

## SOFTWARE RELEASE NOTE # 28

November 01, 2015

To: All EMxpert ERX+ End-Users

Re: Software Release 5.0.8.6 for Firmware Release 1.7.0.6

**EMSCAN is pleased to provide a software and firmware release for the ERX+ units. The limitations to the software capabilities of the current release are listed below. These limitations will be addressed in future releases.**

**The PC must have at least 8 GB of RAM.**

### Supported Features with Known Limitations

1. Spatial Scans
  - No Level 1 spatial scan progress bar
  - Level 1 spatial scan slower than comparable EHX
  - Smallest RBW is 30 kHz
2. Spectral Scans
  - Smallest RBW is 30 kHz
  - Frequency range cannot straddle 50 MHz
    - a. Sweep must be between 0.15 MHz - 50 MHz or 50 MHz - 8000 MHz
    - b. Maximum frequency shown will be a little less than 8000 MHz, depending on the RBW, it might even be less than 7950 MHz
  - Choppy noise floor
3. Spectral/Spatial Scans c/w Interleaved Scan
  - Smallest RBW is 30 kHz
  - Frequency range cannot straddle 50 MHz
    - a. Sweep must be between 0.15 MHz - 50 MHz or 50 MHz - 8000 MHz
    - b. Maximum frequency shown will be a little less than 8000 MHz, depending on the RBW, it might even be less than 7950 MHz
  - Choppy noise floor
4. Handheld Probe Scans
  - Smallest RBW is 30 kHz
  - Frequency range cannot straddle 50 MHz
    - a. Sweep must be between 0.15 MHz - 50 MHz or 50 MHz - 8000 MHz
    - b. Maximum frequency shown will be a little less than 8000 MHz, depending on the RBW, it might even be less than 7950 MHz

- Choppy noise floor
- 5. Internal pre-amp gain compensated in the display of the signal amplitude
  - Correcting factors based on a generic gain table
  - Pre-amp specific gain table for each unit to be uploaded at a later date
- 6. Bypass of internal RF path is fully supported and user enabled
- 7. Spectral Comparison is fully supported
- 8. Spatial Comparison is fully supported
- 9. Spectral Overlay is fully supported
- 10. Report Generator is fully supported
- 11. Reset to factory default is enabled
- 12. Firmware Upgrades can be done over a Google Chrome (*never with Internet Explorer*)

#### Unsupported Features

1. Spectral scan peak marking not implemented yet
  - No inherited peak list will be generated in child spatial scan
2. Internal attenuation not supported
3. Probe compensation is not supported yet (for Far-Field Application)

#### Speed Information

1. Spatial speed per cell. Same above and below 50 MHz
  - RBW 30 kHz = 100 ms
  - RBW 122 kHz = 30 ms
  - RBW 976 kHz = 20 ms
2. Spectral speed per cell 0.15 MHz - 50 MHz span
  - RBW 30 kHz = 90 ms
  - RBW 122 kHz = 40 ms
  - RBW 976 kHz = 20 ms
3. Spectral speed per cell 50 - 1000 MHz span
  - RBW 30 kHz = 1.8 s
  - RBW 122 kHz = 0.7 ms
  - RBW 976 kHz = 0.6 ms

To get the total scan time, multiply by the number of cells and for high resolution also multiply by the scan level power of 2. Note that you can set multiple sweeps per cell to catch short bursts.