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OmniaSST Software Update v8.53 Release Notes

Version 8.53 of Omnia SST represents months of continuous refinement and improvement to our powerful audio software processor. You can download Omnia SST from our website at https://www.telosalliance.com/Omnia/Omnia-SST

This link will give you a working executable. For licensed users, the download will update you to the latest distribution. For newcomers, you can try SST off-line without a license.

Major Highlights

- **Auto EQ** This sonic innovation automatically adjusts audio spectrum before the AGC without compressing the audio. The effect is spectral consistency for content & playlists that have varying timbres. For example if your playlist contains tracks from very diverse sources with some bass heavy cuts while others are very bright, Auto-EQ can help normalize the swings in tonal quality, prior to compression. This means the multiband compressor doesn't need to be pushed as hard to get a consistent sound, allowing compression to be employed more precisely to create a fixed amount of density. If levels suddenly change, Auto EQ leaves the work to the AGC, but if there's suddenly a lot of bass or a rush of highs, the process kicks in. With the Auto EQ enabled, you can precisely control how deep each band will go down and thus how much density you add, regardless of how the input material sounds.

- **Automatic Phase Repair** Renewed industry interest in fixing phase skew to mitigate multipath problems and optimize the quality of mono mix-downs and blends within FM receivers led us to significantly improve the phase correction tools in Omnia SST. Advanced DSP allows the restoration and control of pure anti-phase signals, rivalling processors costing thousands more.

- **Omnia µMPX™ enhancements.** µMPX (microMPX), our groundbreaking MPX codec allowing you to send a full multiplexed FM signal with RDS through a narrow, 360kbps pipe, gets some serious attention in this latest release. A new packet reception display lets you gauge the quality of service of your network connection, and integrates directly into SST's user interface. In addition, our stand-alone µMPX decoder and encoder executables are now manageable from a new, easy to use GUI. Watch for more news about Omnia µMPX™ as this promising technology finds its way into other great products from Omnia and others.

Other Changes and Improvements since SST v8.36

- Web GUI Improvements
- Improved Installer and user experience

- Processing:
  - Compressors: Added dynamic ratio's, for getting more compression at higher input levels
  - Compressors: Added new, more consistent RMS mode, old one renamed to Average
  - Compressors: In new RMS mode, added a new feature "Big release acceleration" to release fast on big drops
  - Compressors: Added channel linking. Allows leaving channels free but limit the maximum difference between them
  - AGC: Side chain now has a parametric EQ (both old and new AGC)
  - Redesigned AGC to a new simpler, more consistent design
  - Clipper: Added "Prioritize loudness" mode
  - Added options to move equalizer and Bass Boost (Harmonics) between multibands 1 & 2
  - Added option to move Bass Boost (Bass Harmonics) before last MB
  - Coupled Hard Limit to clipper on/off
  - Bass Boost: Relax limits on frequencies
  - AM clipper is now always oversampled, small overshoots were possible before (especially in US/10 kHz mode)
  - Allowed separate Normal Output processing clipping level if pre-emphasis for FM is disabled
- Presets: Pruned, added new and updated factory presets; added preset upload / download / delete functions.
- Internal (system) improvements
  - Fixed build warnings
  - About box: Added more licenses for products used
  - Added "Interface" (network port) selection
  - Updated help
  - Added templates to Parameter and HTTP Server classes to use them in MicroMPX as well
  - Web interface: Added way to use remotely without knowing the session ID (use ID -1)
- GUI
  - Changed meter colors to visualize differences between types of meters
  - Updated drawable EQ's
  - Added session ID's
- RDS improvements
  - Filtering out and skipping empty fields when including an empty or non-existent file
  - Added automatic splitting of long words in PS text
  - Split the end of long words, instead of cutting them off

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Bug Fixes

- Multiband in RMS mode could be killed (compressors become inactive, limiting still worked) after feeding a NAN through it
- Increased NAN detection thresholds to avoid false positives
- Sound card buffer could be filled too much until you did a RESTART SOUND CARDS
- Declipper didn't work properly at 192 kHz with a non-phase linear HPF enabled.
- Fixed 2 possible causes of NANs/Improved NAN recovery handling
- Moved memory allocations to before actual audio is running to avoid hiccups after starting
- Made external RDS follower PLL much slower to avoid bad pilot
- AGC: Window did not work properly with smaller AGC block sizes. Caused clicks and volume jumps
- Compressors: Attack/release behavior in the new RMS mode was wrong, now fixed. Result is more consistent and movements are less sudden
- Clipper was recalculating certain tables on every call if both FM and non-FM processing were enabled (performance issue)
- Disabling FM output could make Normal output pre-emphasized (in very specific situations)