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 v1.19, 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? MS2036A Application Package V1.21 2-10-2011

Vector Network Analyzer Application

- Users can now input a specific marker frequency that does not snap to the nearest tested frequency.

Spectrum Analyzer

- Fixed an issue with the display of antenna coefficient in field strength measurement.

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General Caution

It is recommended that Ethernet be used to perform any firmware updates.

If this failure should occur, Recovery is possible using the Emergency Repair feature with Ethernet connection.

What will the Customer See in this release? MS2036A Application Package V1.20 3-30-2010

- No customer changes.

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General Caution

It is recommended that Ethernet be used to perform any firmware updates.

If this failure should occur, Recovery is possible using the Emergency Repair feature with Ethernet connection.

What will the Customer See in this release? MS2036A Application Package V1.19 2-25-2010

Master Software Tools compatibility

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

General Features

- Antenna factors for several Japanese antennas corrected in default file

- 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

Vector Network Analyzer Application

- Increased the number of cables in Table View to 12 in Vector Volt Meter.

- User now can set the unit to turn off RF power when sweep is in hold.

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

Spectrum Analyzer

- Fixed a bug in recall setup that could cause a power measurement error.

- Improved spur performance over previous version of firmware

- New integrated code which includes the Spectrum Analyzer, Interference Analyzer, Channel Scanner, CW Signal Generator and Power Meter. This greatly speeds up mode switching between these four measurement modes

General Spectrum Analyzer Bug Fixes

- Fixed W and V issue in Field Strength measurement

- Fixed Zero Span and Counter Marker incompatibility issue

- Fixed Trace A-B -> C issue

- Fixed Trace B & C Max & Min hold issues

- Fixed 75O measurement issue

Interference Analyzer Enhancements

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

  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

  This greatly speeds up mode switching between these four measurement modes

Anritsu

- Enabled numeric keypad for frequency and bandwidth entry in the customer setup menu.

Power Meter Mode

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

  This greatly speeds up mode switching between these four measurement modes

High Accuracy Power Meter Application

- Support for new High Accuracy power sensors

o MA24108A Microwave USB power sensor 10 MHz to 8 GHz

o MA24118A Microwave USB power sensor 10 MHz to 18 GHz

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General Caution

You must use Ethernet connection to perform any firmware updates.

Updating via USB may result in a failure to finish loading the OS and the unit will not reboot.

All is not lost. Recovery is possible using the Emergency Repair feature with Ethernet connection.

What will the Customer See in this release? MS2036A Application Package V1.14 6-12-2009

General Features

No customer related changes in this package

Vector Network Analyzer Application

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

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General Caution

You must use Ethernet connection to perform any firmware updates.

Updating via USB may result in a failure to finish loading the OS and the unit will not reboot.

All is not lost. Recovery is possible using the Emergency Repair feature with Ethernet connection.

What will the Customer See in this release? MS2036A Application Package V1.13 12-15-2008

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

Channel Scanner Application

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

High Accuracy Power Meter Application

- Added support for MA24104A Inline High power sensor 600 MHz to 4 GHz

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

Vector Network 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

Power Meter Mode

-No Changes

Anritsu

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What will the Customer See in this release? MS2036A Application Package V1.12 3-04-2008

General Features

- No changes

Operating System

- No changes

VNA Mode

- Added dual overlay feature that shows live traces of S21 Log Magnitude and S11 Log Magnitude on the same graph.
- Implemented new SCPI commands for Reference Plane Extension, Smoothing, Dual Overlay, and Smith Chart Reference Impedance.
- Bigger fonts used for Vector Voltmeter CW table.
- Big red "Not Calibrated" message will appear in the graph area when device is not calibrated.
- Fixed a problem where Bias Tee is active even though the option is not selected.

Spectrum Analyzer Mode

- Added Linear Units
- Added vertical limit lines
- Added limit mirror

- New SCPI commands for the above newly added features.

- Fixed SCPI command :TRACe:DATA? so that it will always return data or #0 when data is invalid.

- Traces not active when saved will not be recalled

- Added capability to skip average count on the screen when it's sweeping faster than we can update the count on the screen

- Fixed problem with trace values not adjusting to the Reference Level Offset changed.

Interference Analyzer Application

- The reference level is now saved during mode changes.

- Fixed a problem where changing Min/Max amplitude settings or using Autoscale improperly changes the displayed amplitude value of the input signal.

- Fixed a bug where RSSI would stop taking measurements prematurely.

- Error messages are now cleared from the screen correctly when switching between measurements.

- The problem where markers are drawn a few pixels off from the actual location has been fixed.

- RSSI measurements that do not fill the screen will no longer trigger incorrect warning messages.

- Signal strength measurement will now be updated correctly when input is removed.

Channel Scanner Application

- Fixed a problem where changing Min/Max amplitude settings or using Autoscale improperly changes the displayed amplitude value of the input signal.

High Accuracy Power Meter Mode

-No Changes

Power Meter Mode

-No Changes

V1.11>>

What will the Customer See in this release? MS2036A Application Package V1.11 12-12-2007

General Features

- In previous versions of firmware, SCPI command results for ":TRACe:DATA?" query would occasionally return

  incorrect values. All values are now properly calculated and formatted in the query response string.

- In some situations the instrument may have failed to boot up completely using the previous version of firmware.

  This issue is now fixed.

- Fixed a bug where the 'GPS High Accuracy' state for the internal frequency reference was lost when switching between certain modes.

Operating System

- No changes

VNA Mode

- Bias Tee Voltage user entry with 0.1 volt resolution.

- Smith Chart Scaling (Amplitude) Menu for Reference Impedance (50 ohm or 75 ohm).

- Smoothing of S11 and S21 Frequency Domain measurements with Smoothing % user entry.

- Faster Vector Voltmeter (CW sweep) calibration steps.

- Faster sweep speeds by as much as 2 times.

- Reference Plane Extension for port 1 (S11 and S21). Includes automatic reference plane extension using current measurement.

- Improved spur avoidance down to 1 MHz.

- Cal Mode (Standard or FlexCal™) for combinations of Cal Type (1-Port or 2-Port) and Cal Power (Low or High).

- FlexCal™ remains valid when switching between Vector Network Analyzer and Vector Voltmeter Modes.

>>> Note: Upgrading VNA module from older firmware version will do an internal cal (about 15 to 30 seconds) <<<

System displays "** OPTIMIZING IF GAINS - PLEASE STAND BY **" message at bottom of bootup screen or application change to VNA.

Remote Users:

Remote interface was not updated to include new VNA features of Smith Chart scaling, trace Smoothing, Reference Plane Extension, or FlexCal™. It is possible, however, that front panel use has placed the VNA Master in FlexCal™ mode without the knowledge of the remote controller. It is our recommendation that a :SYSTem:PRESet be performed prior to remote calibration to remove this potential cause for error.

Spectrum Analyzer Mode

- Sweep improvements in graphic update of the screen

- Front panel response speed up

- 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

- General speedup in SCPI and save/recall

- Added resizable marker table

- Added sweep rabbit

- More robust limits

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

- New SCPI commands for Markers, limits, signal standards, save/recall, traces, occupied bandwidth, external frequency, and frequency steps

- More stable sweep time

- More robust GPS behavior

- If averaging is on, manual trigger is now changed to trigger a sweep base on the number of averaging set.

- No full screen support

>>> NOTE: Only dBm unit supported. It will come in the next release.

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.

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.

High Accuracy Power Meter Mode

- Added support for MA24106A USB power sensors

Power Meter Mode

- No change.

V1.09>>>

What will the Customer See in this release? MS2034A/MS2036A Application Package V1.09 8-2-2007

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.

- Critical data loss from EEPROM happened occasionally. Fixed by adding a checksum and created a copy of the data so that it could be restored if it is lost somehow.

- Status window was not big enough to show all the results, now it is scrollable.

- When saving files (setup, measurement, jpg) the first save displayed how many bytes were available.

Now instead of displaying bytes (large number), we display GB, MB, or KB as appropriate.

Operating System

- Improved OS codeload process (mainly fixed OS codeload failures by verifying that Flash writes/erases are correct following each write).

Vector Network Analyzer Mode

-Frequency extended to 610 KHz.

-Fixed a problem where marker can be a huge negative or positive number when using the twiddle to scroll marker to the far left or right.

-Fixed integration failure retracing through 1.25 GHz bandswitch.

-Fix for filters with VERY sharp filter skirts, with sweep speed improvements.

-Update Dmax and Fault Resolution values after Preset.

-Fault Resolution converts to Feet now as needed.

-Fixed a problem to update the Dmax and Fault Resolution correctly when changing stop frequency .

-Fixed a problem with recalling Stop Distance greater than the default Dmax.

-Fixed Signal Standard parser problem with 0 up/down link frequencies.

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.

- Lock failure bug fixed to prevent occasional lock failures on some units.

- Twiddle marker on full span would display as arrow off screen. Now marker stays on screen as expected.

- Frequency step did not handle up/down arrows properly, now it does.

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.

Channel Scanner Mode

- No change.

Interface Analyzer Mode

- No change.

Power Meter Mode

- No change.