SKYWALKER SOUND TOOLS

Now available in PixelStrings Cloud
and PixelStrings On-Prem

Standard Features

- Skywalker Sound Tools are available exclusively in:
  - PixelStrings Cloud
  - PixelStrings On-Prem.
- All audio processing is guaranteed to be faster than real-time for up to 24 channels on hardware meeting our minimum specification. Processing performance guarantee includes all dependent libraries.
  - Accepts up to 48kHz, 24-bit PCM audio
  - Up to 256 total channels per file
  - Up to 24 hours per file
  - Up to 24 files per job
- Loudness
  - Loudness Analysis and Correction of soundfield groups up to 7.1
  - User-defined target loudness and True Peak levels
  - ITU BS.1770-4, Dialog-gated 1770 algorithms
  - (Fall 2020): Leq(m), PPM algorithms
  - Content dialog percentage
  - Look-ahead limiting with clip protection
  - Analysis-only functionality for studio specification QC
  - Loudness compliance per segment or entire program

- Downmixing
  - Intelligent downmixing of soundfield groups up to 7.1
  - User-specified downmix coefficients, or Skywalker Sound proprietary formulas.
  - Parallel downmixes per job
  - Headroom & digital clipping managed during downmix
- Summing & Mapping
  - Advanced mapping matrix allows for channel summing, swapping, exclusion and duplication, and reorganization
  - User-specified summing gain coefficients, or Skywalker Sound proprietary formulas
  - 32-bit float processing
- Output File Handling
  - Interleaved or mono WAV file outputs
  - RIFF or BW64 WAV file formats, dependent on length
  - 48 kHz, dither to 24-bit
  - Custom filenames, output locations
  - Sample-accurate output

Premium Features

- Segment Building
  - Define up to 2,000 program segments per job
  - Sample-accurate segment bounds
  - Ability to cut, move, replace, trim program
  - Generate null audio for pads and insertions
- Retiming
  - High-fidelity audio retiming up to +/- 50% of program length
  - Phase-accurate pitch correction/time alteration of up to 8 channels per group
  - Sample-accurate definition of time-altered segments
  - Individual retime ratios allowed per segment
  - Loudness and true peak transparent through process
  - The Skywalker Sound Tools Standard Feature set is stackable with the retiming process

Standard Features

Downmixing / Summing / Mapping

The Skywalker Sound Tools Mixing module will automatically detect the format of given soundfield groups, and perform high-quality summing and downmixing based on the user's desired output contents and formats. The Mixing module operates in 32-bit float, allowing for proper headroom during high-gain summing scenarios and will sequence operations intelligently according to input and output groupings. Additionally, users can swap channels with a comprehensive mapping matrix.

Loudness Processing

The Skywalker Sound Tools Loudness module provides comprehensive analysis and correction for loudness and peak specifications for up to a 7.1 soundfield group. Current measurement algorithms include ITU BS.1770-4 and Dialogue-gated detection (A/85), as well as the ability to adhere to studio-specific technical requirements. There are presets for most popular distribution platforms (Disney+, YouTube, Netflix, etc.).

Standard Features *(Continued)*

Supported Input Types

The PixelStrings transcoding engine prepares audio sources for processing within the Skywalker Sound Tools module. Skywalker Sound Tools accept 24 or 16-bit PCM WAV audio files at 48 kHz to ensure the highest quality audio fidelity processing. Each generated WAV file can contain a maximum of 24 interleaved channels and a maximum of 24 hours of content length. Each job can contain a maximum of 24 distinct WAV files, for a maximum of 576 audio channels processed per job.

File Writer

Processed WAV files can be interleaved or split into individual mono elements, per the user's specification.

Premium Features

Segment Builder

The Skywalker Sound Tools Segment Builder allows users to construct an output timeline made up of one or more clips. The clips can be time-window selections from the source file (sample accuracy) or silence. Users can identify, edit, insert, and rearrange up to 2000 segments of content within one job. This allows not only for the definition for retime bounds, but also allows the user to effectively specify pads and trims throughout the program. Skywalker Sound Tools intelligently join segments after processing, with appropriate crossfades or fade in/out maintaining sample accuracy and phase coherence without perceptible bumps, ticks, or dropouts. Null (blank) audio may be created using the Segment Builder.

Retimer

The Skywalker Sound Tools Retimer module intelligently groups channels for sample-accurate, phase-coherent time stretch from .5x to 2x of original program length. The advanced signal processing ensures no crosstalk between channels and includes the ability to match loudness and peak values to the original input program. Segment bounds within a program can also be defined for individual retime ratios.