



**Bongiovi**AcousticLabs



**SUNPLUS**

## SPHE8107 Audio System Solution

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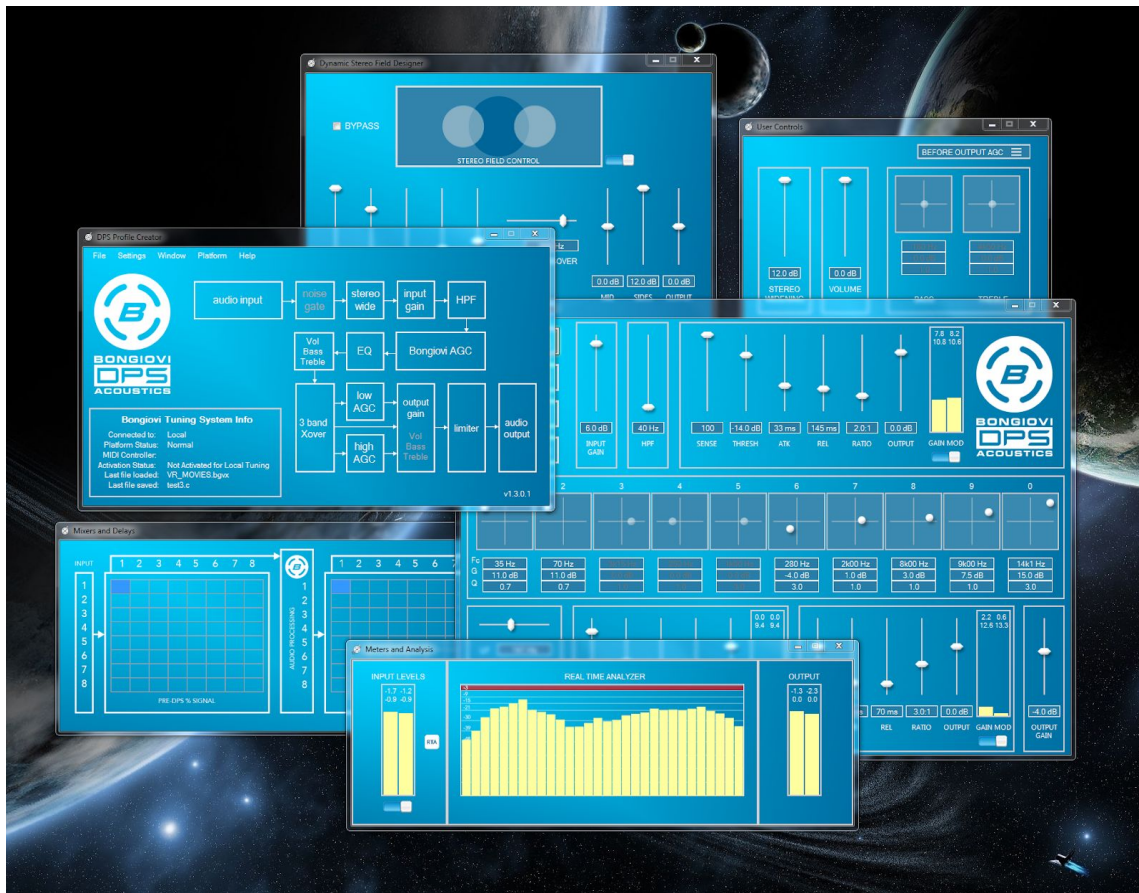
## Overview

The Sunplus SPHE8107 is a highly-integrated 32-bit RISC processor running the advanced Bongiovi Acoustics Digital Power Station (DPS) audio processing algorithms. It is a perfect chip solution for 2.1 or stereo karaoke, soundbar, and boom box applications. Real-time acoustic tuning tools provide the “golden ears” engineer great power to easily create an amazing listening experience.

## Audio Processing Features

- Stereo or 2.1 audio modes:
  - Independent subwoofer processing in 2.1 mode.
- Patented Bongiovi DPS automatic gain control:
  - Creates a more efficient signal for small speakers in noisy environments (like a party)
  - Restores digitally compressed audio
  - Smooth transition between commercials and TV programs
  - Enhances details that are normally difficult to hear
- 10 + 2 band studio quality parametric equalizer:
  - 10 configurable bands
  - 2 user bands (bass and treble)
- Dynamic bass enhancement
  - 3 EQ bands + DRC for subwoofer channel
- Dynamic high frequency enhancement
- Multi-band speaker protection
- Dynamic Stereo sound stage enhancement
- Real-time GUI control over all parameters including audio meters

# DPS Profile Creator Acoustic Tuning Toolkit



The DPS Profile Creator is a Windows PC application that connects via UART to the SPHE8107 platform. This tool provides comprehensive real-time control over every parameter. Input, output and gain-reduction meters give the audio engineer immediate feedback of the behavior of the algorithm as it is running on the target platform.

## Audio Parameter Sets (DPS Profiles)

After audio tuning and calibration is complete, the resulting parameter data may be handled several ways:

- **State File** - This stores the state of all DPS Profile Creator settings including a special Notes feature for documenting changes, versions, and other useful information.
- **BGVX Profile** - This format stores the parameters for a single channel or preset. This is useful for importing into other multi-channel workspaces.
- **Sunplus data set** - This is the native Sunplus format used in the SPHE8107. Multiple data sets may be recalled in the final implementation to provide various user features (music mode, movie mode, video game mode, etc).

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## Points of Contact

### Technical

Automotive Audio Engineering Support USA - **Ryan Copt** [rcopt@bmtgps.com](mailto:rcopt@bmtgps.com)

Audio Engineering Support China - **Tom Gu** [tomku@bmtgps.com](mailto:tomku@bmtgps.com)

Software tool support USA - **Joey Butera III** [xaqmusic@bmtgps.com](mailto:xaqmusic@bmtgps.com)

### Business

COO **Joe Butera Jr** - [jbutera@bmtgps.com](mailto:jbutera@bmtgps.com)

International Business Development USA **James Marvin** - [jmarvin@bmtgps.com](mailto:jmarvin@bmtgps.com)

International Business Development China **Caroline Kuo** - [ckuo@bmtgps.com](mailto:ckuo@bmtgps.com)