

PGGB-IT! Version 5 User Guide

May 2023 - Version 5.3



PGGB•IT! is a professional Windows application for batch processing of music album folders using revolutionary PGGB remastering. Version 5 is a complete redesign of the previous PGGB•IT! version and includes the latest generation of PGGB technology (find out more at remastero.com). PGGB•IT! incorporates powerful features:

- PGGB up to 256-bit high precision reconstruction and noise shaping
- Gain/Normalization and Equalization - all at lossless high precision
- Multi-threaded modeless window design using direct PGGB interfaces (MATLAB not required)
- Simultaneous processing of multiple tracks on performant many-core systems
- A wide variety of supported file formats including video(audio tracks) and multi-channel audio
- FLAC compression up to 16fS (705.6/768kHz) and 32bits
- Separate console window provides session logging information
- Folder monitoring mode for automatic processing when adding files
- Keyboard remote control for headless operation
- Preview & Analyze mode to assist with workflow and settings

PGGB•IT! is available as a no-cost trial license (all features, limit 3 minute duration) with upgrade to a full license at 64-bit, 128-bit or 256-bit precision. Higher precision greatly improves sound quality - especially on transparent systems.

Installation

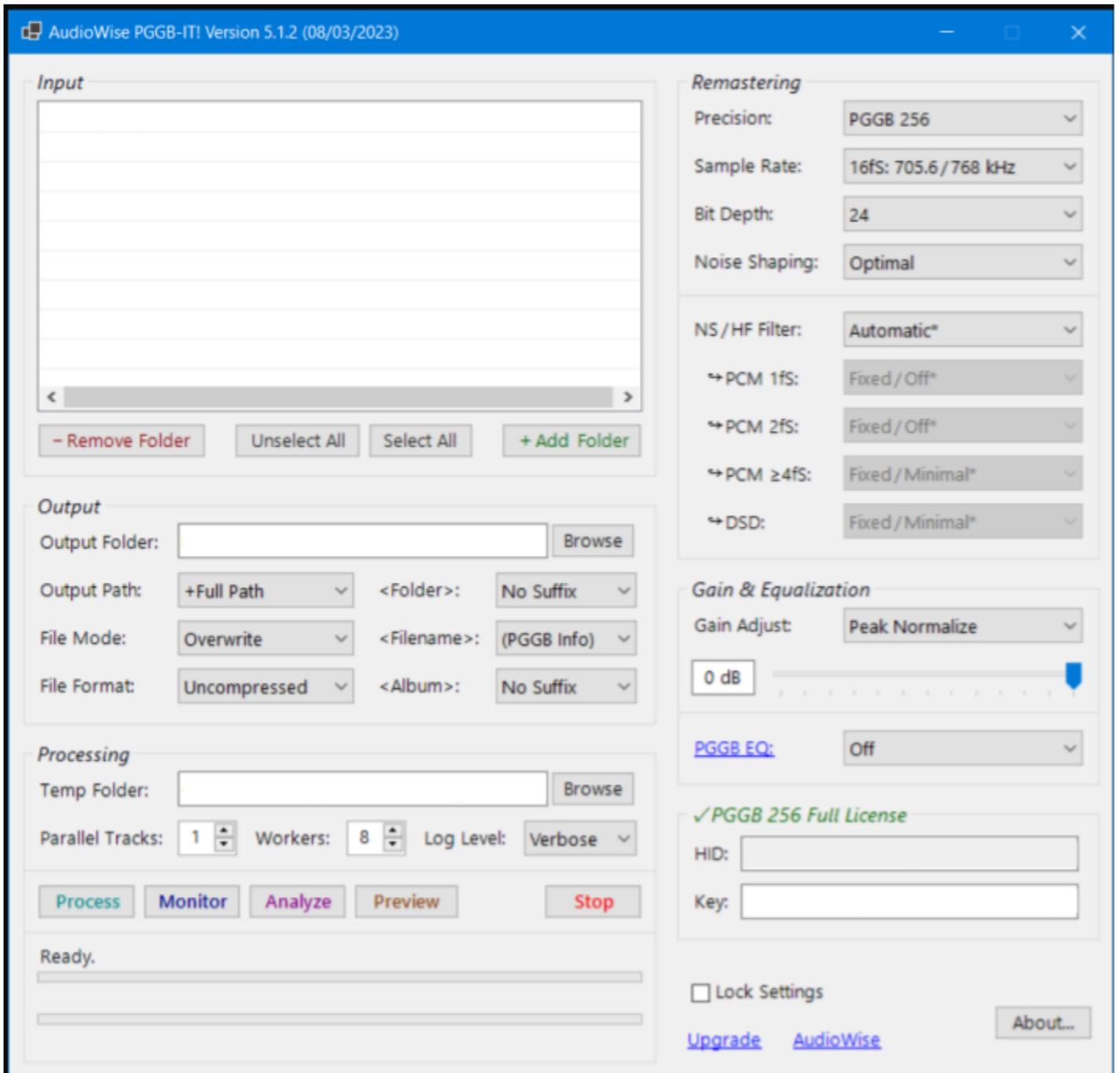
PGGB•IT! is downloaded as a .EXE installation (pggb_it_install_5.X.X.exe). Double click to launch and follow the instructions. The default installation folder is:

C:\Users\<USER>\AppData\Local\Programs\PGGB-IT!

Select this folder or choose a root folder (like C:\PGGB-IT). Do not choose a folder inside 'Program Files'. If possible, choose a location on the fastest drive on your system - preferably a SSD.

Launching PGGB•IT! displays a console window and settings/control dialog as below. These windows are independent but the console is always underneath the settings/control. You can place the windows side by side or resize the console to fullscreen. To close PGGB•IT!, click on the [X] close box on either window; although closing the console window may result in a slight delay.

Acquaint yourself with this settings panel. Help for each setting is provided with tool-tips.



Settings

Input Folders:

Include your music folders for processing by PGGB•IT! by i) Selecting the '+ Add Folder' button, or drag drop from the explorer window to the PGGB•IT! input window. Note that PGGB•IT! only processes folders so if you wish to process individual files (tracks) from a folder (album), copy them to a temporary folder first.

When PGGB•IT! starts processing, all status and progress information will be displayed in the console window. PGGB•IT! will process audio as well as video+audio of the formats in the table below:

| | |
|----------------------------------|---|
| PCM Audio (up to 64 bits/sample) | MP3, OPUS, WMA, MKA, M4A, AIF, FLAC, AIFF, WAV, WV, W64 |
| DSD Audio (64, 128, 256) | DSF |
| Video+Audio (any format/codecs) | MPG, WEBM, WMV, MKV, MP4, MOV |

Other formats in the folder (like JPG or PDF or TXT) are just copied, as appropriate.

Output Folder:

Select the Output Folder. Folders selected for processing will have their fully qualified paths recreated within the output folder selected by the Output Folder.

Output Path:

Select the Output Folder naming mode that maps the input folder structure to the output folder structure. Use the 'Preview' processing mode to view the output folder path (no actual processing is done).

File Mode:

Select 'Create' when you want to save any existing PGGB files - these will be moved to a subfolder named with a date/time timestamp. Select 'Skip' to avoid re-processing files that match the name of files already existing. Select 'Overwrite' to always overwrite any existing files. During processing, the console will display files using color coding to match the file mode and output file existence.

File Format:

'Uncompressed' outputs audio-only to standard WAV with RF64 profile formatting if the file is larger than 4GBytes. If you select **Bit Depth: 64-bits**, the uncompressed Sony Wave64 format is used.

'Compressed' outputs audio-only lossless FLAC for 16fS and lower; and audio-only lossless WavPack otherwise. 'Matroska' outputs either audio-only in MKA format or video+audio in MKV format. Source

video content is copied to the output - otherwise creating a title still image video with timecode. Audio is stored as WavPack compressed (WavPack) with proprietary encoding for HDMI compatibility.

<Folder> Suffix:

Selects the Folder naming. For example, if the music folder 'C:\Music\Santana\Shaman' is included in the PGGB-IT! Library and the Output Folder is set to 'D:\PGGB', the output folder will be processed according to the table:

| | |
|----------------|---|
| No Suffix | D:\PGGB\Music\Santana\Shaman. The output folder maintains the same folder basename as the original. |
| [PGGB] | D:\PGGB\Music\Santana\Shaman [PGGB]. The folder has a '[PGGB]' suffix. |
| Edit Custom... | Create a list of custom suffixes. |

<Filename> Suffix:

Selects the File naming:

| | |
|--------------------|---|
| No Suffix | Each track (file basename) maintains the same file basename as the original. |
| (PGGB Info) Suffix | Each track (file basename) has a suffix of bit depth, sample rate & precision information, ie: 'file-basename (16_44_24_705 PGGB 256)'. |
| Edit Custom... | Create a list of custom suffixes. |

<Album> Suffix:

PGGB-IT! copies metadata tags from the source track to the PGGB resampled track. This setting selects a suffix to be appended to the metadata 'Album' tag. For example, if you are processing the album 'Shaman' by the artist 'Santana':

| | |
|----------------|-------------------------------------|
| No Suffix | Shaman. (no change) |
| [PGGB] Suffix | Shaman [PGGB]. This is the default. |
| Edit Custom... | Create a list of custom suffixes. |

Temp Folder:

During processing, a named folder is required to store temporary files. Select a dedicated drive or folder on a fast SSD drive. Preferably this drive is not the same as your music store drive.

Parallel Tracks:

Normally all tracks in a folder are processed sequentially - one at a time. Select multiple parallel tracks to process multiple tracks simultaneously. Note that boosting this setting may not improve performance linearly as each processing instance takes memory and multiplies the workers. The setting turns a shade of yellow to caution against exceeding the number of system cores.

Workers:

For sequential processing, a good compromise is to use all physical cores (not virtual or hyperthreaded). You can select more cores (workers) to get better performance but risk engaging the thermal protection (speed throttling and fans) and reduce system responsiveness.

Log Level:

Select Normal, Verbose or Minimal to affect the level of detail logged to the console window.

Precision:

Select the level of precision for all processing: reconstruction, noise shaping and gain/equalization. 256-bit precision processing takes substantially more time than 129-bits or 64-bits, however improved precision produces files that sound better due to much lower noise floor/digital artifacts. Refer to the charts and discussion at www.remastero.com in this regard.

Sample Rate:

Resamples to the integer multiple of the source track (fS is the fundamental sample rate). Select the highest possible sampling rate allowed by your DAC.

Bit Depth:

Output files will normally have fixed word sizes of 16, 24 or 32 bits - however the actual audio signal is noise shaped to a specified bit depth to match your DAC. Select the DACs internal bit depth or, in the case of R2R (ladder) DACs, select the most linear bit depth (according to manufacturer specification or industry publication measurements). In addition, make sure the signal transport from source to DAC supports the specified bit depth. Use 32 Float or 64 Float for the special case of exporting to digital audio workstations.

Noise Shaping:

Adaptive noise shaping removes quantization noise resulting in a high degree of small signal accuracy and a very life-like sound. Select the modes 'Optimal', 'Alternate' or 'Extended' as applicable. Select 'Off (Dither)' for certain 32-bit DACs set to NOS mode or when the output is to a hardware upsampler (eg. MScaler in bypass mode).

NS/HF Filter:

This is an advanced setting. Normally leave at 'Automatic'. Manual overrides are described in the tooltips.

Volume/Gain:

PGGB performs all volume adjustment prior to noise shaping to ensure maximum sound quality. Auto is the default - meaning unity gain without any adjustment to the volume level (apart from that required to avoid inter-sample-overs). Select 'Peak Normalize' to set the peak value of the output track to the selected value. Select 0dB to output files at the loudest possible volume - a peak of ~1.0000 PCM or ~0 dB.

Equalization:

PGGB-IT! supports lossless EQ. Refer to the information on the remastero.com site for how to measure and obtain impulse files for your listening room or headphones.

HwID:

PGGB uses your hardware system fingerprint as a hardware ID for licensing.

Key:

Submit your hardware ID to AudioWise when purchasing a full license. You will receive a license key that is simply pasted to this field. A 256 precision key supports all precisions.

Lock Settings

Use this to disable settings adjustment apart from that required to select folders and process. This may be used to ensure settings are not altered.

Processing

Process

Process folders marked with a checkbox .

Monitor

Monitor folders marked with a checkbox . Any changes to the folders will result in those changes being processed. Note that a delay between change and initiation or processing is normal.

Analyze

This feature is under development.

Preview

Use this feature as a 'what if?' to display the folder structure and file list without actually doing any processing.

Stop

Stop all processing/monitoring/analyzing/preview. The console may report 'Stopping...' and require several seconds to stop all parallel processes.