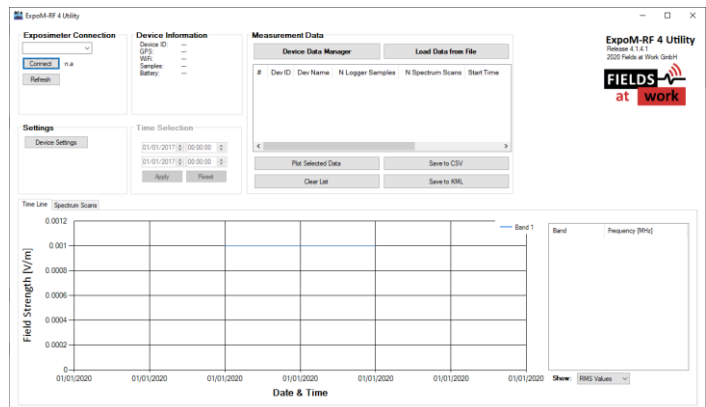


# ExpoM – RF 4

## Utility Release Notes

Document Release 9.0 (April 18<sup>th</sup>, 2023)





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## 1 Introduction

This document describes the modification history of the ExpoM-RF4 Utility. It describes new added features and known and resolved issues that have impact on the customer experience.

## 2 Release Descriptions

Release #	Description
4.4.3.5	<ul style="list-style-type: none"> <li>- <b>New Feature:</b> Improved field strength data interpolation algorithm increasing the accuracy of the measurement results. This change will lead to slightly higher field strength values on average (5-10%) compared to previous utility releases.</li> <li>- Changes in export file format: Header of exported CSV file now includes ExpoM-RF Utility version; fixed inconsistencies of decimal separator on some language settings; file format version 4.0.</li> <li>- Improved handling of frequency scans and saving of data sets which include both logger and scan data.</li> <li>- Various improvements in file handling, auto-naming and KML export</li> </ul>
4.4.3.1	<ul style="list-style-type: none"> <li>- <b>Resolved Issue:</b> Loading a saved measurement file could lead to an error under certain size and measurement interval combinations.</li> <li>- <b>Resolved Issue:</b> Fixed error in CSV export of spectrum scans.</li> <li>- Visual user interface improvements</li> </ul>
4.4.3.0	<ul style="list-style-type: none"> <li>- <b>New Feature:</b> The ExpoM-RF4 Utility received a beautiful face-lift, simplifying the design and cleaning up the main window's UI.</li> <li>- <b>New feature:</b> Both the logger data plotting tool as well as the exported data now include two kinds of computed values: the six-minute average (per band) as well as the total over all bands. These should help evaluate measurements.</li> <li>- <b>New feature:</b> The redesign also brings better support for small displays or high scaling factors. Now the window should always be scaling accordingly. When the space on the screen is not enough, scroll bars on the right and bottom help reach all parts of the window</li> </ul>
4.3.2.0	<ul style="list-style-type: none"> <li>- <b>New Feature:</b> A brand new plotting tool is introduced. It now features more intuitive mouse drag/zoom behavior and tooltips when hovering over a graph. Additionally, this version provides significant performance improvements when working with large data sets. The speed can be further enhanced by changing the display resolution of the plot.</li> <li>- <b>New feature:</b> The ExpoM-RF4 Utility updated its architecture and now runs on .NET Core 3.1. When installing the <i>Lightweight</i> compilation, the corresponding .NET version needs to be installed separately.</li> </ul>

	<ul style="list-style-type: none"> <li>- <b>New feature:</b> The ExpoM-RF4 Utility now supports scrollbars that allow the navigation of the software even on very small screens.</li> </ul>
	<p><b>Releases 4.3.0.0 and newer only supports firmware releases v4.0 and newer. If the device's firmware is below v4.0 either update its firmware<sup>(*)</sup> or use a release of the ExpoM-RF4 Utility older then 4.3.0.0</b></p> <p>(*) A firmware update can be done with any release of the ExpoM-RF4 Utility!</p>
4.2.7.4	<ul style="list-style-type: none"> <li>- <b>Resolved Issue:</b> With the previous release certain issues occurred displaying Utility correctly, i.e. side or/and bottom edge were cut of if the display resolution was set too low. This should fix most issues with screen resolution.</li> <li>- <b>Resolved Issue:</b> Inside the <i>Spectrum Scan</i> perspective the Peak/RMS selector was mistakenly disabled. This is now fixed, which means you can now switch between <i>Peak</i> and <i>RMS</i> values again.</li> <li>- <b>Resolved Issue:</b> When loading logger settings from a file that contains empty band names (i.e. without the hyphen that is set by default), Utility now handles it correctly.</li> </ul>
4.2.7.0	<ul style="list-style-type: none"> <li>- <b>New Feature:</b> Each frequency band can now be named individually for easier identification. The band names will appear throughout Utility and be stored in the exported .csv data as well as in a new version of the band settings file for sharing this preset across multiple ExpoM-RF 4 devices<sup>1</sup>.</li> <li>- <b>New Feature:</b> The order of the bands can now be changed with two arrow buttons in the <i>Device Settings</i> window.</li> <li>- <b>New Feature:</b> Access to the device can now be blocked by setting a PIN code from within the <i>Device Settings</i> window. This blocks all access to the device's settings and data. In case the PIN code was lost, contact the manufacturer to request a device specific PUK code to unlock your device again.</li> <li>- <b>Modification:</b> On startup Utility will automatically start looking for a connected device. If it doesn't find one, the <i>Refresh</i> button is still there to trigger the search manually.</li> </ul>
4.2.2.2	<ul style="list-style-type: none"> <li>- <b>New Feature:</b> For using the device with the mobile app the WiFi option can now be applied in the device settings. Currently the SSID and its password are pre-set and are not modifiable, but it is intended to be so in the near futures update.</li> </ul>

<sup>1</sup> To use this feature please make sure you have updated your device to the firmware release v3.5 or above.

	<ul style="list-style-type: none"> <li>- <b>New Feature:</b> Inside the charts a so-called tooltip function is enabled for displaying the values of the data point over which the mouse is currently hovering.</li> <li>- <b>Modification:</b> When searching for connected devices, only ExpoM-RF4 devices are listed (showing its device ID) instead of any COM interface detected by the computer.</li> <li>- <b>Modification:</b> New communication protocol has been introduced to communicate with the device.</li> <li>- <b>Modification:</b> Improved reliability of the value representing the batteries state of charge. It remains being a rough approximation as it is linked linearly the to batteries voltage.</li> <li>- <b>Modification:</b> Due to issues with culture depending settings on the computer (e.g. comma separation i.e. “,” vs. “.”) the data output is now standardized to gain culture overlapping compatibility for any by ExpoM-RF4 Utility generated data file.</li> </ul>
<p><b>Releases 4.2.0.0 and newer only supports firmware releases v2.0 and newer. If the device’s firmware is below v2.0 either update its firmware<sup>(*)</sup> or use a release of the ExpoM-RF4 Utility older then 4.2.0.0</b></p> <p>(*) A firmware update can be done with any release of the ExpoM-RF4 Utility!</p>	
4.1.5.1	<ul style="list-style-type: none"> <li>- <b>Resolved Issue:</b> Reading data from csv file may has ended up in an error claiming that the file contains corrupt data.</li> </ul>
4.1.5.0	<ul style="list-style-type: none"> <li>- <b>New Feature:</b> Added "Clear Band List" button: This is added to easily clear the entire list. Saving an empty list then will result in loading the default logger settings after next restart of the device.</li> <li>- Note: Changing the default logger settings is not possible for the customer due to it is related to the customer specific calibration setup.</li> <li>- <b>New feature:</b> Added KML export</li> <li>- <b>Resolved Issue:</b> When a data file is loaded from the computer the after comma part in MHz presentation was still suppressed, leded to presenting the frequency as e.g. 97 MHz instead of 97.5 MHz. New feature: Added KML export</li> </ul>

- **Modification:** Improved drawing of the charts grid when zooming in and out.
- **Resolved Issue:** Corrected faulty presentation of frequency, whereas the "kHz" part was missing (before: 97'750 kHz was displayed as 97 MHz, now it will be displayed as 97.75 MHz).
- **Resolved Issue:** Illogical behaviour were eliminated when switching in between TimeLine chart and Spectrum chart as well as when requesting a scan.
- **Resolved Issue:** Switching the chart between "peak" and "RMS" has added dummy data with set marker sign.
- **Modification:** When applying device settings a progress bar is added displaying the approximated remaining time until the device is ready again for further communication.
- **Resolved Issue:** Communication interface in between computer and exposimeter has been improved. Issues got visible when messages were transmitted that caused the CPU of the device to be busy for a while (about > 2.73 ms). Trying to communicate with the device then ended in a communication error.
- **Resolved Issue** (Affects releases 1.0.1 and newer): When downloading logger settings to the device the sample interval wasn't downloaded to the device when the user pressed "Apply Settings".
- **Resolved Issue:** When saving CSV file recommended file naming appeared with incorrect values for "minutes" and "seconds".
- **Modification:** Set max. size for buttons in "Measurement Data" group box.  
  
Background: Opening the utility in full screen mode these buttons grown exorbitantly big which wasn't reduced the clearness of the utility.
- **Modification:** Changed time presentation from 12h to 24h.
- **Modification:** Updated the "About Form".
- **Modification:** Improved file name recommendation (date reflects data of measurement start instead of date of file saving).

	<ul style="list-style-type: none"> <li>- <b>Modification:</b> Calculation of the min. recommended measurement interval has been improved and is now more accurate. Further it is now only a warning so that the value still can be applied.</li> <li>- <b>Modification:</b> Min. measurement interval recommendation info is now updated when GPS gets enabled/disabled as well.</li> </ul>
4.1.0.0	<b>Initial Release</b>