVB-S2X preset for 128/256 APSK

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### **Version M.25.04 (Release Date Dec, 2019)**

### **Enhancement:**

- VMA Custom OFDM: support DRM presets
- VMA Digital Demodulation: support Tx BER for Digital Demodulation

- NB-IoT: support EUTRA carrier cell ID in In-band different PCI mode
- WLAN: support A-MPDU data decoding with per-subframe CRC check, Mean PSD to WLAN CHP, correct CRC result for inactive user (from "failure" to NAN")
- Bluetooth: support of initial frequency drift for BT 5.0
- Radio Test: add "Next Peak" function in RF Spectrum window
- Radio Test: add new type "Disconnect" to Output Ground setting

#### **Issues Resolved:**

- "Undefined Header" error when sending specific SCPI commands to change display power unit
- The modulated spectrum is inverted from 30 MHz to 60 MHz
- Intermittent hang-up when long pressing the touchscreen

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### **Version M.24.58 (Release Date Sep, 2019)**

#### **Enhancement:**

- Audio Metrics: Add dBuV, dBmV display options to audio level.
- DSB PEP and rms power measurement
- SSB PEP and rms power Measurement
- SSB span filter and freq error issue
- Support frequency error measurement for AM DSB

#### **Issues Resolved:**

- External Trigger Slope Doesn't Work as Expected When Set to Negative
- "Settings Alert; Acquisition truncated" when in Specific Range Settings

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### **Version M.23.09 (Release Date June, 2019)**

#### **Enhancement:**

- Add pre-generated waveforms: additional APCO Ph1 waveforms

- Rx/Tx Frequency coupling option with optional offset
- Add dBm result in audio level measurements in RX mode,
- Audio analysis list mode

### **Issues Resolved:**

- T/R High sensitivity mode warning does not turn off after switching out of high sensitivity path
- External Gain doesn't work for RT RF Spectrum window
- Source waiting for trigger dialog doesn't disappear even switch to continuous mode from single mode with bus trigger
- Inconsistent measured power from T/R port when RF Output Port is set to T/R in the recalled state file
- Inconsistent actual settings on Sine 2 Level by using UI and SCPI
- Cannot change PEP and RMS power unit between dBm and W for AM LSB/USB

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### **Version M.21.16 (Release Date Oct, 2018)**

### **Enhancement:**

- Add pre-generated waveforms for APCO Ph1 and TETRA
- Add Autotune function
- Add additional audio filters
- Support increment set for RF generator frequency and amplitude
- Add reference impedance support for audio output power (watts)

### **Issues Resolved:**

- Dirty marker display issue when changing the selected window

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### **Version M.21.13 (Release Date Sep, 2018)**

### **Enhancement:**

- ACP measurement  
Integration Pass Band -6dB
- VMA measurement  
Digital Demodulation MSK Type 1 enhancement
- Analog demodulation  
AM SSB support

**Issues Resolved:**

- WLAN Sequence Mask measurement result is not correct when overlap function is enable
- Source Output Shifts After Initialization

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**Version M.20.37 (Release Date June, 2018)**

Initial release to support M8920A