

General Caution

Please use a USB Memory Stick for firmware updates. Suitable firmware can be found on Anritsu's web site under the instrument library listings. If your existing firmware is older than v1.58, please use Master Software Tools and the Ethernet interface for firmware updates.

If there is a firmware update question, please contact Anritsu service support at www.Anritsu.com, and then click on "Technical Support" for further information.

What will the Customer See in this release? MT8222A Application Package V1.80 07/23/2012

General Features

-Updated Antenna File to V2.03

Additional Anritsu Antenna selections have been added to the files Anritsu_2000-1659-R Anritsu_2000-1660-R Anritsu_2000-1645-R_lowband Anritsu_2000-1645-R_highband Anritsu_2000-1648-R

Spectrum Analyzer

- Fix a problem in firmware that had problems with DSP FPGA older than 3.04
- Fixed the problem of which marker jumps onto trace A when user presses button to search next peak to the left/right.
- Stopped displaying antenna factor in field strength measurement if the spectrum measurement is outside of the valid antenna's frequencies.
- Disallow recalling of a setup if the instrument is in measurement recall mode.

AM-FM-PM Analyzer

No changes

Interference Analyzer

- Fixed the problem of which the spectrum sweep doesn't reset after it has been recorded into the spectrogram trace under some circumstances.

- Improved timing accuracy of sweep interval in RSSI

Channel Scanner

- Fixed the problem of which the signal standard list window was dismissed prematurely when user has selected an invalid signal standard such as "NONE."



PIM Analyzer

- Added support the new PIM Master model MW8209A
- Changed the way calibration is performed in distance-to-PIM mode.
- Reset MW8209A 900MHz upper frequency limit from 970MHz to 960MHz.
- Added additional Cal/Measure capability for MW8208A DTP measurement
- Implemented PIM SCPI command for changing between DTP and PIM.
- Bug fix to keep display from updating PIM measurement during DTP Cal.

Power Meter

- No changes

High Accuracy Power Meter

- Added support for the new power sensor model MA24240A, and MA24105A.

Cable and Antenna Analyzer

- No changes

CDMA Analyzer

- No changes

EVDO Analyzer

- Fixed the problem which the pass/fail mode would report incorrect spurious emission test result.

GSM Analyzer

- No changes

TD-SCDMA Analyzer

------- No changes

WCDMA Analyzer

- Fixed a lock failure problem at certain frequencies.

LTE Analyzer

- Added Power vs. RB measurement
- Added support for Freq Error averaging
- Added Indicator for EVM Auto status
- Added Indicator for which Antenna was detected
- Added support for EVM Max Hold
- Added RSRP, RSRQ, SINR measurements to Scanner
- Added TxTest measurement
- Added support for in-instrument Mapping



Fixed WiMAX Analyzer

------- No changes

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Mobile WiMAX Analyzer

------- No changes

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T1/E1/T3

- No changes

DVBTH Analyzer

- No changes

DVBTHSFN SFN Analyzer

- No changes

General Features

- Temperature reading in status window now displays both in Celsius and Fahrenheit
- Fixed a bug that would sometimes include the save dialog when saving as a jpeg

Spectrum Analyzer

- Fixed a bug where Save-on-event would continue to save after switching to other modes
- Fixed a bug in the saved measurement file that caused Reference Level Offset to be incorrectly read and applied in Master Software Tools
- Fixed a bug where Quasi-peak detection wouldn't use the correct CISPR RBW filters

AM-FM-PM Analyzer

- Added Coverage Mapping feature

Interference Analyzer

- Improved timing accuracy of sweep interval in RSSI

Channel Scanner

- No changes



PIM Analyzer

- PIM Analyzer mode is now standard on all models that include Spectrum Analyzer (no longer tied to the option 419) - Added support for Distance-to-PIM measurement for PIM Master with option 420.

Power Meter

- No changes

High Accuracy Power Meter

- No changes

Cable and Antenna Analyzer

- No changes

CDMA Analyzer

- Pilot Scanner no longer displays gray bars for noise

EVDO Analyzer

- Pilot Scanner no longer displays gray bars for noise
- New SCPI commands to read RF summary measurements

GSM Analyzer

- No changes

TD-SCDMA Analyzer

- New SCPI commands to read RF and Demod summary measurements
- FETCh:DEMod:CDP? SCPI command now returns the correct PCDE value

WCDMA Analyzer

- New SCPI commands to read RF and Demod summary measurements

LTE Analyzer

- No changes

Fixed WiMAX Analyzer

- No changes



Mobile WiMAX Analyzer

- Fixed a bug where "Preamble scanner Error" message would not get cleared even when error conditions got cleared

T1/E1/T3

- No changes

DVBTH Analyzer

- No changes

DVBTHSFN SFN Analyzer

- No changes

General Features

- The parameter being edited is now displayed in a larger white color font for better readability in poor lighting
- Some improvements to the speed of switching modes (varies with modes).
- Power Offset is now a shared parameter across modes.

Spectrum Analyzer

- Overhaul of the User Interface (see New Measurement Guide 10580-00244 for more details)

- More setup information is now displayed on the left edge of the screen.
- Amplitude menu
 - Reference Level Offset is now more consistent with 'Power Offset' used in other modes.
 - It now accepts 'Gain' or 'Loss' as terminators and the value is shared with other modes by default.
- BW menu
 - RBW and VBW values are now maintained separately for zero-span measurements.
 - The default value of Span/RBW is now 100.
 - A new button to change VBW average type to Log.
- Marker menu
 - A 'Large' setting is now available for the Marker table to view marker readout in a large font.
- Trace menu

- A new Trace Info button is now available in the Trace menu to show a concise listing of all parameters for the selected trace.

- 'Reset Sweep' button has been renamed to 'Reset Trace' and moved to the Trace menu.
- Sweep menu
 - 'Manual Trigger' is now called 'Sweep Once'.
 - A new 'Sweep n Averages' button has been added to allow a full set of averages to sweep when the sweep is set to Single.
 - A new Sweep Mode button (only certain models) allows users to control the sweep algorithm.
 - A new 'Auto Sweep Time' button has been added.
 - Trigger sub-menu has been revamped with the ability to add hysteresis to the video trigger level.



- Gated Sweep Setup (Option 90) is now more responsive and has separate controls for the gate view (zero span).

- Improvements and bug fixes to the Field Strength measurement.

Interference Analyzer

- New Interference Mapping capability added.

- Fixed a bug where the 'Save' window would also be saved when saving to jpeg from Spectrogram measurements.

Channel Scanner

- Fixed several bugs related to Script Master.

PIM Analyzer

- Initial Release

Power Meter

- No changes

High Accuracy Power Meter

- No changes

Cable and Antenna Analyzer

- No changes

CDMA Analyzer

- Improved the Pilot Scanner's Ec/Io sensitivity to about -35 dB when 'Meas Speed' is set to slow. As a result of this improvement, the y-axis for this view has been increased to 45 dB.

EVDO Analyzer

- No changes

GSM Analyzer

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- No changes

TD-SCDMA Analyzer

- No changes

WCDMA Analyzer

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- No changes

LTE Analyzer

- Added support for additional BWs (1.4, 3, 5 MHz).
- Added a new Spectral Emission Mask measurement under Option 0541 (RF Measurements).

- Added support for a "PBCH Only" EVM measurement for measurements made over the air (default selection for OTA-Scanner view).

- Added support for Watts units.
- Added marker support for Channel Spectrum view.
- Changed scale of bars in Control Channel Power view and OTA-Scanner view to better match live signals.
- Added a new Table view that shows Total Powers for Control Channel Power measurements.
- Changed scale and color of dominance bar to improve readability.
- Added ability to sync to Reference Signals (RS) on 2nd Tx port (10 MHz BW only).
- Made significant improvements to reduce false positives in the OTA Scanner measurement.
- Fixed a bug in PCFICH power calculation for certain physical cell ID values.

Fixed WiMAX Analyzer

No changes

Mobile WiMAX Analyzer

- Added 'Timing Error' result to Modulation Summary view
- Fixed a bug where Manual DL-MAP settings would cause an error message while performing modulation analysis

T1/E1/T3

- No changes

DVB-T/H Analyzer

- Addressed issue with an instrument running DSP FPGA V2.18/V3.05 or earlier reporting a fatal error during measurement.

- Added Shoulder Attenuation measurement view.

DVB-T/H SFN Analyzer

- Addressed issue with an instrument running DSP FPGA V2.18/V3.05 or earlier reporting a fatal error during measurement.

- Addressed issue where antennas added to the Antenna List after row 20 would not get loaded correctly.

General Features



- Improved battery communication handling.

Spectrum Analyzer

- Fixed Powermeter Auto Scale error.
- Fixed a bug regarding display in IA Spectrogram Measurements.
- For Gated Sweep Option 90, fixed the display in Channel Power and Occupied BW Measurements.

T1/T3/E1 Analyzer

- Loopback fix for Lucent DCSs

- Backward compatibility with Option 50

DVB-T/H

- Fixed bug where the displayed TPS data was not being scaled correctly in the Constellation measurement view.

- Fixed bug where the Spectrum Monitor Zone Channel would be off by 1 relative to the Channel parameter.

- Fixed bug in Center Frequency recall (both from power up and recalled file states)

DVB-T/H SFN

- Fixed bug where unit could hang if a Trigger Sweep operation is performed immediately after a Detect Parameter operation.

- Fixed bug in Center Frequency and Reference Level recall (both from power up and recalled file states)

General

- Added ability where a user can still acquire an IP address if Ethernet cable is not plugged in at boot-up (takes 15-20 seconds after plugging in cable)
- New File menu with significant overhaul of save/recall
- New signal standards menu with "Favorites" feature
- "/usr" is no longer the default directory when saving to external drives
- Added a feature to allow Shared center frequency across modes
 - By default, this feature is ON
 - Can be toggled at System->System Options->Center Freq Share
- Improved ability to delete multiple user files

WCDMA

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- HSDPA view has improved code marker behavior
- Speed enhancements



3x improvement to multipath 2x improvement to scanner

Channel Scanner

- Various fixes to scriptmaster

High Accuracy Power Meter

- Fixed bug where sensor would not work if plugged in prior to switching into Hi-PM application

- Fixed an issue where E1 Analyzer was showing up twice in the mode list dialog

CWSG

- CWSG showed no output power at the RF output port. This has now been fixed.

General

- Antenna factors for several Japanese antennas corrected in default file
- Customers can now upgrade FW using a USB memory stick

Spectrum Analyzer

- SCPI remote commands added for Gated Sweep Option

Mobile WiMAX Analyzer

- Fixed a bug in the display of BSID when DL-MAP is in compressed mode
- Added absolute power values for preamble power in preamble scanner measurement

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- Initial Release

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Spectrum Analyzer

Fixed a bug in recall setup that could cause a power measurement error. Improved spur performance over previous version of firmware

Channel Scanner

Fixed a problem discovered in V1.53 related to channel BW causing incorrect channel power measurements.

Master Software Tools compatibility

This version of firmware requires that v2.15 or newer of MST be used for USB connectivity.

General Enhancements

Added new USB firmware - Users will now be able to update the instrument firmware via a USB memory stick after this firmware update

Added new arrow style to application buttons with sub-menus - Will be solid and shown all the time Added LTE channel information to the Signal Standards list

Support for new High Accuracy power sensors (requires option 19)

- o MA24104A Inline High power sensor 600 MHz to 4 GHz
- o MA24108A Microwave USB power sensor 10 MHz to 8 GHz
- o MA24118A Microwave USB power sensor 10 MHz to 18 GHz

Spectrum Analyzer Enhancements

New integrated code which includes the Spectrum Analyzer, Interference Analyzer, Channel Scanner, CW Signal Generator and Power Meter

o This greatly speeds up mode switching between these four measurement modes

General Spectrum Analyzer bug fixes

- o Fixed W and V issue in Field Strength measurement
- o Fixed Zero Span and Counter Marker incompatibility issue
- o Fixed Trace A-B -> C issue
- o Fixed Trace B & C Max & Min hold issues
- o Fixed 750 measurement issue

Interference Analyzer Enhancements

New integrated code which includes the Spectrum Analyzer, Interference Analyzer, Channel Scanner and Power Meter

o This greatly speeds up mode switching between these four measurement modes

Channel Scanner

New integrated code which includes the Spectrum Analyzer, Interference Analyzer, Channel Scanner and Power Meter

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o This greatly speeds up mode switching between these four measurement modes

WCDMA Enhancements

Added support for HSPA+ (64 QAM only)

Added support for DTX (discontinuous transmission)

- o AMR (Adaptive Multi-Rate) support is included in this update OTA (Over-the-Air) scanner speed improvement- Approximately twice as fast
- Improved CDP (Code Domain Power) over the air measurement performance
- o Lower EVM
- o More active channels displayed

Added RMS Phase Error measurement to Modulation Summary screen

Fixed some W-CDMA bugs

- o Improved ghosting issues in Multi-Path measurement
- o CDP and Constellation measurements now synchronized in HSDPA screen (option 65)
- o Fixed manual SC (Scrambling Code) settings in OTA scanner

TD-SCDMA Measurement Mode

Added CDP (Code Domain Power) marker capability

Added CDP Table measurement

Added support for MBMS (Multimedia Broadcast Multicast Service)

Added SCPI (National Instruments VISA) programming support

DVB-T/H Enhancements

Updated the GUI (User Interface) to be consistent with all other measurement modes Improved the measurement speed about 40% New save file format for saving measurements that is compatible with MST (Master Software Tools)

CDMA Enhancements

Added new Limit Test measurement to the OTA (Over-the-Air) option in CDMA

CDMA Scanner improvements

- o Improved PN scan speed by more than 2X
- o Added PN Increment
- o Added a 'PN Sort'
- o Added new Absolute Power measurement field

Motorola LMF (base station control software)

- o Fixed a problem with Motorola LMF compatibility
- o Added support for Motorola UBS base stations to LMF

Fixed Tau measurement problem with Samsung BTS using external-trigger

Cable and Antenna Analyzer Application



-Fixed a problem where the sweep would stop when changing power from high to low while smoothing is on.

Other Applications

- No customer related changes in this package

General Features

- Updated Signal Standards and Antenna files to fix errors
- Minor improvement in power on booting time
- Support for handling Compact Flash/USB drives > 4GB
- Allow instrument to turn on even if there is a problem communicating with smart battery

CDMA Application

- Watts unit selection will now scale power results dynamically to mW, uW, pW, etc

Channel Scanner Application

- Added support for running scripts that will enable scanning of many more channels than standard offering.

CW Signal Generator Application

- No changes

DVB-T/H Application

- bug fix to maintain lock on signal when switching from Modulation Analysis to BER measurement for certain signal conditions

- bug fix to disable results in Field Strength measurement if antenna chosen doesn't match freq band

DVB-T/H SFN Application

- Added support for 5, 6 MHz BWs

EVDO Application

- Watts unit selection will now scale power results dynamically to mW, uW, pW, etc

GSM Application

- Added support for 'Script Master' which allows a user to run tests based on scripts generated in MST

High Accuracy Power Meter Application

- Added support for sensors which will be available in the future

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Interference Analyzer Application

- Minor Signal ID algorithm enhancements

Spectrum Analyzer Application

- Fixed several bugs related to Markers and Limit lines

- Users can now enter a specific marker frequency value without the instrument 'snapping' to the closest valid freq point

- Added Support for Option 90 - Gated Sweep

- Added a new Emission Mask measurement

- Fixed bug where Saved Measurement files contain Trace B and Trace C data even though they are not being used. They are now saved only when the traces are ON when saving

T1/E1 Application

- Fixed a bug that would cause T1/E1 setup windows to show black boxes (instead of green ones with black text) if a user changed modes from the Interference Analyzer mode

Cable and Antenna Analyzer Application

- Added support to allow peak search between markers 5,6

- Fixed a bug where DTF setups wouldn't recall properly at certain frequencies

WCDMA Application

- Watts unit selection will now scale power results dynamically to mW, uW, pW, etc

- Added support for 'Script Master' which allows a user to run tests based on scripts generated in MST

- Fixed a bug in the EVM calculation that caused some signals to report a higher symbol EVM

Fixed WiMAX Application

------- No changes

Mobile WiMAX Application

- Added a new Preamble Scanner measurement to the OTA option (Option 37)

- Added Max/Min information to Spectral Flatness measurement

TD-SCDMA Application

- Added HSDPA support

- Added Spectral Emission Mask measurement

TD-SCDMA Application

- Revised Signal Standards



- Updated Signal Standards and Antenna files to fix errors

Operating System

- No changes

CDMA Application

- Added ability to specify a 1.35 MHz span to be used for OBW calculation instead of the standard 2.5 MHz.

Channel Scanner Application

------- No changes

CW Signal Generator Application

------- No changes

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DVB-T/H Application

- Added support for 5, 6 MHz BWs.

- Added capability to specify frequency offset to offset frequency from normal channel map.

DVB-T/H SFN Application

------- No changes

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EVDO Application

- Added ability to specify a 1.35 MHz span to be used for OBW calculation instead of the standard 2.5 MHz.

GSM Application

- Added BSIC decoding which replaces TSC as a measurement result.

High Accuracy Power Meter Application

- No changes

Interference Analyzer Application

- Fixed a critical bug in Signal ID measurement that would cause the instrument to hang when used in certain spans.

Spectrum Analyzer Application



- Fixed critical bug that would cause instrument to hang when using fast sweeps and Save On Event

- Fixed several bugs in Limit lines and Markers
- Fixed bug that caused manual RBW/VBW values to not recall correctly
- Revised some warning messages to be more informative (ADC Over range, Mixer Saturation, etc)
- Fixed a bug that caused Max Hold to not reset when RBW, VBW changed

T1/E1 Application

- No changes

Cable and Antenna Analyzer Application

- Revised cable list

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WCDMA Application

- Fixed a bug where markers would not read out correctly in non default spans

- Added ability to change units to W and mW

Fixed WiMAX Application

- Improved responsiveness to button presses

Mobile WiMAX Application

- Added CINR measurement to the Constellation, EVM vs. Subcarrier and EVM vs. Symbol views (replaced Freq Error (ppm))

- Ability to switch Freq Error unit from Hz to ppm (due to replacement of ppm result by CINR)
- Improved preamble detection to better sync to a frame when DL burst is lower in power than UL burst

- Improved responsiveness to button presses

TD-SCDMA Application

- Revised Signal Standards

General Features

------ No changes

Operating System

------ No changes

CDMA Application



No changes

Channel Scanner Application

- Fixed a bug where measurement accuracy was off by several dB on some versions of HW

- Fixed a bug where channel powers and channels (in 'scan channels' mode) recalled from a setup are different from when they were saved.

CW Signal Generator Application

- No changes

DVB-T/H Application

- No changes

DVB-T/H SFN Application

- No changes

EVDO Application

No changes

GSM Application

- Added support for demodulating Siemens BTS model 240

High Accuracy Power Meter Application

- No changes

Interference Analyzer Application

- New measurement called 'Signal ID' added

- In spectrogram, change sweep interval to best accommodate for changes in time span instead of clipping the time span.

- Fixed Spectrogram color map so that it goes from black to red instead of black to blue.
- Changed incorrect warning messages in RSSI when the screen had not yet filled up with data
- Fixed a bug where measurement accuracy was off by several dB on some versions of HW

- Signal standards forced a change in span when channel numbers were changed - this has been changed to no longer change span when channel numbers are changed

Spectrum Analyzer Application

- Sweep improvements in graphic update of the screen
- Front panel response improved
- Added Zero-span markers and limits
- Added save/recall functionality for Trace B and Trace C



- Added relative reference and scale for trace math

- Added the message "*Settings changed, sweep data invalid*" when a sweep has not been completed with the new setting

- Min/Max hold on Trace B

- Fixed a signal standard problem where changing span would invalidate the signal standard but not removing it from the screen

- Added resizable marker table

- Added sweep progress indicator at the bottom of the graph

- Fixed a problem where turning on Counter Marker in a narrow span would crash the system

- More robust GPS behavior

- Sweep time display is more stable and accurate

T1/E1 Application

- No changes

Cable and Antenna Analyzer Application

- Large "not calibrated" message is now displayed to show Uncalibrated status

WCDMA Application

- No changes

Fixed WiMAX Application

- Fixed a bug where Alternate ACP when BW = 6MHz was junk (~+46dBm)

Mobile WiMAX Application

- Added support for Compressed DL-MAP
- Added support for 3.5MHz and 7MHz BWs
- Added display of 48 bit BS ID
- Fixed a bug in demodulation when total number of symbols > 12
- Fixed a problem where Constellation display did not display data from all the bursts
- Fixed some bugs in Power vs. Time delta markers when multiple markers are selected

TD-SCDMA Application

- Initial Release

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What will the Customer See in this release? MT8222A Application Package V1.46 12-28-2007

General Features

- Added support for Motorola LMF (Local Maintenance Facility) software

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- Updated Signal Standards list with UMTS Bands X, XI

Operating System

- No changes

CDMA Application

- No changes

Channel Scanner Application

- No changes

CW Signal Generator Application

- No changes

DVB-T/H Application

- Initial Release

DVB-T/H SFN Application

- Initial Release

EVDO Application

- No changes

GSM Application

- No changes

High Accuracy Power Meter Application

- No changes

Interference Analyzer Application

- No changes

Spectrum Analyzer Application

- No changes

T1/E1 Application

------- No changes



Cable and Antenna Analyzer Application

- Added Support for Option 10A - Bias Tee (voltages up to 32V)

WCDMA Application

- No changes

Fixed WiMAX Application

- No changes

Mobile WiMAX Application

- No changes

General Features

- Previously, Gigabit and Terabit 'GB/TB of free memory' message used integer so it looked like the device was smaller than it was. For example, using a 2GB CF with 1.7GB remaining displayed '1GB of free memory', now it displays '1.7GB' instead.

Operating System

- Disconnect/reconnect of 10-Mbit Ethernet would previously only sometimes recover. Also, when disconnected, the instrument would slow down noticeably. This has been fixed.

CDMA Application

- Added support for Band Class 6. Carrier BW selection now restricted to 3 values.
- Added RBW value to marker display and changed resolution of marker readout to kHz.
- Carrier Freq and Freq Error now show tenth of Hz in display.
- Internal high accuracy (with GPS option) will now be retained as expected.

Channel Scanner Application

- Previously, recalling setups with custom channel scanning resulted in invalid, dashed-out channel numbers on the display. This has been fixed so that the correct channel numbers will be displayed.

CW Signal Generator Application

- No change

EVDO Application



- Added support for Band Class 6. Carrier BW selection now restricted to 3 values.
- Added RBW value to marker display and changed resolution of marker readout to kHz.
- Carrier Freq and Freq Error now show tenth of Hz in display.
- Internal high accuracy (with GPS option) will now be retained as expected.
- Saved traces were losing freq precision from MHz to Hz. More digits were added after the decimal point (from 6 to 9) to some freq values

that require tenth-Hz precision.

GSM Application

- Internal high accuracy (with GPS option) will now be retained as expected.

- Pass/Fail defaults would show small negative values as failures.

Test limits have been updated.

- Freq Error had a factor of 10 offset. The error is now fixed.

High Accuracy Power Meter Application

- Added support for the MA24106A USB Power Sensor.

Interference Analyzer Application

- Failure of storage location (int CF, USB, ext CF) full is now displayed correctly.

- There were previous problems with the autosave feature for RSSI and spectrogram measurements. In some cases, duplicate files were saved when the autosave was triggered. Also, some longer-duration measurements would terminate after only 3 hours. Both of these issues have been fixed.

- Better reporting for spectrogram measurements trying to set very large save times in very large memory devices. Previously, this may have resulted in an error that said the device did not have capacity.

- User is no longer allowed to modify the Min Sweep Time parameter when in RSSI mode. A message appears on the screen requesting that the user modify the Time Interval and Span parameters instead.

- Previously, When doing a Preset from RSSI mode, the trace appeared to be squished on the left side of the graph when measurement is resumed under the preset conditions. Settings are now properly cleared during the preset operation.

- Display of parameters was improved in RSSI mode. Previously, when updating a parameter value, the red text in the upper-left of the plot on the display would get garbled as the parameter value (or parameter text) changed. The text would become clear again when the next point of data was received and displayed. This was most noticeable when the Time Interval parameter was large (i.e. 5 seconds).

- Unit will not hang up in fast sweep conditions (large RBW, narrow span).

- Error message display was improved so that critical error messages would not be missed.

- Previously, the min/max parameters of the Signal Strength measurement could be set backwards (i.e. min > max). This is no longer allowed.

- Improved autoscale feature of the Signal Strength measurement.



Spectrum Analyzer Application

- Some new strings were added to the local language translations.
- Added upgrades to move limit.
- Added vertical limit lines.
- Added limit mirror.
- Improved warnings for marker 1 reference.
- Improved warnings for full screen conflict.
- Changing signal standard channel will no longer revert the span back to

3x the channel width.

- Video Trigger Levels are now validated to avoid unreasonable values.

T1/E1 Application

- No change

Cable and Antenna Analyzer Application

- Improved recall of marker data.

- Added Cal Mode (Standard or FlexCal) for combinations of Cal

Type (1-Port or 2-Port) and Cal Power (Low or High).

- The system will now allow the user to input a stop frequency that is smaller than the start frequency.

- New calibration warning messages when 1-port calibration is active and the user attempts to switch to 2-port channels.

- Improved spur avoidance down to 1 MHz.

- Request that CABLE_LOSS_AVERAGE added to info for MST.

WCDMA Application

- Added a Span button under Channel Spectrum that allows a user to toggle between 10 MHz and 5 MHz spans for more accurate OBW measurements in a multi-carrier environment.

- Added more digits to the carrier frequency and frequency error measurements on the display.

- Improved behavior When recalling a pass/fail measurement. Previously, the ESC key would not exit recall mode properly.

- Improved the spectrum emission mask measurement. Previously, the instrument would hang if left to measure spectrum emission mask repeatedly for a long time.

- Internal high accuracy (with GPS option) will now be retained as expected.

- Spectrum Emission Mask: measurement results for highest levels in each zone of the spectrum emission mask measurement would report the correct level but it reported incorrect frequencies. This is now working.

Fixed WiMAX Application

- Internal high accuracy (with GPS option) will now be retained as



expected.

Mobile WiMAX Application

- Added support for extended DIUC.

- Improved filter design to better reject power from adjacent

channels during demodulation.

- Added support for CTC decoding of the DL-MAP to automatically

determine the demodulation parameters.

What will the Customer See in this release? MT8222A Application Package V1.41 9-27-2007

General Features

- In some situations the instrument may have failed to boot up completely using the previous version of firmware. This issue is now fixed.

Operating System

- No changes

Spectrum Analyzer Mode

- No changes

Interference Analyzer Mode

------- No changes

Channel Scanner Mode

------- No changes

WCDMA Signal Analyzer Mode

- No changes

GSM/EDGE Signal Analyzer Mode

- No changes

Fixed WiMAX Signal Analyzer Mode

- No changes

Mobile WiMAX Signal Analyzer Mode



- No changes

High Accuracy Power Meter Mode

- No changes

CDMA Signal Analyzer Mode

- No changes

EVDO Signal Analyzer Mode

- No changes

PM Mode

------- No Change

VNA Mode

No changes

T1 Analyzer

- No Change

T3 Analyzer Mode with Fractional payloads

- No change

E1 Analyzer

- No change

CW Signal Generator

- No changes

General Features

------- Anritsu Logo added to the top left of the GUI

Operating System

- No changes



Spectrum Analyzer Mode

- Fixed bug where recall limit would fail and give no indication it failed. Now it does not fail.

Interference Analyzer Mode

- No changes

Channel Scanner Mode

- No changes

WCDMA Signal Analyzer Mode

- Fixed bug where mode changes with GPS connected caused frequency accuracy errors.

- Improved how the zoom area is shown in codogram, CDP and HSDPA views

GSM/EDGE Signal Analyzer Mode

- Fixed bug where mode changes with GPS connected caused frequency accuracy errors.

Fixed WiMAX Signal Analyzer Mode

- Added support for 5ms and 10ms frame lengths

- Added ability to use RF power to do a rough trigger in power vs. time when no preamble is found. This prevents trace from jumping around even when the DL preamble is not found.

Mobile WiMAX Signal Analyzer Mode

- Initial release

High Accuracy Power Meter Mode

- No changes

CDMA Signal Analyzer Mode

- Fixed bug so carrier frequency reports the measured value correctly.

- Fixed bug where mode changes with GPS connected caused frequency accuracy errors.

EVDO Signal Analyzer Mode

- Fixed bug where mode changes with GPS connected caused frequency accuracy errors.

PM Mode

- No Change

VNA Mode



- Added support for Bias Tee option 10A.

- Added user selection in Smith Chart Scaling (Amplitude) Menu for Reference Impedance (50 ohm / 75 ohm).
- Fixed a problem where DTF could not recall stop dist greater than the default Dmax.
- Fault Res has correct unit conversion now.
- Dmax and Fault Res are updated correctly after Preset

T1 Analyzer

- No Change

T3 Analyzer Mode with Fractional payloads

- No change

E1 Analyzer

- No change

CW Signal Generator

- Fixed a problem where Freq couldn't be changed with arrow keys.

What will the Customer See in this release? MT8222A Application Package V1.39 7-20-2007

General Features

- Antenna list handling improved so spaces in the file name are handled correctly.

- Power save increases battery time by decreasing default screen brightness.

- remote command functionality will now handle multiple events.

Operating System

- No changes

Spectrum Analyzer Mode

- Marker frequency resolution was lost on saved measurements, now recalled measurements show the correct resolution.

- Marker peak search on slow sweeps did not work correctly on the first sweep. Now the correct data is searched.

- Extensive limit upgrades. Save/recall limit, limit envelope, limit absolute/relative, move limit (by frequency).
- application self test displays overall status better now.
- Some warning/error messaging has improved details.
- Certain types of lock failures have been prevented. Also, one LO's failure should no longer cause another LO to fail.

Interference Analyzer Mode



No changes

Channel Scanner Mode

No changes

WCDMA Signal Analyzer Mode

- CDP view would take up to 1 minute to refresh after closing an input window, this has been fixed.
- Traffic analysis measurement capabilities are added using both code utilization and amplifier capacity.
- Frequency error measurements now has averaging which can be enabled/disabled.
- Max amplifier output power was not being set correctly under certain conditions. Now it is properly set.

GSM/EDGE Signal Analyzer Mode

- No changes

Fixed WiMAX Signal Analyzer Mode

- Remote commands that set signal or channel standards did not correctly update the frequency or channel, now it does.

- Auto range time was slow, it is now a little faster.

High Accuracy Power Meter Mode

- With max-hold on, When relative power is turned on the data would be lost. This bug has been fixed.

CDMA Signal Analyzer Mode

- Invalid PN numbers were caused when power offset was non-zero. This bug has been fixed.
- 'Slow' measurement mode now averages over more chips to get better frequency error accuracy.

EVDO Signal Analyzer Mode

- Invalid PN numbers were caused when power offset was non-zero. This bug has been fixed.

PM Mode

- No Change

VNA Mode

- No Change

T1 Analyzer

- No Change

T1 Analyzer Mode with Fractional payloads



- VF measurement function was observed to become inactive during a measurement. Fixed to keep the measurement going even when we move between views.

- VF measurement flashes a wrong value in the Power box when the Audio Monitor is turned on. Fixed so that the screen displays the right values with or without Audio Monitor turned on.
- Subchannel editing from the menu buttons allowed entering invalid numbers when using the key pad. Fixed to allow only the valid ranges for the Subchannel numbers.

T3 Analyzer Mode with Fractional payloads

- Fixed SelfTest to display all the test results.