BarbaBatch Manual

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BarbaBatch™

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Introduction

1. Welcome.

BarbaBatch is a batch sound file conversion program for Mac.
This manual covers its functionality in the year 2020 version 5 release, which is 64 bit macOS Catalina compatible.

For over 25 years BarbaBatch has been winning awards and acclaim for its top quality conversions. Its samplerate conversion algorithm, and support for BWF, Sonic Solutions, 192kHz sampling rates, 32 bit float files, and Redbook CD image extraction has made it popular among mastering engineers.

A wide range of telephony formats together with compression and samplerate conversion that make low quality audio sound not as low as you'd expect, has made it excel in telephony audio.

Smooth and fast batch capabilities and extensive logging, allowing tens of thousands of files to be converted to multiple output formats in one run make it the production choice top selling computer games.

Automated CD ripping of faded snippets to many streaming sound formats make it ideal for delivery of web based audio.

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BarbaBatch™
Installation and Authorization

Install by dragging BarbaBatch to your applications folder. When you launch BarbaBatch for the first time on a machine that has not been authorized yet, you are prompted with the authorization dialog.

It will guide you through the authorization process. You do not have to be on-line with the computer that you are authorizing, but it does help.

A single purchase of BarbaBatch allows a single authorized installation, but of course there are several reasons why you may have to transfer BarbaBatch's authorization to another computer. To do that, simply install on the new computer and follow instructions after first launch. It will guide you to the on-line authorization pages which will detect your second authorization attempt. You will then be taken through the proper channels.

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BarbaBatch™
Basic Operation

Launch BarbaBatch.

In the top panel there are four large buttons that cover four steps.
From left to right these buttons mean:

1.   Selecting the files and folders you want to convert

2.   Selecting the desired conversion(s)

3.   Selecting a destination where the converted soundfiles will be stored

4.   Starting the conversion process.

We will now take a look at the features behind these four buttons.

BarbaBatch *Batch Audio File Converter*

1 Selecting the files and folders you want to convert

When you press the Input button, the 'Input' dialog appears.
The 'Input' dialog consists of a scrolling list of all your input files, information about the files and controls to play them back.

The input batch (list of selected files and folders) can consist of a mix of all file types supported by BarbaBatch.

The easiest way to build your input batch: go to the Finder and simply drag and drop one or more items onto the BarbaBatch application icon or into BarbaBatchs input items list.

You can also use the Add button to add files and folders.

You can remove items from your input batch by selecting them and pressing either remove or <back space>. Like all list operations in BarbaBatch you can undo your last action.

Via its bottom right corner you can resize the window to reveal more columns of information about the soundfiles. You can relocate, sort and resize the information columns by clicking on the column name or dragging the column name separation lines.

2 Selecting the desired conversion(s)
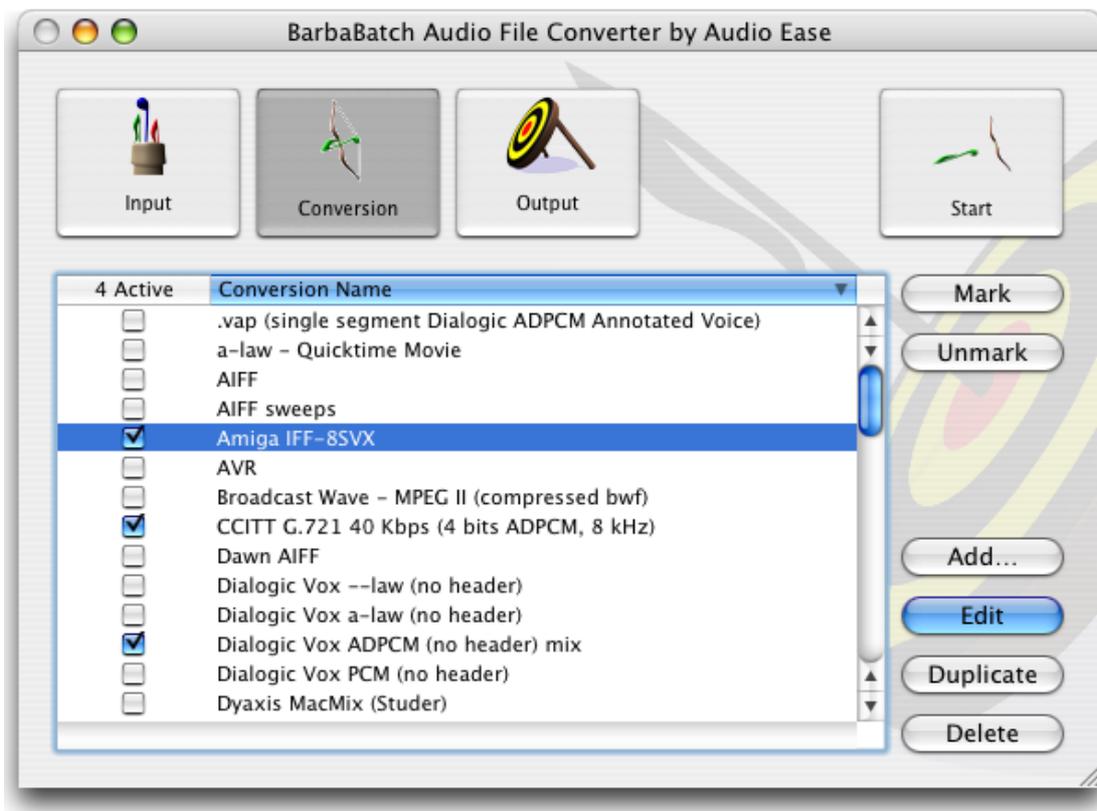
When you press the Conversion button, a scrollable list appears with conversions you have already built. With a fresh BarbaBatch install, the Audio Ease preset conversions will sit here. You can import BarbaBatch 3 conversions. The reference section of this manual explains how.

Checked conversions will be performed when you hit the start button. You can check more than one conversion simultaneously. You can do this by checking the checkbox in front of the conversion name, or by making a multiple selection (select all, or shift- or command-click on names) and clicking the mark button.

To make your own, new conversion press the Add button in the 'Conversion' dialog. To edit an existing conversion press the edit button, or double click the conversion name.
The 'Define New Conversion' dialog appears.

Suppose you want to convert the input batch to 22kHz, 8 bit Wave files.
In the name field you enter the name of the conversion. Let's call it 'WAV, 22050 Hz, 8 bits'. This name will appear in the conversion list when you are finished building the conversion.

Select all the desired properties as shown in the next picture.
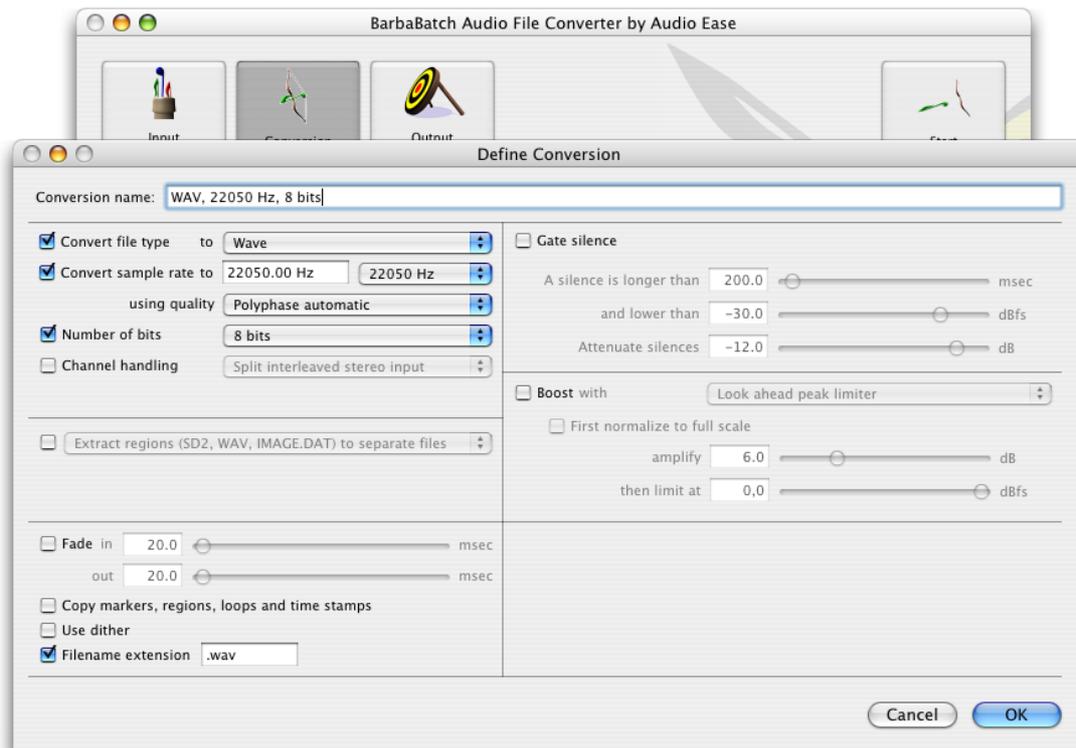
When you are done editing your conversion, press the OK button to add it to the conversion list.

BarbaBatch automatically marks the conversion you just created in order to actually perform it when you eventually run the process.

It is very important to realise that you do not have to check every conversion parameter. For instance, when you do not check a parameter such as convert sample rate, the sample rate from each input file will be maintained in the output file.

Most of the fields in the Define New Conversion Dialog speak for themselves, but for a detailed description of all of them, please refer to the reference section of this manual.

3 Selecting a destination where the converted soundfiles will be stored

None of the conversions is performed 'in place'. All the original files will stay on the disk unaltered. This means that you have to select a folder to store the result of the conversions.

You do this by pressing the Output button shown above.

When you enter this dialog for the first time, nothing is selected. To select a destination you can drag a folder from the Finder into this area or you can use the Output Folder button. Next time you launch BarbaBatch, your last output folder will already be selected.

4 Starting the conversion

Press start.

In the output folder, BarbaBatch will create a new folder for each checked conversion. The folder will have the name of the conversion. The complete folder hierarchy of the input batch is maintained in every conversion folder.

While converting, a detailed log text file of the conversion will be created in the output folder. In this log file, information about the conversion specification along with the names of the converted soundfiles is listed. If something went wrong during the conversion, this is indicated with an error message next to the filename of the input file.

The log file is a standard text file that can be opened using the menu item File->Open Last Log'. You can also use any word processor to open the logbook file.

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BarbaBatch Reference

The BarbaBatch menu - Preferences

Most preferences in the preferences panels do not require any explanation. The exceptions are listed below.

Conversion - Easy Through

When BarbaBatch starts a conversion process, it creates a folder named after the conversion. In this folder converted soundfiles will be stored.

After you converted soundfiles, it is possible you want to convert more soundfiles using the same conversion storing to the same location.

Because of safety reasons, BarbaBatch will generate a Duplicate name error, because a second folder with the same name is attempted to be created in the same location.
When the Easy Through option is turned off, you can choose a different output folder, rename your conversion or remove the older folder.
Experienced users may find it useful to turn the Easy Through option on.
Now, you can convert to the same location using the same conversion definition.

When extracting or compacting:

Ignore regions that contain the whole file

Some soundfile editors automatically create a region in the soundfile which covers the complete soundfile.
When extracting regions, BarbaBatch would also create a soundfile from this region. This means along with your created regions, the total soundfile region would end up among the extracted regions.
When compacting a soundfile using the region information, BarbaBatch would not compact the soundfile, because one region covers the whole soundfile.
To overcome these problems, please check the option Ignore regions that contain the whole file.

Process the whole file if no regions exist

Some soundfile editors don't automatically create a region in the soundfile which covers the complete soundfile.
When you have soundfiles with region definitions and soundfiles without region definitions at the input you may want to extract all audio from those that do not have region definitions.
If Process the whole file if no regions exist is unchecked, BarbaBatch will display an error if it didn't find a region definition in a soundfile when extracting or compacting. To overcome this problem, please check the option Process the whole file if no regions exist.

When a bad region name is encountered

BarbaBatch has options for renaming bad region names.
This becomes important when extracting regions, because conflicts may occur when generating soundfiles using region names.

When you set this option to *Rename the region*, bad region names will be renamed in resulting soundfiles whenever regions are important. Checking Skip The Rest of this file will stop conversion from the current file when a bad region name is found. BarbaBatch will then proceed with the next file. Bad regionnames are:

• *Duplicate region names* - In some sound editor applications, it is possible to create different regions with the same name. This would result in duplicate filenames within one folder when extracting regions. If the Rename the region option is set, a number will be added after the 29th character of the conflicting region name (or after the last character of the region name when the regionname is shorter than 29 characters) in the resulting soundfile, whenever regions are important.

• *Regions without names* - In some sound editor applications, it is possible to create regions with no names. If you want to extract such a region, the resulting file name would become empty. This is considered a 'bad name' by the Finder, and is not allowed. If the Rename the region option is set, the empty named region will be named '••• no name •••' in the resulting soundfile, whenever regions are important. When more regions in the same soundfile don't have names, they will be renamed to '••• no name •••#2', '••• no name •••#3' etc.

• *Regions with the ':' character in their name* - When extracting a region with a ':' character in its name, the resulting soundfile will have an illegal name. This character is used by the Finder to identify folders, subfolders and files. If the Rename the region option is set, every ':' character will be replaced by the '-' character in the resulting soundfile when ever regions are important.

The BarbaBatch menu - Check For Updates / Buy Online

Both items only function when you are connected to the internet. They will take you to the appropriate pages on the Audio Ease Website.

BarbaBatch Reference - The 'Define Conversion' Window

When you select the menu option Edit Conversion... <cmd>-E in the Conversion menu, or you press the Edit button right to the conversion list while highlighting a conversion definition (or when you double-click on a conversion definition), an 'Edit Conversion' dialog appears.

This dialog allows you to edit an existing conversion definition.

This dialog is similar to the 'Define New Conversion' dialog, except for the buttons at the bottom. Please refer to the previous section explaining how to set conversion parameters.

The default button is Replace which replaces the existing conversion definition after confirming an 'Are you sure?' dialog.
If you want to skip this dialog, press the option key while pressing the Replace button.

An Add button will not replace the edited conversion definition, but instead adds an edited version. This is handy if you want to define a conversion based on an existing one. Make sure you change the conversion name, or you will still be asked if you want to replace the existing c

Convert file type

The Convert file type to option in the 'Define New Conversion' dialog allows you to select a soundfile type, to which all input soundfiles will be converted.

A discussion of all these soundfile types can be found in the technical appendix "Soundfile Types" Also check any (pdf) addendums for any recent additions to this list.

Convert sample rate

The Convert sample rate to option in the conversion specifications allows you to select a sample rate, to which all input soundfiles will be converted.
This option only affects the sampling rate.

BarbaBatch can convert from any sample rate to sample rates from 1kHz to 200 kHz.

You can enter a sample rate number by typing in the text box next to the Convert sample rate to text. You may enter values from 1000 up to 200,000 Hz (200 kHz).
It is possible to use decimal fractions. Up to 4 decimals will be recognized.

Also you can enter a sample rate by selecting one from the popup menu next to the text item.

The sample rate conversion quality popup menu

linear (fastest)
Automatic choice from qualities below
----
1 - for 8 bit output files
2 - for 24 and 16 bit output files at 48 kHz or lower
3 - for 24 to 64 bit output at 88.2 kHz or higher

3 is the best algorithm you'll find anywhere, but it is the slowest available in BarbaBatch.
1 is the lowest quality available in BarbaBatch, faster than 3, but still better than most professional options elsewhere.
Linear should be used only in situations where extreme speed is required.
Automatic makes the proper choice for you on a per situation basis.

Number of bits / bitrate

The Number of bits option in the conversion specifications allows you to select a wordsize to which all input sounds will be converted.
This option only affects wordsize, and the available options depends on the filetype chosen
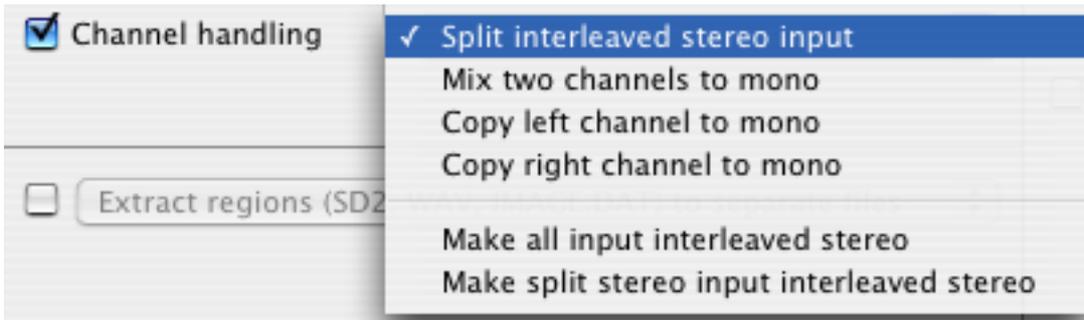in the *Convert file type* popup.

In the case of, amongst others, MPEG and QDesign files, the number of bits option changes into a 'bitrate' popup. The technical appendix "Soundfile Types" goes into this on a per filetype basis.

It is also possible to use dithering in the wordsize conversion process, by checking the "Use Dither" checkbox in the "Define New Conversion" dialog.

To read more about dithering, please refer to the section explaining the Use dither option, or read the technical appendix "Requantization & Dither".

Channel handling

This option allows you to force stereo output or mono output using different schemes.

BarbaBatch *Batch Audio File Converter*

☑ Channel handling	✓ Split interleaved stereo input
	Mix two channels to mono
	Copy left channel to mono
	Copy right channel to mono
☐ Extract regions (SD2	
	Make all input interleaved stereo
	Make split stereo input interleaved stereo

Above the line, different conversion schemes to mono files are listed.
The to-stereo conversion scheme is listed below the line.

Split interleaved stereo input - One interleaved stereo soundfile gets split into two separate files. Mono soundfiles will stay mono.) Two characters are added at the end of the name of the split soundfiles: '.L' or '.R'.

- *Mix two channels to mono*
  This option mixes any stereo soundfiles (also split stereo) to mono soundfiles, and mono soundfiles are not treated. An automatic pre-mix gain reduction of 6 dB makes sure that stereo soundfiles containing two identical, normalized tracks, will not clip when mixed.

- *Copy left channel to mono*
  This option only copies the left channel from interleaved or split stereo soundfiles. The right channel is not used.

- *Copy right channel to mono*
  This option only copies the right channel interleaved or split stereo soundfiles. The left channel is not used.

- *Make all Input Interleaved Stereo*
  will create a single stereo file out of any input, including mono files. Split stereo files (.L & .R) will transform into single, interleaved stereo files.

- *Make Split Stereo Input Interleaved Stereo*
  only split stereo files (.L & .R) will transform into single, interleaved stereo files. Files with other channel configurations will not change from input to output.

Extract, Compact and Snippet functions

Sound Designer II, Microsoft ADPCM WAVE soundfiles and redbook audio cd images (Image DAT, or ppd) may contain region definitions. Regions are (named) sections within a soundfile.

Please note when using ProTools, Deck, Logic, Vision, etc, that you need to 'export' the region definitions to the soundfiles. Otherwise BarbaBatch will not be able to find the regions in the soundfiles.

Extract SDII or WAV regions to separate files

The extract option creates a new soundfile for every region defined in a source soundfile. The new soundfiles will be named after the regions and they will be stored in a new folder named after the source soundfile.

The extracted soundfiles will be converted according to the other conversion specifications.

When a conversion extracts and changes maximum level, a total soundfile gets leveled before the regions are extracted.

If a source soundfile lacks regions, this will be reported in the 'BarbaBatch Status' dialog, as well as in the logbook file. To overcome this problem, you may want to set the 'Region extracting or compacting' option in the 'Preferences' dialog to Process the whole file if no regions exist. See the section "Preferences" on page 29 for more information.

Extracted soundfile names are truncated to 31 characters if the region names are longer. Duplicate soundfile names resulting from this will be reported in the logbook file.

You may want to set the 'When a bad region name is encountered' option in the 'Preferences' dialog to Rename the region.
In this way, you overcome the problem of aborting the conversion process when duplicate region names are encountered (in most soundfile editing applications duplicate region names are allowed).
See the section on "Preferences" for more information.

When setting Fade in and Fade out times, every extracted soundfile will have an appropriate fade in and fade out.

Ignore audio outside regions (compact)

When compacting a soundfile, a new soundfile will be created without the sections around the regions. (Only 'regioned' sections will remain.)

This may be handy if you want to get rid of unwanted parts of the soundfile.

The compacted soundfile will be converted according to the other conversion specifications.

The region definitions will remain in the resulting soundfile when you check the Copy markers, regions & loops option in the same dialog.

If a source soundfile lacks regions, this will be reported in the 'BarbaBatch Status' dialog, as well as in the logbook file. To overcome this problem, you may want to set the 'Region extracting or compacting' option in the 'Preferences' dialog to Process the whole file if no regions exist. See the section "Preferences" on page 29 for more information.

Use safety margin of

When compacting a soundfile, a safety margin option may be used.
In this way every region will have some 'space' around it, allowing for later editing like fading or cross-fading.

You can enter a safety margin by typing in the text box next to the Use safety margin of text. The safety margin is in milliseconds and can have any non-negative value including

zero. Numbers up to 1 decimal will be recognized.The Info Box will help you, if you enter a wrong number. You may also use the slider next to the text item.
If you don't want to use a safety margin, just set the safety margin to zero.

Only convert a snippet from input files

If you want to convert only a part of each input file, you can use the editable snippet function in the Define New Conversion window.

This function works on every input filetype including Audio CD Tracks. You can use this function to create short clips of CD tracks for web authoring, or to get some preview audio from a batch of files to evaluate your conversion settings.

Fade in and Fade out time

When this option is set, a logarithmic fade-in and fade-out is created within the output soundfile. The duration of the soundfile will not change as a result.

You can enter a fade time up to 5000 milliseconds by typing in the text box next to the Fade in or Fade out text.
The fade time is in milliseconds and ranges from 0 up to 5000 milli-seconds. Up to 1 decimal will be recognized. You may also use the slider next to the text item.

Copy markers, regions & loops

When the Copy markers, regions and loops option is checked, any marker, region or loop definition found in the input soundfile, will be copied to the converted soundfile. In the case of AIFF files, also the MIDI base key and the upper and lower key limits are translated.

The position of markers, regions or loops are maintained when soundfile lengths are changing due to sample rate conversion, wordsize conversion, extracting regions or compacting audio.

For an overview of soundfile formats supporting markers, regions or loops, please refer to the technical appendix "Soundfile Types" at the end of this manual.

Use dither

If the Use dither option is checked, dither will be used in every requantization process.

This is a quite simple dithering method, using white noise with a rectangular probability density function.

To read more about the dithering method, please read the technical appendix "Requantization & Dither"

Add or Replace Filename extension

It is possible to supply filenames of converted files with an extension (such as .wav) from within the Define new Conversion window of BarbaBatch. When you choose a conversion file type, BarbaBatch will automatically fill in the default extension.

In the case of hederless files (like Dialogic files) , the filename extension is needed in order to recognize the sample data format. In order to minimize the risk of name-too-long errors, only four characters are allowed as an extension.

Dynamics Processing

On the right side of the 'Conversion Definition' dialog, you can find the dynamics processing options. This allows for simple normalizing of soundfiles or for more advanced ways of treating the dynamics.
On the next pages the different options are explained in detail.

dBfs

In the dynamics processors, levels appear in Decibel relative to Full Scale (dBfs). This unit is common for digital audiosystems, since it defines a full 16bit word as 0 dBfs.

A 16 bit soundfile has a dynamic range of approximately 96 dB.

An 8 bit soundfile has a dynamic range of approximately 48 dB.

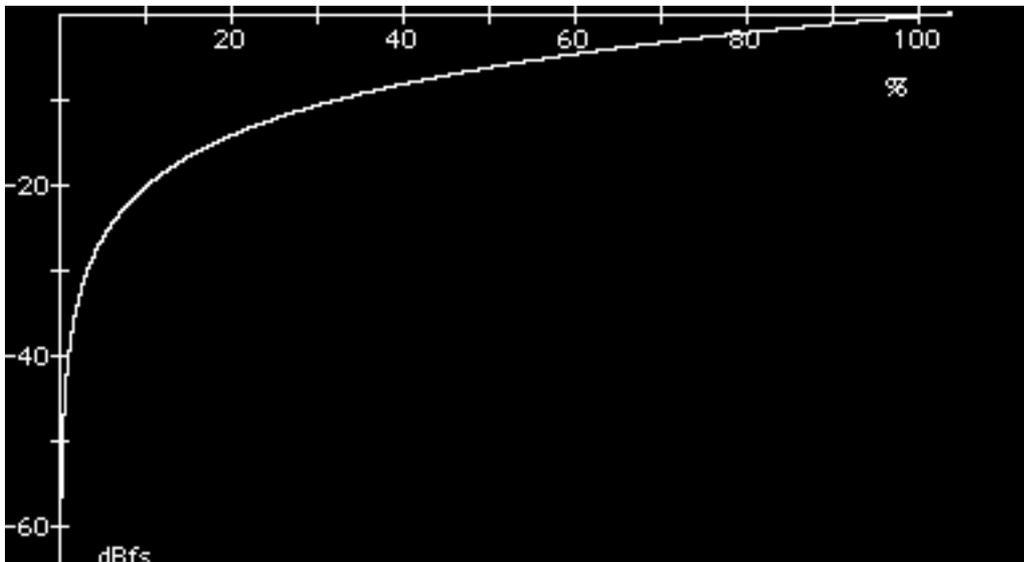The following figure shows the relationship between levels in dBfs and levels in percentages.

Figure showing levels in dBfs vs. levels in %

The formula for calculating levels in percentages to levels in dBfs is:

dBfs = 20 log (percentage / 100)

Gate Silence

The Gate Silence option in the conversion specifications allows you to select a dynamics processor: a gate with three parameters.
This option only affects dynamics, and maintains original file types, sampling rates. word sizes, etc.

The 'Gate Silence' is for getting rid of unwanted, low level audio in between higher level sounds, folding papers, background noise and such will be stripped from in between spoken word. A recording may get annoying when noise is heard instead of silence.
In the Gate Silence you specify what a silence is by adjusting the first two parameters. The third parameter sets the amount of attenuation when the gate activates.

If you set the Gate Silence option, three adjustable parameters show up.

A silence is longer than

The A silence is longer than parameter adjusts the minimal duration of the silence to activate the gate. As soon as the audio drops below the level specified in the second parameter, the gate will examine the length of the audio drop. If it is longer than specified in this parameter, the gate recognizes a silence.
Using the fader or typing a decimal number in the field next to it, you can enter a time from 100 up to 4000 milliseconds.

and lower than

The 'and lower than' parameter adjusts the audio level threshold for the gate to start examining the duration of the silence. As soon as the audio drops below this level, the gate examines the length of the audio drop.
Using the fader or by typing a decimal, negative number in the field next to it, you can enter a level from -96 up to 0 dBfs.
A Gate Threshold of -96 dBfs makes sure that the Gate will never work, a Threshold of 0 dBfs makes sure that the Gate is constantly attenuating.

Attenuate silences

The 'Attenuate silences' parameter adjusts the attenuation of the gate, when the gate activates. This means, the audio gets lower in volume by the amount specified here, as soon as the gate starts to work. Using the fader or by typing a decimal, negative number in the field next to it, you can enter a level from -144 dB up to 0 dB.

If you want absolute silence as soon as the gate activates, set this option to -96 dBfs (the dynamic range of 24 bits soundfiles is 144 dB). If your resulting soundfiles will be 8 bits,

setting this parameter to -48 dB will already be absolute silence (the dynamic range of 8 bits soundfiles is only 48 dB).
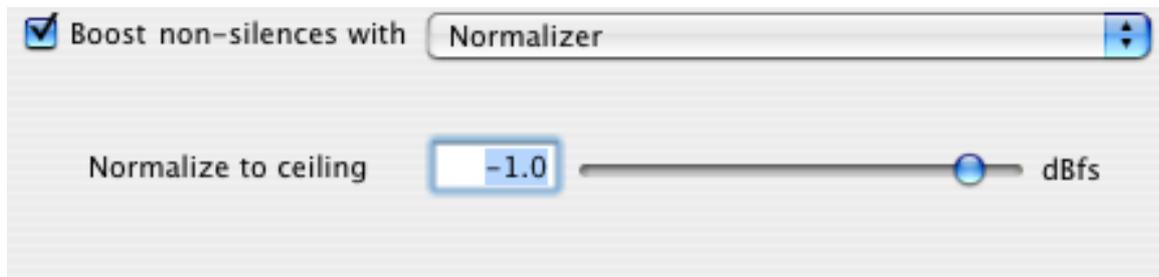
Boost (non-silences) with

The 'Boost with' option offers ways to get more level from your audio.

It allows you to select a Normalizer or a Look Ahead Peak Limiter.

Boost with Normalizer

If you set the Boost with option to Normalizer, a Normalize to ceiling option show up.

This allows you to select a level to which all input sounds will be normalized. BarbaBatch normalizes to a ceiling within a range from 0 dBfs to -12 dBfs.

You can enter a decimal number in the text field next to the Normalize to ceiling text. Up to one decimal number will be recognized.

You may also use the slider next to the numeric field.

Boost with Look Ahead Peak Limiter

If you set the Boost with option to Look Ahead Peak Limiter, three parameters show up.
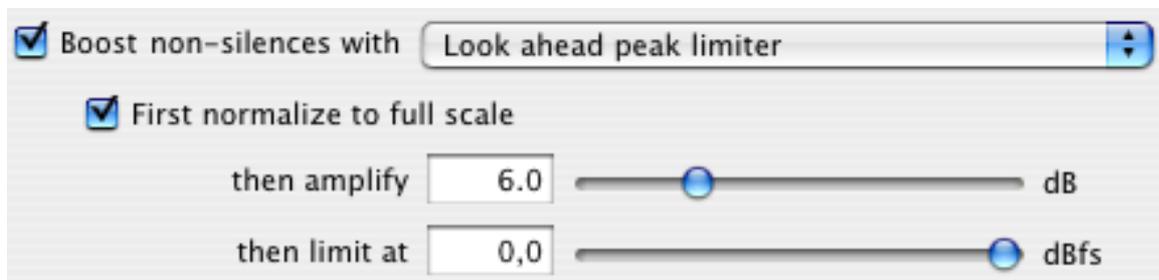
The Look Ahead Peak Limiter option is a more advanced way to treat the dynamics of soundfiles.

If the boost (Amplify option) is about to exceed the maximum level of a soundfile (0 dBfs) a look ahead algorithm makes sure, the boost is decremented smoothly before this point has been reached.
After this point, the boost gets slowly incremented again to the original level until the boost may exceed the maximum level again.
In this way, low level audio gets boosted, while high level audio stays the same.

The Look Ahead Peak Limiter will work great for improving the intelligibility of dynamic sound files, especially when converting to 8 bits. (The dynamic range of 8 bits soundfiles is only 48 dB.)

If you set *First normalize to full scale* , every soundfile will have its peak at 0 dBfs before amplifying or limiting.

It is as if *Boost with Normalizer* is set to 0 dBfs.
So every soundfile gets normalized to 0 dBfs before the soundfile is processed using amplifying and/or limiting.

Amplify allows you to increase the gain within a range of 0 to +24 dB using the Look Ahead Peak Limiter.

If you set *First normalize to full scale* , *Amplify* changes to *Then Amplify* in order to show the order of processing.

You can enter a value in the text field next to the *Amplify* text, or you can use the slider next to it.

The *Then limit at* paramter allows you to decrease the dynamic range by setting the maximum level to which the soundfile will be limited.
This process also uses the Look Ahead Peak Limiter.

You can enter a value in the text field next to the *Then limit at* text, or you can use the slider next to it. The range is from 0 to -12 dBfs.

Combinations of "Gate Silence" and "Boost with"

It is possible to combine the *Gate Silence* and *Boost* options (Normalizer or Look Ahead Peak Limiter) to treat the dynamics in a more advanced way.

If you set the *Gate Silence* option, the *Boost* with option changes into the Boost non-silences with option. This is to show that silences as set by the *Gate Silence* option will not be processed by the Normalizer or Look Ahead Peak Limiter.

Using the Gate Silence parameters, you define a 'silence'.
The Boost parameters define what to do with non-silences.
The Gate Silence parameters allow you to define what do with silences.

- *Gate Silence and Boost non-silences with Normalizer*
  If using the Gate Silence in combination with the Normalizer, only non-silences will be normalized.In this way you can attenuate low level audio and normalize normal level audio in one pass.

- *Gate Silence and Boost non-silences with Look Ahead Peak Limiter*
  If using the *Gate Silence* in combination with the *Look Ahead Peak Limiter*, only non-silences will be treated by the *Look Ahead Peak Limiter*. In this way you can attenuate low level audio and boost normal level audio in one pass.

5 *BarbaBatch File Formats*

A complete list of File formats and their peculiarities can be found here:

https://www.audioease.com/barbabatch/#filetypes