

SOFTWARE RELEASE NOTE # 21

January 13, 2014

To: All LabExpress and RFxpert units

Re: Latest Software Release 4.1.0.23

EMSCAN is pleased to provide all LabExpress and RFxpert customers with a new software release.

Units under warranty will receive it for free; units no longer under warranty can obtain the software upgrade by purchasing a Customer Care Package (p/n 3000-0122). Please contact your local representative or contact us via our web site: <https://www.emscan.com/contact-us/>

- 4.1.0.23 major new features
 - Windows 8.1®, Windows 8® is now supported. Windows XP® is no longer supported.
 - Near-Field Window (NFW) is a view setting; it is no longer in the node settings.
 - Enabling the “With Near-Field Window” option in the preference ribbon will change everything you see.
 - NFW data is calculated automatically so switching between ON and OFF has no delay though it increased the overall run time.
 - NFW is recommended to be ON for all frequencies. It is not ON by default to facilitate comparison with previous project files.
 - MCP Node
 - MCP capability supported under .dll
 - There is a new demo software package for .dll programming
 - Changed X and Y axis appearance in the MCP settings
 - MCP view will be refreshed after the MCP row and column numbers are changed.
 - S_{11} value for MCP node is calculated as an average in dB of all sub-scans
 - You can choose to save the *.rfx file with all NF and FF data pre-processed to speed up opening a project file by enabling “Store with Dataset” in the ribbon
 - Note that this will increase the file size about 30 times!
 - The current view is now highlighted and its title goes to uppercase
 - Holographic view is now a tab
 - It is now possible to enter a new separation value post-capture
 - All far-field data is recalculated
 - Only for a single scan for the Fixed Frequency node. All scans for all other nodes
 - It impacts individual phase pattern bi-sections

- Data List / Charts Window
 - The selected data list columns will be remembered
 - Double clicking on the Data List / Charts ribbon will expand the table to show all columns
 - You can now delete/undelete multiple scans from the data list in fixed frequency scan
 - Home, End, PgUp, PgDn key handler is supported in the Data List table
- Status bar at the bottom left of the application window
 - Shows progress of the storing (i.e. saving of the file)/ loading (i.e. opening of the file)
 - Progress of the near-field and far-field data calculation if the project file has not been saved with “Store with Dataset” enabled
- Presence of a network analyzer, power meter and BSE is now indicated in the bottom right of the application window.
 - One new icon allows the user to refresh the instrument list. It is no longer necessary to left click on the RFXpert icon on the Start bar
 - One new icon allows the user to disconnect from all hardware
- Keysight IO 17 support

The MCP node does not have NFW window capability because truncation at the edges can be dealt with by making the scan area larger. With a sufficiently large scan area the NFW capability will have no added benefit. In fact this method will produce better pattern results than a smaller area with NFW active.

The MCP does not support the separation value and therefore does not change power, gain and efficiency values with increasing distance. Large antennas are typically very efficient and the uncertainty in the overall measurement added to the uncertainty in separation factors is typically less than the efficiency loss in the large antennas. A separation factor would have no added benefit.

- 4.1.0.23 bug fixes
 - MCP Node
 - EIRP, TRP/PRAD, Gain Efficiency values with NFW ON are now correct
 - Pattern and directivity were always correct!
 - Unknown publisher warning during installation has been resolved.