

## General Caution

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Please use a USB Memory Stick for firmware updates.

If there is a firmware update question, please contact Anritsu service support at <https://www.anritsu.com/test-measurement/contact-us> for further information.

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## What will the customer see in this release?

Product : S412E, MW82119B

Application Package : v4.40

Release Date : Release Oct. 2021

Information below may not apply to every model/option in Product list

### \*\*\* NEW FEATURES \*\*\*

-> Software - TETRA

[SPH-4509] Added a new feature to allow users the ability to load custom TETRA DL test patterns.

-> Software - NBFM

[SPH-4988] Added dBuV units to EMF measurement in NBFM analyzer mode for S412E.

### \*\*\* IMPROVEMENTS \*\*\*

-> Software - DMR2

[SPH-5029] Default squelch level changed from -100 dBm to -110 dBm across all LMR applications to better suit the general customer needs.

-> Software - NXDN

[SPH-5029] Default squelch level changed from -100 dBm to -110 dBm across all LMR applications to better suit the general customer needs.

-> Software - dPMR

[SPH-5029] Default squelch level changed from -100 dBm to -110 dBm across all LMR applications to better suit the general customer needs.

-> Software - NBFM

[SPH-5029] Default squelch level changed from -100 dBm to -110 dBm across all LMR applications to better suit the general customer needs.

-> Software - TETRA

[SPH-5029] Default squelch level changed from -100 dBm to -110 dBm across all LMR applications to better suit the general customer needs.

-> Software - P25/P25p2

[SPH-5029] Default squelch level changed from -100 dBm to -110 dBm across all LMR applications to better suit the general customer needs.

[SPH-5034] Resolved an issue where the P25 LSM Tx pattern output levels were lower than the selected value.

-> Software - CAA

[SPH-5041] Added the AFW-2HFR-3 7/8 inch fire rated cable to the Anritsu cable list. This fire rated cable has been introduced to support the new public safety indoor signal coverage requirements.

-> Software - PTC

[SPH-5029] Default squelch level changed from -100 dBm to -110 dBm across all LMR applications to better suit the general customer needs.

-> Software - PDT

[SPH-5029] Default squelch level changed from -100 dBm to -110 dBm across all LMR applications to better suit the general customer needs.

\*\*\* BUG FIXES \*\*\*

-> Software - DMR2

[SPH-5020] Resolved an issue where Tx Output units did not convert correctly between Volts and Watts when output power was set to greater than -0.9dBm.

-> Software - NXDN

[SPH-5020] Resolved an issue where Tx Output units did not convert correctly between Volts and Watts when output power was set to greater than -0.9dBm.

-> Software - dPMR

[SPH-5020] Resolved an issue where Tx Output units did not convert correctly between Volts and Watts when output power was set to greater than -0.9dBm.

-> Software - PIM

[SPH-4976] Fixed an issue with saved Noise Floor-Spectrum view plots that previously could not be opened by Line Sweep Tools (LST).

[SPH-5027] Fixed an issue that could cause a unit to freeze while switching between the Cable & Antenna measurement mode and PIM measurement mode.

-> Software - TETRA

[SPH-4998] Resolved an issue in which the soft buttons would not respond after aborting a TETRA pattern load by pressing the ESC button.

[SPH-5020] Resolved an issue where Tx Output units did not convert correctly between Volts and Watts when output power was set to greater than -0.9dBm.

[SPH-5032] Resolved an issue when loading a custom TETRA DL pattern from USB device. Multiple key presses could result in all patterns on the USB stick being loaded.

[SPH-5033] Resolved an issue where custom TETRA patterns could be erased during firmware updates.

-> Software - NBFM

[SPH-5020] Resolved an issue where Tx Output units did not convert correctly between Volts and Watts when output power was set to greater than -0.9dBm.

-> Software - P25/P25p2

[SPH-5020] Resolved an issue where Tx Output units did not convert correctly between Volts and Watts when output power was set to greater than -0.9dBm.

-> Software - PTC

[SPH-5020] Resolved an issue where Tx Output units did not convert correctly between Volts and Watts when output power was set to greater than -0.9dBm.

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What will the customer see in this release?

Product : S33xE, S36xE, MS271xE, MT821xE, S412E, MS202xB, MS203xB, MS202xC, MS203xC, MS2720T, MT822xB, MT8220T, MW82119B

Application Package: V4.30

Release Date : Quarterly Release April 2021

Information below may not apply to every model/option in Product list

\*\*\* NEW FEATURES \*\*\*

-> Software - PIM

[SPH-4844] Added Support for MW82119B-0703 option.

\*\*\* IMPROVEMENTS \*\*\*

-> Software - PIM

[SPH-4510] DTP overlay previously had to be re-applied/measured every time a user switched to another PIM measurement mode (Swept PIM or PIM vs. Time). with this fix the DTP overlay will stay active between PIM measurement modes. This will save the technician time in the field since they will only need a single DTP overlay measurement per antenna.

\*\*\* BUG FIXES \*\*\*

-> Software - CAA

[SPH-5003] Fixed an issue were the default F1 and F2 frequencies for the MW82119B-0194 model were incorrect.

[SPH-5007] Resolved an issue where setting the option 28 CWSG frequency to 3 decimal places (1 kHz resolution) resulted in the actual CW frequency being rounded to 2 decimal places (10 kHz resolution).

-> Software - SPA and Sub-apps

[SPH-4946] Fixed an issue with functionality of the PIM hunting measurement mode when recalling a setup file.

[SPH-4948] Fixed an issue were the PIM Hunting sweep time was not matching in the status window.

[SPH-5007] Resolved an issue where setting the option 28 CWSG frequency to 3 decimal places (1 kHz resolution) resulted in the actual CW frequency being rounded to 2 decimal places (10 kHz resolution).

-> Software - PIM

[SPH-4674] Fixed an issue where the MW82119B-0700 PIM Master was not remembering non-default F1 and F2 settings.

[SPH-4954] Fixed an issue where user defined F1 and F2 values and calibration were lost going between High band and Low band in the MW82119B-0700 700 MHz PIM Master. The unit will now remember both the F1 and F2 values and the calibration between High band and Low band.

[SPH-4968] Resolved an issue when using the SCPI command (programming language) to recall the residual PIM value returning the wrong value.

[SPH-4975] Fixed an issue where the residual PIM calibration was not applied to F2 on the MW82119B-0700/-0701 PIM Master models at 20W with the Swept PIM measurement.

[SPH-4977] Fixed an issue in the MW82119B-0700 model that was setting the wrong IM range for Swept PIM measurements after the user makes PIM vs. Time measurements in both Low Band and High Band before making a swept PIM measurement.

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What will the customer see in this release?

Product : S33xE, S36xE, MS271xE, MT821xE, S412E, MS202xB, MS203xB, MS202xC, MS203xC, MS2720T, MT822xB, MT8220T, MW82119B

Application Package: V3.90

Release Date : Release May. 2020

Information below may not apply to every model/option in Product list

\*\*\* IMPROVEMENTS \*\*\*

-> Software - CAA

[SPH-2095] The following cables have been added per customer requests: RLCX-SL 158R, RLCX-SL 114R, RLCX-SL 078R, RLCX-SL012R, RLCX-SL038R, RLCX-SL014R, RLCX-SL012S, RLCX-SL038S, RLCX-SL014S, RLCX-SL012R FPR.

[SPH-4778] CSV file format added to File Save Menu.

-> Software - VNA

[SPH-2095] The following cables have been added per customer requests: RLCX-SL 158R, RLCX-SL 114R, RLCX-SL 078R, RLCX-SL012R, RLCX-SL038R, RLCX-SL014R, RLCX-SL012S, RLCX-SL038S, RLCX-SL014S, RLCX-SL012R FPR.

\*\*\* BUG FIXES \*\*\*

-> Software - CAA

[SPH-4731] Resolved an issue where sometimes the last point marker value displayed would not match the last point data in the saved measurement.

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What will the customer see in this release?

Product : MW82119B

Application Package: V3.83

Release Date : Release March 2020

Information below may not apply to every model/option in Product list

\*\*\* NEW FEATURES \*\*\*

-> Software - PIM

[SPH-4844] Added Support for MW82119B-0703 option.

\*\*\* BUG FIXES \*\*\*

-> Software - PIM

[SPH-4919] Fixed an issue that could cause the trace data for the Noise Floor - Spectrum View measurement to be incorrectly initialized.

[SPH-4920] Fixed incorrect calculation of Swept PIM trace data when the measurement crosses certain thresholds (-77 dBm for most options).

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What will the customer see in this release?

Product : S33xE, S36xE, MS271xE, MT821xE, S412E, MS202xB, MS203xB, MS202xC, MS203xC, MS2720T, MT822xB, MT8220T, MW82119B

Application Package: V3.70

Release Date : Quarterly Release October 2019

Information below may not apply to every model/option in Product list

\*\*\* NEW FEATURES \*\*\*

-> Software - CAA

[SPH-4784] Added (Trace + Memory)/2 feature to Trace Memory. Allows users to reduce or eliminate peak-to-peak ripple caused by standing waves when making 1-port cable loss measurements.

\*\*\* BUG FIXES \*\*\*

-> Software - DMR2

[SPH-4000] regional language Support for S412E LMR Master is available.

-> Software - NXDN

[SPH-4000] regional language Support for S412E LMR Master is available.

-> Software - dPMR

[SPH-4000] regional language Support for S412E LMR Master is available.

-> Software - NBFM

[SPH-4000] regional language Support for S412E LMR Master is available.

-> Software - TETRA

[SPH-4000] regional language Support for S412E LMR Master is available.

[SPH-4690] Fixed an issue where TETRA Base Station Receiver Sensitivity loading of customer patterns did not operate correctly. Added a softkey to display BCC, MCC, and MNC of loaded BSRS custom patterns.

-> Software - P25/P25p2

[SPH-4000] regional language Support for S412E LMR Master is available.

-> Software - PTC

[SPH-4000] regional language Support for S412E LMR Master is available.

-> Software - PDT

[SPH-4000] regional language Support for S412E LMR Master is available.

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What will the customer see in this release?

Product : S33xE, S36xE, MS271xE, MT821xE, S412E, MS202xB, MS203xB, MS202xC, MS203xC, MS2720T, MT822xB, MT8220T, MW82119B

Application Package: V3.40

Release Date : Quarterly Release January 2019

Information below may not apply to every model/option in Product list

\*\*\* NEW FEATURES \*\*\*

-> Software - CAA

[SPH-4535] Added cal coefficient support for cal kits with 4.3-10 connectors.

-> Software - PTC

[SPH-4442] Added common American Association of Railroads (AAR) frequency standards to our Signal Standards lists, and made them available in PTC mode.

-> Software - SPA and Sub-apps

[SPH-4566] Added dBuW, dBmA, and dBuA units in SPA mode.

-> Software - VNA

[SPH-4535] Added cal coefficient support for cal kits with 4.3-10 connectors.

\*\*\* IMPROVEMENTS \*\*\*

-> Software - LTE

[SPH-4590] Added Band 71, the new 600 MHz LTE Band to the signal standard list.

\*\*\* BUG FIXES \*\*\*

-> Software - LTE

[SPH-4597] Fixed an issue where recalled 4x4 MIMO LTE measurement would not properly display the green/grey antenna icons.

-> Software - ISDBT/SFN

[SPH-4687] Corrected the antenna.txt file so that it would behave correctly in ISDB-T mode.

-> Software - VNA

[SPH-4689] Fixed an issue in field mode that unnecessarily limited scale settings in Field Mode VSWR measurements.

-> Software - SPA and Sub-apps

[SPH-3745] Fixed a corner case error with averaging in Interference Analysis Field Strength measurement.

[SPH-4458] Antenna selection list now includes EMI antennas when 'All' is selected.

-> Software - PIM

[SPH-4642] Changed the time/date text layout in the PIM Calibration Due popup.

[SPH-4644] Addressed an issue that could cause an option 600 or 902 instrument to lock up when they are set to high band and perform a calibration via the SCPI command:  
CAL:PIM:FULL ON

-> Software - OS/Base

[SPH-4593] Fixed an issue where unit would hang during power-up under certain conditions after recalling a VNA setup from SPA mode.

-> Software - CAA

[SPH-4593] Fixed an issue where unit would hang during power-up under certain conditions after recalling a VNA setup from SPA mode.

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What will the customer see in this release?

Product : MW82119B

Application Package: V3.25

Release Date : Release September 2018

Information below may not apply to every model/option in Product list

\*\*\* NEW FEATURES \*\*\*

-> Software - PIM

[SPH-4447] Added support for new PIM Option 600.

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What will the customer see in this release?

Product : MW82119B

Application Package: V3.21

Release Date : Quarterly Release beginning July 2018

Information below may not apply to every model/option in Product list

\*\*\* NEW FEATURES \*\*\*

-> Software - PIM

[SPH-4546] Changed the default F2 frequencies for Option 700 to 764 / 761 MHz for low / high band, respectively.

[SPH-4598] Fixed DTP Trace Issue in the LTE High Band for option 700/701/702 with RF hardware board revision 2 or higher.

-> Software - OS/Base

[SPH-4429] Improved battery charge algorithm.

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What will the customer see in this release?

Product : MW82119B

Application Package: V3.10

Release Date : Quarterly Release beginning April 2018

Information below may not apply to every model/option in Product list

\*\*\* NEW FEATURES \*\*\*

\*\*\* BUG FIXES \*\*\*

-> Software - OS/Base

[SPH-4360] Fixed an issue where the GPS information in the title would disappear after recalling a setup file.

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What will the customer see in this release?

Product : MW82119B

Application Package: V3.00

Release Date : Quarterly Release beginning January 2018

Information below may not apply to every model/option in Product list

\*\*\* NEW FEATURES \*\*\*

-> Software - CAA

[SPH-3864] Added additional save type Measurement and JPG" to the uWave VNA family."

-> Software - PIM

[SPH-3921] PIM Measurement Tx1 range adjusted to cover 731 MHz to 734.5 MHz

\*\*\* BUG FIXES \*\*\*

-> Software - OS/Base

[SPH-3572] Fixed an issue where the GPS tag does not disappear even though GPS is off. This would occur when recalling a trace with GPS data then switching to a live trace and switching modes.

[SPH-3739] Fixed an issue where the unit didn't display an error message when setting the Save Location to USB, then removing the USB, and pressing the camera icon to save a screenshot.

[SPH-3829] Fixed an issue where the option list on the boot up screen was beyond the right edge.

-> Software - CAA

[SPH-3646] Fixes an issue where the touch screen functionality would be disabled due to the Attention" dialog moving behind the main form window."

[SPH-3837] Fixes an issue where the Dmax value could be manually set to a value that was large then the calculated Dmax value.

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What will the customer see in this release?

Product : MW82119B

Application Package: V2.90

Release Date : Quarterly Release beginning October 2017

Information below may not apply to every model/option in Product list

\*\*\* NEW FEATURES \*\*\*

-> Software - PIM

[SPH-3658] SPH-3658 Adds support for the SCPI command MMEMemory:DElete for deleting setup and measurement files.

-> Software - VNA

[SPH-2592] Increases the number of markers from 8 to 12 in VNA mode (mwVNA Instruments, VNA and Field measurement views).

\*\*\* BUG FIXES \*\*\*

-> Software - VNA

[SPH-2451] Fixes an issue where the Cable List Window was not remaining the top-most form and would move behind the VNA graph.

[SPH-2593] Changes the mwVNA Instruments Limit Line Feature such that each measurement mode can now have independent limit line settings.

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What will the customer see in this release?

Product : S33xE, S36xE, MS271xE, MT821xE, S412E, MS202xB, MS203xB, MS202xC, MS203xC, MS2720T, MT822xB, MT8220T, MW82119B

Application Package: V2.80

Release Date : Quarterly Release beginning July 2017

Information below may not apply to every model/option in Product list

\*\*\* BUG FIXES \*\*\*

-> Software - LTE

[SPH-2922] In LTE-EMF mode, when the EMF antenna is disconnected, error messages have been reorganized to have better readability.

[SPH-2924] In WCDMA-EMF mode, when the EMF antenna is disconnected, error messages have been reorganized to have better readability.

-> Software - VNA

[SPH-2594] Fixed an issue with multiple markers and touching the trace, which was causing the nearest marker to become active and move to the touched location. The new behavior is such that touching the trace will result in the marker that is already active to move to the location that was touched.

[SPH-2595] Fixed an issue where when Marker on trace" was set to "All" (in field mode for example) the marker would not update correctly when the start or stop frequency was changed."

-> Software - CPRI

[SPH-2708] Preset now set Spectrogram Record to 'Off' state

[SPH-2898] Starting with MST V2.36.8 and unit firmware V2.8x, MST will support multiple traces from OBSAI and CPRI applications.

[SPH-2969] Corrected preset values for limit lines in CPRI and OBSAI applications.

[SPH-2970] Fixed a bug where CPRI/OBSAI limit lines would not correctly export to Master Software Tools. Also requires MST v2.36.8

[SPH-2971] Lower Limit line default value corrected in CPRI and OBSAI to match the RF applications

[SPH-3232] Fixed a bug where internal time base would not always lock to external or GPS reference in CPRI mode

-> Software - SPA and Sub-apps

[SPH-2841] Fixes an issue where EMI antenna selection was off by one.

[SPH-3138] Fixes rounding error of BW value in Channel Scanner file after Scriptmaster scan.

-> Software - OS/Base

[SPH-3237] Fixed the issue where using the arrow keys to move around the indoor map was slow in the Spectrum Analyzer mode. Also fixed the issue where moving the cursor around the indoor map failed after recalling a AZM file.

-> Software - OBSAI

[SPH-2975] Fixed a bug where Single Sweep mode would occasionally cause the Layer 2 Alarms display to flicker

-> Software - P25/P25p2

[SPH-3147] Mapping data collection for is now limited to 8 hours or 60,000 points of data collection to avoid memory overrun issues.

-> Software - CAA

[SPH-2424] Fixed an issue where the unit would hang if a SCPI preset was issued and the Cable list table dialog was open.

NOTE: THIS FIX ALSO APPLIES TO THE PIM MASTER.

[SPH-2548] Fixed an issue where the marker would not move when adjusting the twiddle knob to the left.

[SPH-3114] Fixed an issue where Marker-to-Peak and Marker-to-Valley were shifted 1 pixel to the left when recall a measurement file type .dat.

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What will the customer see in this release?

Product : S412E, MS202xB, MS203xB, MS202xC, MS203xC, MS2720T, MW82119B

Application Package: V2.70

Release Date : Quarterly Release beginning April 2017

Information below may not apply to every model/option in Product list

\*\*\* NEW FEATURES \*\*\*

\*\*\* IMPROVEMENTS \*\*\*

-> Software - DMR2

[SPH-2156] Tx Output will now synchronize to Base Station downlink signal

-> Software - VNA

[SPH-2402] The limit line behavior in the Cable and Antenna mode of the BTS Master has been enhanced. With this update, the limit line settings for each measurement type will

be unique for that measurement and will persist even if the measurement type is changed.

\*\*\* BUG FIXES \*\*\*

-> Software - SPA and Sub-apps

[SPH-2337] Fixes an issue where Emission Mask measurements produced erroneous pass/fail results under certain conditions.

[SPH-2504] Fixed an issue where Field Strength measurements in Coverage Mapping did not display the correct results for non-dBm units

-> Software - OS/Base

[SPH-2860] Added support for commands with a block data parameter for the raw socket SCPI interface.

-> Software - TETRA

[SPH-2397] Fixed a bug where saved .mtd files were not correctly storing EVM data.

-> Software - NBFM

[SPH-2891] Fixed a bug in NBFM where changing DCS value could corrupt the Signal Generator pattern outputs for all LMR demod applications

-> Software - CAA

[SPH-2393] Fixed an issue with the Back soft key in the Application Options menu that would not return the user back to the System Menu once they have entered into the Bias Tee menu.

-> Software - PTC

[SPH-2455] SOURce:DM:PATtern and SOURce:DM:PATtern? remote commands are now functional

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What will the customer see in this release?

Product : S33xE, S36xE, MS271xE, MT821xE, S412E, MS202xB, MS203xB, MS202xC, MS203xC, MS2720T, MT822xB, MT8220T, MW82119B

Application Package: V2.60

Release Date : Quarterly Release beginning January 2017

Information below may not apply to every model/option in Product list

\*\*\* NEW FEATURES \*\*\*

-> Software - DMR2

[SPH-1811] DMR2 Application nomenclature changed to DMR" Remote command remain compatible."

-> Software - CAA

[SPH-2508] Added support for easyTest in the VNA Master (MS20xxB series) and LMR Master (S412E).

[SPH-1506] Added a SCPI command to allow saving of .dat measurement files.

-> Software - LTE

[SPH-2296] Added limited support for TD-LTE 4x4 MIMO

-> Software - VNA

[SPH-2508] Added support for easyTest in the VNA Master (MS20xxB series) and LMR Master (S412E).

[SPH-1506] Added a SCPI command to allow saving of .dat measurement files.

-> Software - CPRI

[SPH-2180] For Option 751 CPRI - Added the ability to show two spectrum or spectrogram graphs which can display up to four separate AxC groups (traces).

[SPH-2448] Added support for CPRI line rate 8 (10.1376 Gbps)

[SPH-2449] Added support for compressed LTE sampling rate on 20 MHz LTE signals

[SPH-2640] Auto Detect improved with Ericsson presets

\*\*\* IMPROVEMENTS \*\*\*

-> Software - OS/Base

[SPH-2515] Web UI tab removes model information.

\*\*\* BUG FIXES \*\*\*

-> Software - LTE

- [SPH-47] Fixed a bug in LTE EMF recalled measurements where RS values might recall improperly
- [SPH-2240] Fixed an issue that prevented 4x4 MIMO time alignment data from recalling properly to unit.
- [SPH-2788] Shift-1 Preset is now prevented while a recalled measurement is displayed.

-> Software - SPA and Sub-apps

- [SPH-1988] Fixes a bug where the zero span max RBW value was incorrectly limited in the GUI and as a result was out of sync with the actual RBW value.

-> Software - OS/Base

- [SPH-1812] Fixed an issue where black on white and color on white schemes were not displaying correctly in some LMR Master modes.

-> Software - HiPM

- [SPH-1667] Fixed a bug where the unit would unexpectedly attempt to zero the sensor after recalling a measurement
- [SPH-2381] Fixes an issue where the Quick name buttons were not saved with the setup in Hi-PM mode.

-> Software - TETRA

- [SPH-2376] Save on Event .csv measurement files are updated to contain results for recently-added RMS Vector Error and Peak Vector Error measurements.

-> Software - VSG

- [SPH-1800] BTS Master VSG now allows up to 48 waveforms to be loaded

-> Software - P25/P25p2

- [SPH-2373] Fixed an issue that could cause the unit to hang when recalling setups for an application other than the current one.
- [SPH-2501] Updated remote DISPLAY:TRACe<Tr>:FORMat:SIGAnalyzer command/query parameters to match the Programming Manual.

-> Software - WiMAX

- [SPH-2309] Fixed a bug where the unit would intermittently hang when displaying Spectral Emission Mask

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What will the customer see in this release?

Product : S33xE, S36xE, MS271xE, MT821xE, S412E, MS202xB, MS203xB, MS202xC, MS203xC, MS2720T, MT822xB, MT8220T, MW82119B  
Application Package: V2.50

Release Date : Quarterly Release beginning October 2016  
Information below may not apply to every model/option in Product list

\*\*\* NEW FEATURES \*\*\*

-> Software - TETRA

[SPH-2147] Added Residual Carrier Magnitude measurement to the Summary display

[SPH-2149] TETRA remote queries :FETCh:SIGAnalyzer? :READ:SIGAnalyzer? :MEASure:SIGAnalyzer? will now contain two additional values in the response for Peak Vector Error and Residual Carrier Magnitude

[SPH-1603] Added Police Digital Trunking Options 563 and 562

-> Software - OS/Base

[SPH-119] Improved error message on LTE trace save failure when trying to save before the end of the first sweep.

-> Software - NBFM

[SPH-1919] Remote command :FETCh:SIGAnalyzer? updated so the second returned value in the string will represent the value indicated by the Summary Freq Disp front panel setting. (Carrier Frequency or Frequency Error)

-> Software - VNA

[SPH-1921] Added select SCPI commands to support VNA Field Mode.

\*\*\* BUG FIXES \*\*\*

-> Software - VNA

[SPH-2307] Resolved an issue with marker interpolation on Smith Charts or Polar Charts that caused stray lines to be drawn over the entire screen. This issue only affected VNA mode in the VNA Master products.

-> Software - SPA and Sub-apps

[SPH-282] Fixed an issue where Markers on Result traces do not jump to the right frequency when markers are toggled between traces.

[SPH-2182] In SPA field strength graph, negative antenna factors show correctly over frequency.

-> Software - OS/Base

[SPH-1642] Fixed a typo in the power limit warning message at boot.

[SPH-1653] Clearing old messages when changing modes from a recall state.

[SPH-1681] Fixed a black out of the web interface remote display in Chrome when selecting a different browser tab then selecting the remote display tab.

[SPH-1863] Fixed an issue where SPA application performed a LO Null search on the second application load after a master reset.

[SPH-1889] Fixed a problem where user defined calibration files were getting deleted on entering the PIM application a second time after a master reset.

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What will the customer see in this release?

Product : MW82119B

Application Package: V2.40

Release Date : Quarterly Release beginning July 2016

Information below may not apply to every model/option in Product list

\*\*\* NEW FEATURES \*\*\*

-> Software - VNA

[SPH-1744] Added support for interpolated markers in VNA mode. When marker values are set via the numeric keypad or via SCPI, interpolation will be used if the desired marker x-axis value is not an actual measurement point. Markers will continue to snap to the nearest point if the twiddle knob or the arrow keys are used to set their location.

-> Software - OS/Base

[SPH-1858] Added EasyTest repeat script capability.

\*\*\* IMPROVEMENTS \*\*\*

-> Software - OS/Base

[SPH-1510] Fixed an issue where web server popups were showing up off screen on pages that can be scrolled.

\*\*\* BUG FIXES \*\*\*

-> Software - VNA

[SPH-502] Resolved an issue that prevented the instrument settings from getting preset after a measurement file was recalled.

-> Software - HiPM

[SPH-1606] Fixed a bug in High Accuracy Power Meter mode where max power for the MA24106A sensor could not be set up to +23 dBm.

-> Software - OS/Base

[SPH-107] Fixed an issue where instruments would respond to multiple IP addresses.

[SPH-1859] Fixed the issue where the instrument would hang at the last step when executing an easyTest script with the maximum number of steps(500) allowed.

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What will the customer see in this release?

Product : MW82119B

Application Package: V2.31

Release Date : June 14, 2016

\*\*\* BUG FIXES \*\*\*

Cable and Antenna Analyzer [1]

- Corrected the application version number to fix an issue where .vna files from V2.30 would not open in Line Sweep Tools.

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What will the customer see in this release?

Product : MW82119B

Application Package: V2.30

Release Date : April 19, 2016

\*\*\* NEW FEATURES \*\*\*

Cable and Antenna Analyzer [1]

- Add .vna file extension option for saving measurement files in MW82119B instruments with option 331. SPH-1388

High Accuracy Power Meter [1]

- Added support for MA243xxA USB power sensors.

\*\*\* ENHANCEMENTS \*\*\*

General [5]

- Increased the number of easyTest Script steps supported from 100 to 500.
- Substantial updates to Japanese language translation files for System applications.
- Substantial updates to Chinese language translation files for all applications.
- Allow WEB server admin login to access all instrument control capabilities. QDF-79
- Added a disclaimer notice on web server login page. QDF-81

\*\*\* BUG FIXES \*\*\*

General [4]

- Fixed an issue where the instrument would display an incorrect IP address when using a Zyxel mobile router powered by the instrument's USB port. #23728
- Fixed an issue where the status window reported an invalid IP address of 169.254.x.x if the window was opened shortly after the Ethernet cable was plugged in. #23045
- Fixed an issue with the first attempt to login to the web server after a timeout. QDF-80
- Fixed an issue where the file type warning message was not shown in the Select File Type dialog.

High Accuracy Power Meter [1]

- Fixed an issue with zeroing external USB high accuracy sensors.

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What will the customer see in this release?

Product : MW82119B

Application Package: V2.24

Release Date : March 30, 2016

\*\*\* NEW FEATURES \*\*\*

Cable and Antenna Analyzer [1]

Passive Intermodulation Analyzer [1]

- Expanded capabilities to allow easyTest to enable more complex test scripts to be executed. easyTest scripts will also be able to save files to a single directory allowing for a simplified process for retrieving test results. ECAA-9  
Refer to Sky Bridge product release notes for individual product/option support.

\*\*\* MISCELLANEOUS \*\*\*

General [1]

- Adjusted LCD Horizontal and Vertical timing to work with display manufacturer revision changes.  
Updated SPL/IPL to V3.60 and ATABoot revision to V3.71 for improved handling of battery charge termination while unit is in the powered down state.  
SPL/IPL and ATABoot are only available for update at Factory or Customer Service Centers.

\*\*\* ENHANCEMENTS \*\*\*

General [2]

- easyTest will now replace existing measurements with the same name when performing an automatic file save operation.
- Updated the CableList.txt file to add 9 additional cables in response to customer request.

\*\*\* BUG FIXES \*\*\*

Passive Intermodulation Analyzer [1]

- Fixed an issue where the output power was not set correctly following a custom calibration performed at multiple power levels. #23542

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What will the customer see in this release?

Product : MW82119B

Application Package: V2.15

Release Date : November 20, 2015

\*\*\* NEW FEATURES \*\*\*

General [1]

- Scripts created by easyTest Tools V1.08 or higher may be executed on the PIM Master. #2720.

Passive Intermodulation Analyzer [5]

- Added capability to bypass a high reflection warning to PIM test a system with poor return loss for a maximum of 60 seconds at 43 dBm maximum power. A bypass dialog appears on the screen and stops the current measurement when a high reflection is detected. The bypass dialog can be disabled in the Setup menu. The words "High Reflection warning bypassed!" appear on the screen anytime the high reflection warning is bypassed. #2644.
- Calibration is no longer turned off when more than 12 hours have elapsed since the last calibration for the current configuration. Instead, a warning dialog is presented that asks the user to verify the residual PIM level and recalibrate if it is too high for their test requirements. #3270.
- Calibration progress is now displayed for all calibration procedures except the manual OSL calibration. The User-Defined Calibration dialog can be found via the Calibration menu > Other Calibrations menu > User-Defined. #3133.
- Menu buttons are now disabled during a calibration. #2288.
- Replaced "PIM vs. Time Only, All Power Levels" calibration with new "User-Defined Calibration" dialog. Users can now select the specific calibrations they want to perform at either one, two, three or all integer power levels. #3133.

\*\*\* ENHANCEMENTS \*\*\*

General [3]

- Added a warning that appears when downloading multiple files via a WEB browser now indicates that the process may make the instrument unresponsive until the download is completed. If there is an error during the process, another message will appear to suggest a smaller download. #22945
- Added additional monitoring of Battery SMBus to improve the handling of battery charge termination while unit is in operation. #23219.
- Changed several icons used in Night Vision mode for better visibility. #22831

Cable and Antenna Analyzer [1]

- The HHST warning message that appears when saving a .dat measurement files with more than 551 points will now only show once on the first save attempt after any reboot. #3424

#### Passive Intermodulation Analyzer [3]

- Added ability in the Trace menu to toggle Max Hold ON or OFF for the trace in 'Noise Floor - Spectrum View'. #3269
- Improved Spectrum View Marker to automatically display and set Marker 2 to the current IM product frequency. #3415
- Initiating a touch screen calibration is no longer possible while the PIM Application Self Test dialog is open. #23074. #23074

#### \*\*\* BUG FIXES \*\*\*

#### General [4]

- Fixed an issue in easyTest menu shortcuts to test for the existence of the script file before attempting to execute the script file. #22842
- Fixed an issue in the WEB UI of device where the scale on the graph showed incorrect units under certain conditions. #22659
- Fixed an issue that could cause the Quick Name or the Quick Name Matrix button configuration to become undefined after a setup is saved via a remote command or PC tool and recalled at a later time. #22810
- Fixed an issue where the Menu buttons were outlined in red when the Display Blank feature was activated on a PIM Master instrument. #22944

#### Cable and Antenna Analyzer [2]

- Fixed an issue in Cable and Antenna Analyzer mode where presetting the unit after a recall operation could leave the device in an inconsistent state. #22552
- Fixed an issue where the RF did not turn off while operating in HOLD mode while making PIM VNA measurements. #22952

#### Passive Intermodulation Analyzer [3]

- Fixed an issue where the "IM Overload" warning message could be displayed on instruments without -50 dBm measurement capability. #23086
- Fixed an issue where the dialog that appears when the factory calibration is due was missing the instruction to press ENTER to dismiss the dialog. #3305.
- Fixed an issue with the DTP normalization calibration that was triggered by the "Start Calibration" button in the Calibration menu.

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What will the customer see in this release?

Product : MW82119B

Application Package: V2.14

Release Date : October 30, 2015

\*\*\* NEW FEATURES \*\*\*

General [1]

- Scripts created by easyTest Tools V1.08 or higher may be executed on the PIM Master. #2720.

Passive Intermodulation Analyzer [5]

- Added capability to bypass a high reflection warning to PIM test a system with poor return loss for a maximum of 60 seconds at 43 dBm maximum power. A bypass dialog appears on the screen and stops the current measurement when a high reflection is detected. The bypass dialog can be disabled in the Setup menu. The words "High Reflection warning bypassed!" appear on the screen anytime the high reflection warning is bypassed. . #2644.
- Calibration is no longer turned off when more than 12 hours have elapsed since the last calibration for the current configuration. Instead, a warning dialog is presented that asks the user to verify the residual PIM level and recalibrate if it is too high for their test requirements. #3270.
- Calibration progress is now displayed for all calibration procedures except the manual OSL calibration. The User-Defined Calibration dialog can be found via the Calibration menu > Other Calibrations menu > User-Defined. #3133.
- Menu buttons are now disabled during a calibration. #2288.
- Replaced "PIM vs. Time Only, All Power Levels" calibration with new "User-Defined Calibration" dialog. Users can now select the specific calibrations they want to perform at either one, two, three or all integer power levels. #3133.

\*\*\* ENHANCEMENTS \*\*\*

General [3]

- Added additional monitoring of Battery SMBus to improve the handling of battery charge termination. #23219
- Changed several icons used in Night Vision mode for better visibility. #22831
- The warning that appears when downloading multiple files via a WEB browser now indicates that the process may make the instrument unresponsive until the download is completed. If there is an error during the process, another message will appear to suggest a smaller download. #22945

Cable and Antenna Analyzer [1]

- The HHST warning message that appears when saving a .dat measurement files with more than 551 points will now only show once on the first save attempt after any reboot. #3424

#### Passive Intermodulation Analyzer [3]

- Added ability in the Trace menu to toggle Max Hold ON or OFF for the trace in 'Noise Floor - Spectrum View'. #3269
- Improved Spectrum View Marker to automatically display and set Marker 2 to the current IM product frequency. #3415
- Initiating a touch screen calibration is no longer possible while the PIM Application Self Test dialog is open. #23074. #23074

#### \*\*\* BUG FIXES \*\*\*

#### General [4]

- Fixed an issue in easyTest menu shortcuts to test for the existence of the script file before attempting to execute the script file. #22842
- Fixed an issue in the WEB UI of device where the scale on the graph showed incorrect units under certain conditions. #22659
- Fixed an issue that could cause the Quick Name or the Quick Name Matrix button configuration to become undefined after a setup is saved via a remote command or PC tool and recalled at a later time. #22810
- Fixed an issue where the Menu buttons were outlined in red when the Display Blank feature was activated on a PIM Master instrument. #22944

#### Cable and Antenna Analyzer [2]

- Fixed an issue in Cable and Antenna Analyzer mode where presetting the unit after a recall operation could leave the device in an inconsistent state. #22552
- Fixed an issue where the RF did not turn off while operating in HOLD mode while making PIM VNA measurements. #22952

#### Passive Intermodulation Analyzer [2]

- Fixed an issue where the "IM Overload" warning message could be displayed on instruments without -50 dBm measurement capability. #23086
- Fixed an issue where the dialog that appears when the factory calibration is due was missing the instruction to press ENTER to dismiss the dialog. #3305.

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What will the customer see in this release?

Product : MW82119B

Application Package: V2.12

Release Date : July 24, 2015

\*\*\* NEW FEATURES \*\*\*

Passive Intermodulation Analyzer [2]

- A Distance-To-Fault (DTF) measurement can now be performed and displayed by the PIM Master as part of a Distance-To-PIM (DTP) measurement. The DTF measurement is enabled by default and may be controlled by the "Low Resolution DTF" button in the Setup menu in DTP mode. A new step in the PIM calibration sequence has been added to support this new measurement capability. #2338
- The PIM Master now beeps once for each calibration step and beeps twice when the calibration is complete.

\*\*\* ENHANCEMENTS \*\*\*

General [2]

- Added the ability to lock an instrument from Telnet and FTP connections.  
After setting the remote password and rebooting the unit, the unit will no longer allow Telnet and FTP connections.  
To remove the lock, either do a factory reset or remove the remote password by setting it to blank. #22432
- Made error message more meaningful when saving files with target memory nearly full. #21966

\*\*\* BUG FIXES \*\*\*

General [8]

- Changed the Spanish Language translation of ON/OFF to fit within the allowable space of the Marker Table. #22315
- Fixed an issue in the Web UI of the device where the MENU button would occasionally not be displayed, when using Internet Explorer version 10/11. #22535
- Fixed an issue in Web interface where the Remote Control screen did not show the instrument menu button when accessed through Safari browser. #22158
- Fixed an issue where dragging an open dialog box would leave tracers on the screen. #21961
- Fixed an issue where measurement file type in Cable and Antenna Analyzer mode was resetting to default upon recalling a setup file. #21571
- Fixed an issue where the login button would not work on WEB server UI when accessing the device remotely with Safari browser. #22155
- Fixed an issue with file save error message shown on WEB server UI. Providing more relevant information as to the cause of the error. #21444
- WEB browser file download attempts are no longer possible with iOS devices. #22499

#### Cable and Antenna Analyzer [2]

- Fixed an issue in Cable and Antenna Analyzer mode where a screen touch outside any notification window during Calibration would cause the device to go into an unresponsive state. #22428
- Fixed an issue in Cable and Antenna Analyzer mode where turning the limits ON via SCPI would not work as expected soon after a factory reset of the instrument. #22461

#### Passive Intermodulation Analyzer [1]

- Fixed an issue that could prevent cable properties, such as propagation velocity, from being saved between reboots when Option 331 is enabled. #22296

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#### What will the Customer See in this release?

#### Application Package for MW82119B : V2.11\_MW82119B 3-31-2015

#### General Features

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- (New) A small camera icon has been added to the system title bar next to the floppy disk save icon. This icon can be used to quickly save a screenshot to the last-used save location.
- (New) The Quick Name buttons and the Quick Name Matrix are now shared between the PIM and Cable and Antenna Analyzer applications.
- (New) The configuration of the Quick Name buttons and the Quick Name Matrix is now preserved for future firmware upgrades when selecting the "Save and Restore" option during the firmware upgrade process.
- (New) File sort method and sort order is now persistent and shared between uses of the recall, copy, and delete dialogs.
- JPGs can no longer be saved if free space is running low on the device.
- Improved the web browser remote control session time-out logic to prevent unintentional lockout.
- Fixed occasionally displaying '(null)' text on buttons.
- Improved the speed of the INST:NSEL SCPI command.

#### PIM Analyzer

-----

- (New) Added Spectrum View measurement mode. Spectrum View shows the noise floor across the entire receive frequency range of the PIM Analyzer, dependent on the

installed PIM Option. See Appendix B in the PIM Master User Guide for option-specific frequency ranges.

- (New) The Distance-To-PIM (DTP) measurement mode now shows information on a dBm scale by default. The scale in DTP mode may be changed between dBm and dBc units as desired.
- The "Instrument Busy" message displayed in a web browser remote control session was not being dismissed correctly after the instrument had been unresponsive for a long time.
- The initial date of the Calibration Due Date dialog is now set to one year from the Factory Calibration Date when no due date has been set.
- Fixed the detection of calibration data when cycling through Intermod Orders in PIM vs. Time and Swept PIM modes.
- Markers in all measurement modes are now drawn with a filled diamond when they are located on a local maximum to be consistent with the marker behavior in Distance-To-PIM mode.
- The PASS/FAIL indicator text is now easier to read in the PIM application when using the Black and White color profile.
- Fixed a configuration error that could cause some multi-band instruments to reset to defaults after a reboot.
- Fixed an error that could prevent DTP Enhanced Resolution markers from being displayed.

#### High Accuracy Power Meter

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- Updated language translations.

#### Cable and Antenna Analyzer

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- Updated language translations.
- Cable list window no longer clips long cable names.
- Changing start frequency via the left side status touch panel, the other parameters are now properly updated on screen.
- Corrected the signal standard start/stop frequency calculations.
- Remote Preset command is now disallowed when the unit is in measurement recall mode.

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Application Package for MW82119B : V2.10\_MW82119B 2-27-2015

#### General Features

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- (New) The web browser File List page now allows for bulk downloading of files/directories as a single zip file. Navigation of sub-directories is also now possible.
- Files larger than 1 MB can now be downloaded from the instrument via the web browser File List page.

- Web browser connections are now rejected if there has been a connection to the instrument from a different computer/device in the past 2 minutes.
- Fixed occasional crashes when interacting with the instrument through web browser remote control.
- Increased the contrast of the rectangular border around the battery level indicator to make it more visible through web browser remote control.
- Added an indicator in web browser remote control when the instrument is busy processing and may be unresponsive to input.
- Key presses and commands are now ignored in web browser remote control while the connection is paused.
- The Save Measurement dialog can now automatically increment filenames with multiple '\_' characters.
- The Save and Recall dialogs now use the correct icons for the current color scheme.
- Fixed an error that could cause decimal limit values to be stored and displayed incorrectly.

#### PIM Analyzer

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- (New) Cable properties (name, loss, propagation velocity) are now shared between the PIM and Cable-Antenna Analyzer applications for PIM Masters with Option 331.
- (New) A dialog will appear during residual PIM calibration if the PIM Master detects a poor PIM signal from the test port. The dialog will prompt the user to check the connections before continuing with the calibration.
- Eliminated some spurs in the 1800 and 2100 MHz PIM options.
- Changed the measurement mode text to display "Noise Floor – Time View" when making noise floor measurements in PIM vs. Time.
- Entering the marker menu now always selects the last used marker that is enabled.
- Fixed incorrect display of IMD frequency in PIM options with multiple bands and displayed Output Power range in the PIM Aid dialog.
- Fixed the display of trace, marker, and limit values when output power is adjusted while dBc units are selected.
- Fixed a configuration error that limited 5th and 7th order IM frequency selection for the Option 700 in low-band mode.
- Corrected the upper limit of the low-band receiver for Option 700 to 717 MHz.
- Fixed a configuration error that limited the maximum F2 frequency selection for the Option 702 in PIM vs. Time mode to 803 MHz, when it is capable of transmitting up to 807 MHz.

#### High Accuracy Power Meter

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- The Save Measurement button in High Accuracy Power Meter now correctly selects a measurement file type instead of a setup file type.
- The summary window now correctly goes away with the preset command.

#### Cable and Antenna Analyzer

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- Red "Marker" input text is no longer displayed when no marker is selected.

- The .VNA file format is not supported with the MW82119B Option 331 and has been removed from the save and recall dialogs as a selectable filetype.
- Eliminated some spurs and spikes that could occur with certain frequency spans.

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Application Package for MW82119B : V2.06\_MW82119B 10-31-2014

General Features

- - No changes

PIM Analyzer

- - No changes

High Accuracy Power Meter

- - No changes

Cable and Antenna Analyzer

- - Resolved production test issues.

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Application Package for MW82119B : V2.05\_MW82119B 10-15-2014

General Features

- - Resolved production quality issues.

PIM Analyzer

- - No changes

High Accuracy Power Meter

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- No changes

Cable and Antenna Analyzer

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- No changes

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Application Package for MW82119B : V2.02\_MW82119B 9-29-2014

General Features

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- Resolved production test issues.

PIM Analyzer

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- No changes

High Accuracy Power Meter

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- No changes

Cable and Antenna Analyzer

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- No changes

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Application Package for MW82119B : V2.01\_MW82119B 9-22-2014

General Features

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V2.01 is the initial release for customers.

PIM Analyzer  
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High Accuracy Power Meter  
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Cable and Antenna Analyzer  
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