



WavTools Utility 2.3

Introduction

The WavTools utility is designed to enable mass processing of WAV, MP3 and WMA files. It can:

- convert WAV files to different sample sizes, sample rates and channels
- convert WAV files to MP3 and WMA files of different bit rates
- update the ID3 tags of MP3 files
- create Image Script (ISC) files for burning WAV files to CD

WavTools uses the [SSRC](#) utility for sample rate conversion, and the [LAME](#) utility to do MP3 file creation.

System Requirements

This software requires Microsoft Windows 2000/XP/Vista/7/8 or compatible operating system.

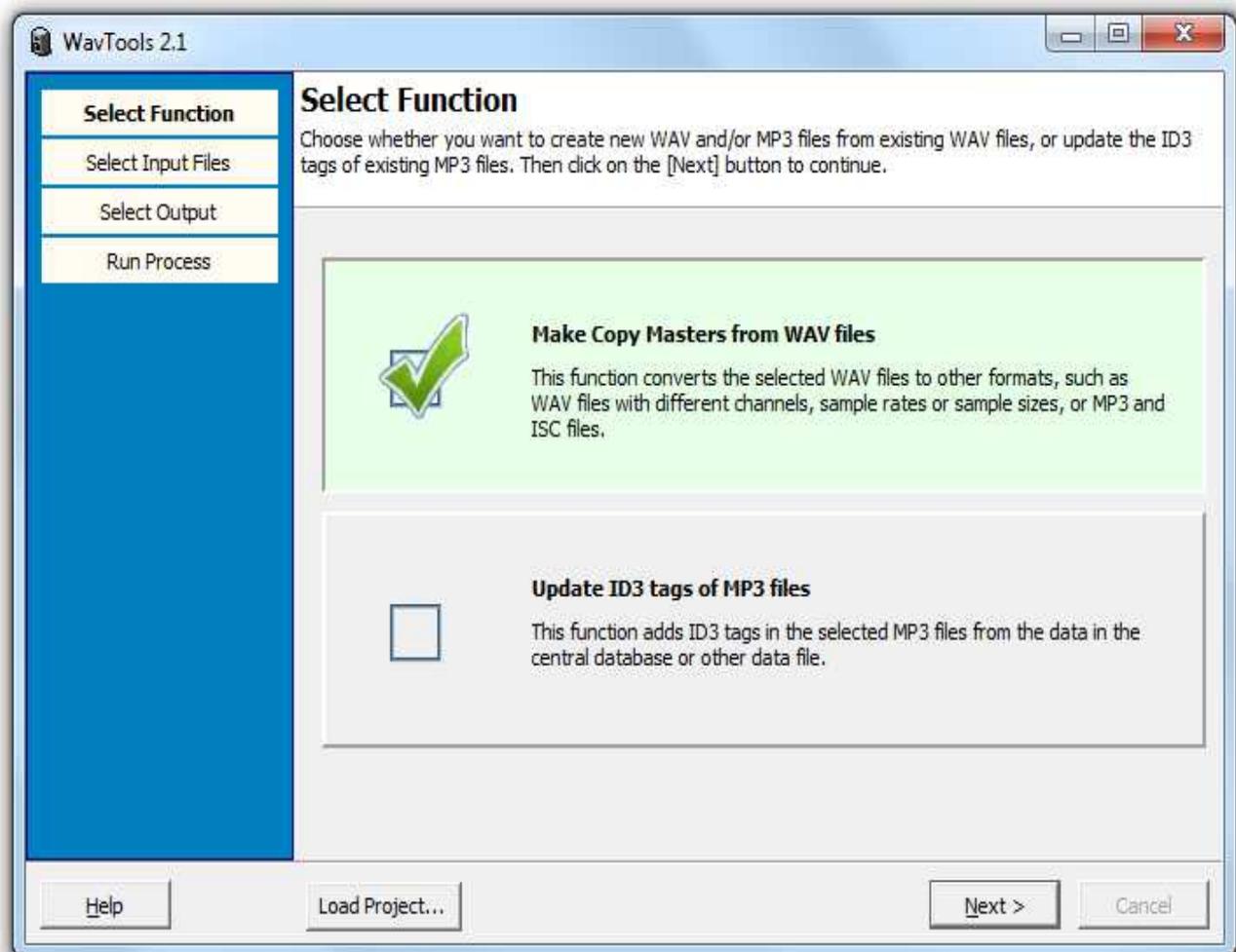
Operating procedure

WavTools has a series of screens to define the function to perform, the file to operate on, and the output required.

1 - Select Function

The **Select Function** screen is the first to be shown. Choose between the two main operations of WavTools:

1. The “**Make Copy Masters from WAV files**” function creates new WAV, MP3 and/or ISC files from existing WAV files.
2. The “**Update ID3 tags of MP3 files**” function updates the ID3v2 tags of existing MP3 files.



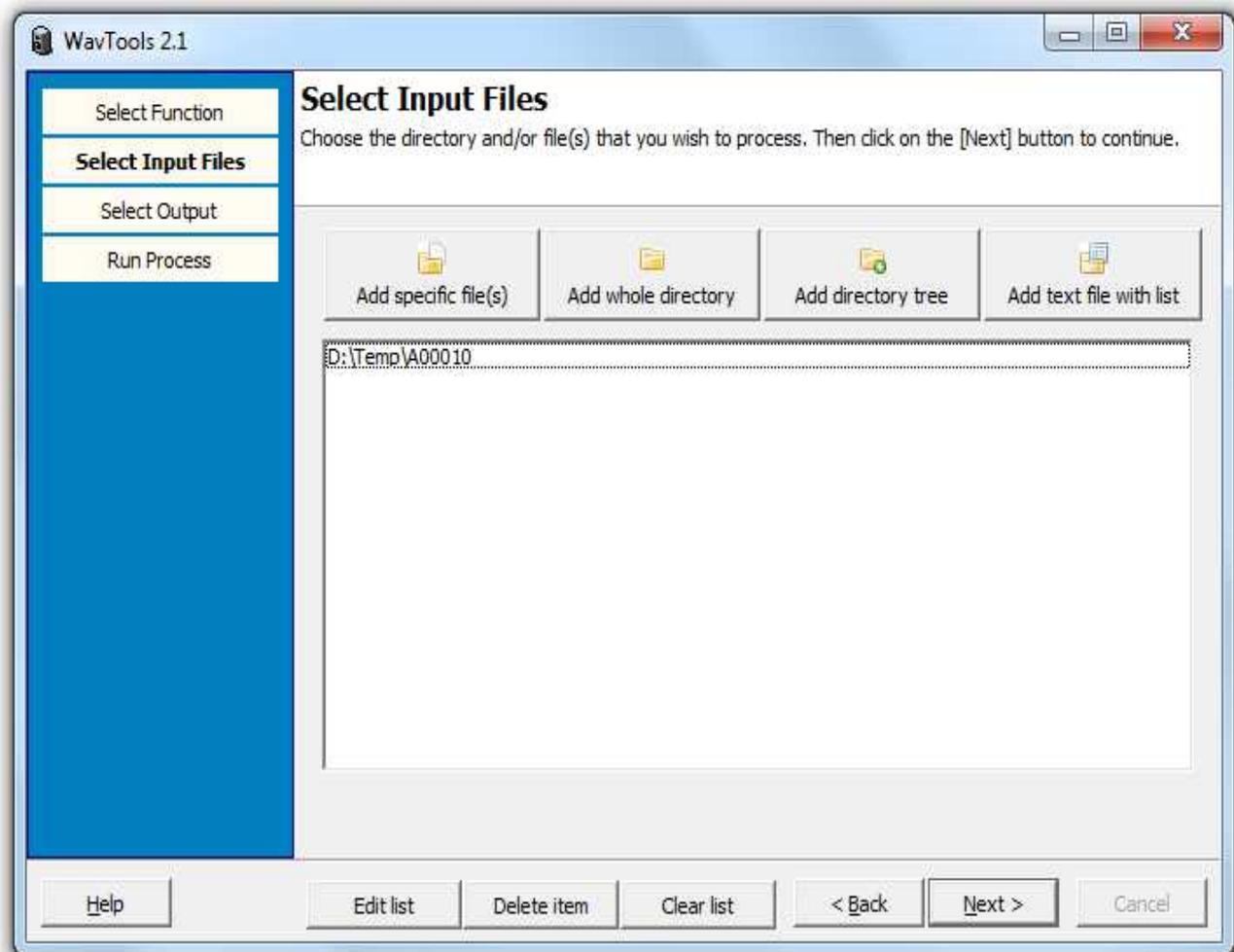
Select one of the two functions.

Alternatively, click on the **Load Project** button to load a previously saved collection of settings.

When the function has been selected, click on the **Next** button to go to the next screen.

2 – Select Input Files

On this screen, select one or more files and/or directories on which to operate.



Click on the **Add specific file(s)** button to select one or more files from a single directory.

Click on the **Add whole directory** button to select all the files in one directory.

Click on the **Add directory tree** button to select a directory and all its subdirectories. By default this will include two levels of subdirectories, as indicated by the “//2” parameter after the directory name. However this can be changed to any other number of levels if required.

Click on the **Add text file with list** button to select a list of files and/or directories stored in a text file.

The above four buttons can be used multiple times to create a list of files and/or directories to process.

Click on the **Edit list** button to allow the list to be edited in a text editor.

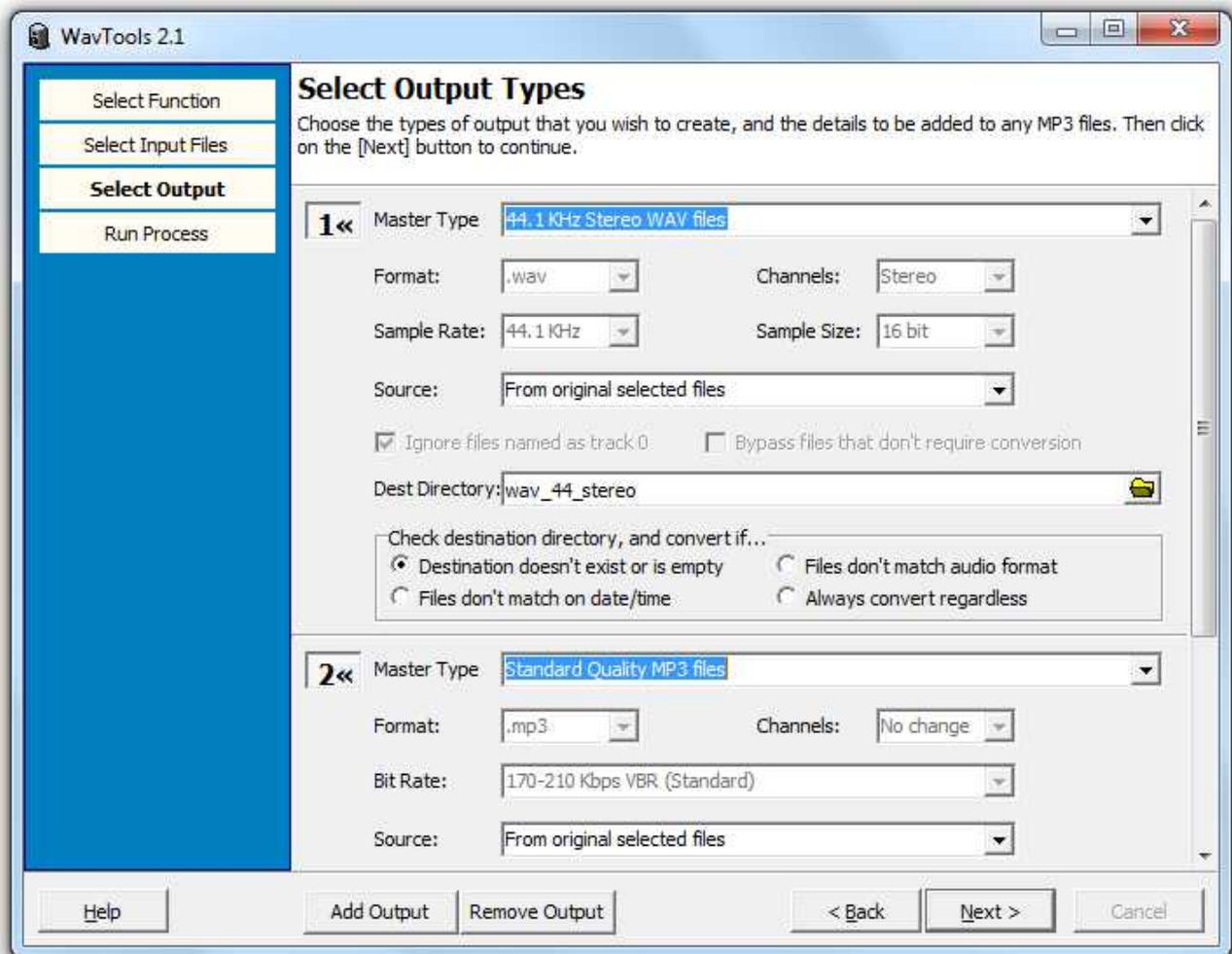
Click on the **Delete item** button to delete the currently selected item in the list.

Click on the **Clear list** button to delete all items from the list.

When the list is complete, click on the **Next** button to go to the next screen.

3a – Select Output Types

If the “**Make Copy Masters from WAV files**” function is selected on the first screen, then the **Select Output Types** screen is displayed. This allows one or more output files to be created for each input WAV file.



Click on the **Add Output** button to create another output group for each input WAV file.

Click on the **Remove Output** button to delete the last output group from the list.

In each output group, select the **Master Type** to define the file type and characteristics. Use the Custom type if you want to select all the file attributes individually.

Each output group can use as a **Source** the files originally specified in the Input Files page, or it can use the files created in a preceding output group.

Each output group must have a **Destination Directory**. If the items on the Input Files page also specify an output directory, then this is appended to the Destination Directory specified here.

The **Check Destination** option determines when the output files are created. Each option does more comprehensive checking than the option before, and so it more likely to result in output files being created.

- **Destination doesn't exist or is empty** means that there are currently no files in the output directory.

- **Files don't match on date/time** means that there may be files, but they do not all have exactly the same date/time stamps as the input files.
- **Files don't match audio format** means that the characteristics of any existing files, such as number of channels, sample rate, bit rate and so on, do not satisfy the specification of the output group.
- **Always convert regardless** means that the output files will always be created for this output group.

When the list is complete, click on the **Next** button to go to the next screen.

3b – Select Tag Details

If the “Update ID3 tags of MP3 files” function is selected on the first screen, then the **Select Tag Details** screen is displayed. This allows the ID3 data to be defined for each input MP3 file.

The Update ID3 Tags from option allows you to select from multiple sources of ID3 data.

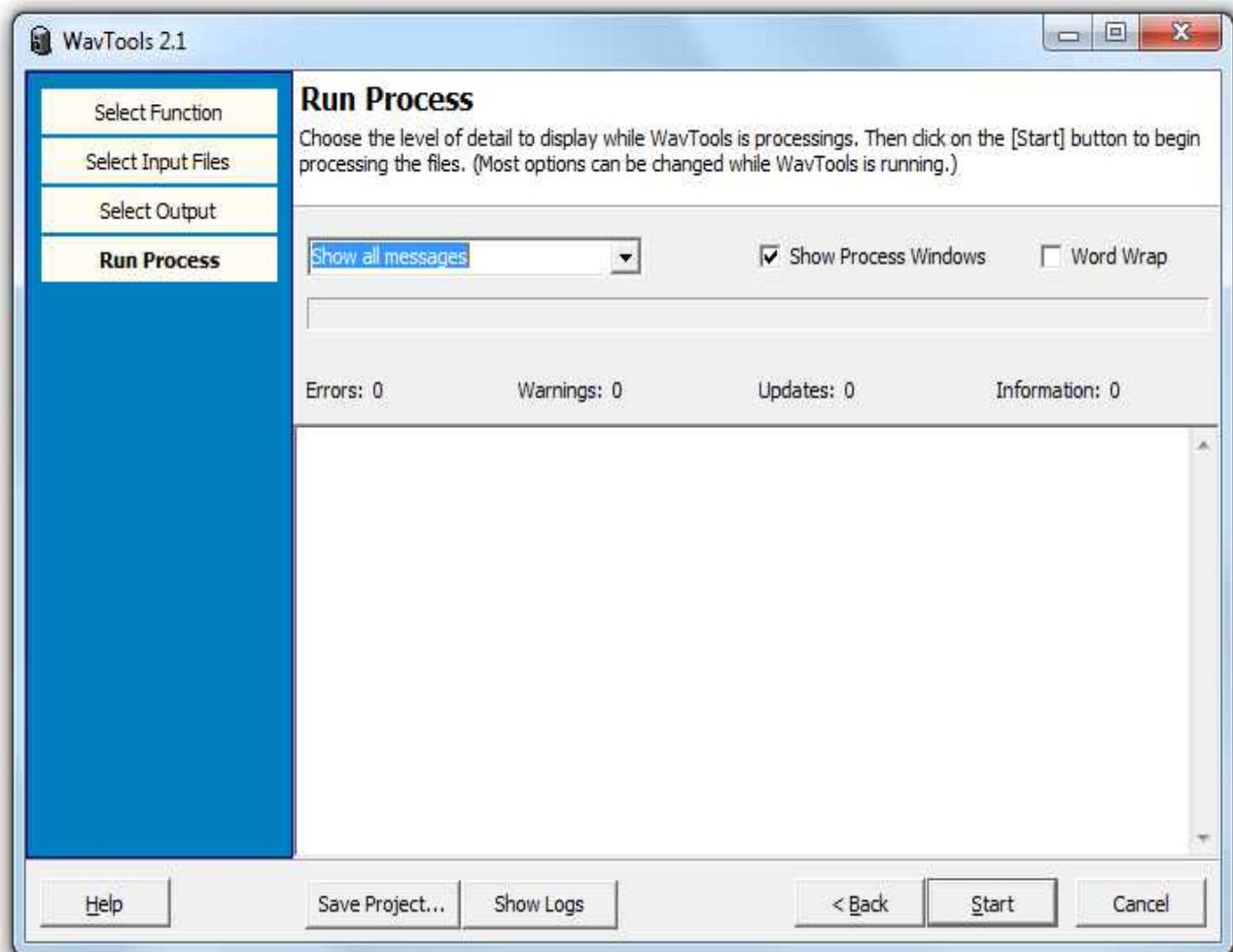
- **None** means that all ID3 tags will be set to blank.
- **Set values** means that all ID3 tags will be set to the same value. Fill in the specific values into the fields on this page.
- **INI File** means that all ID3 tags will be set from values stored in an INI file. This allows different tags for different programs. See "INI File Format for ID3 Tagging" section below. Fill in the INI file name and default image path into the fields on this page. There is also an option to set only programs and files that are listed in the INI file.
- **Website Feed** means that all ID3 tags will be set from values available from a URL on the GRN website. Fill in the Website feed URL and default image path into the fields on this page. There is also an option to set only files that are listed in the Website feed file.
- **GRN Database** means that all ID3 tags will be set from values in a specific table in the GRN Central Database. Fill in the database table name and default image path into the fields on this page. There is also an option to set only files that are listed in the database table.

The image folder name defaults to a collection of basic images that are included with WavTools.

When the details are complete, click on the **Next** button to go to the next screen.

4 – Run Process

On this screen, select the level of detail required to be displayed during processing.



The **Show Messages** dropdown list specifies the level of severity of messages that are to be displayed during processing, for example just errors, or just warnings and errors.

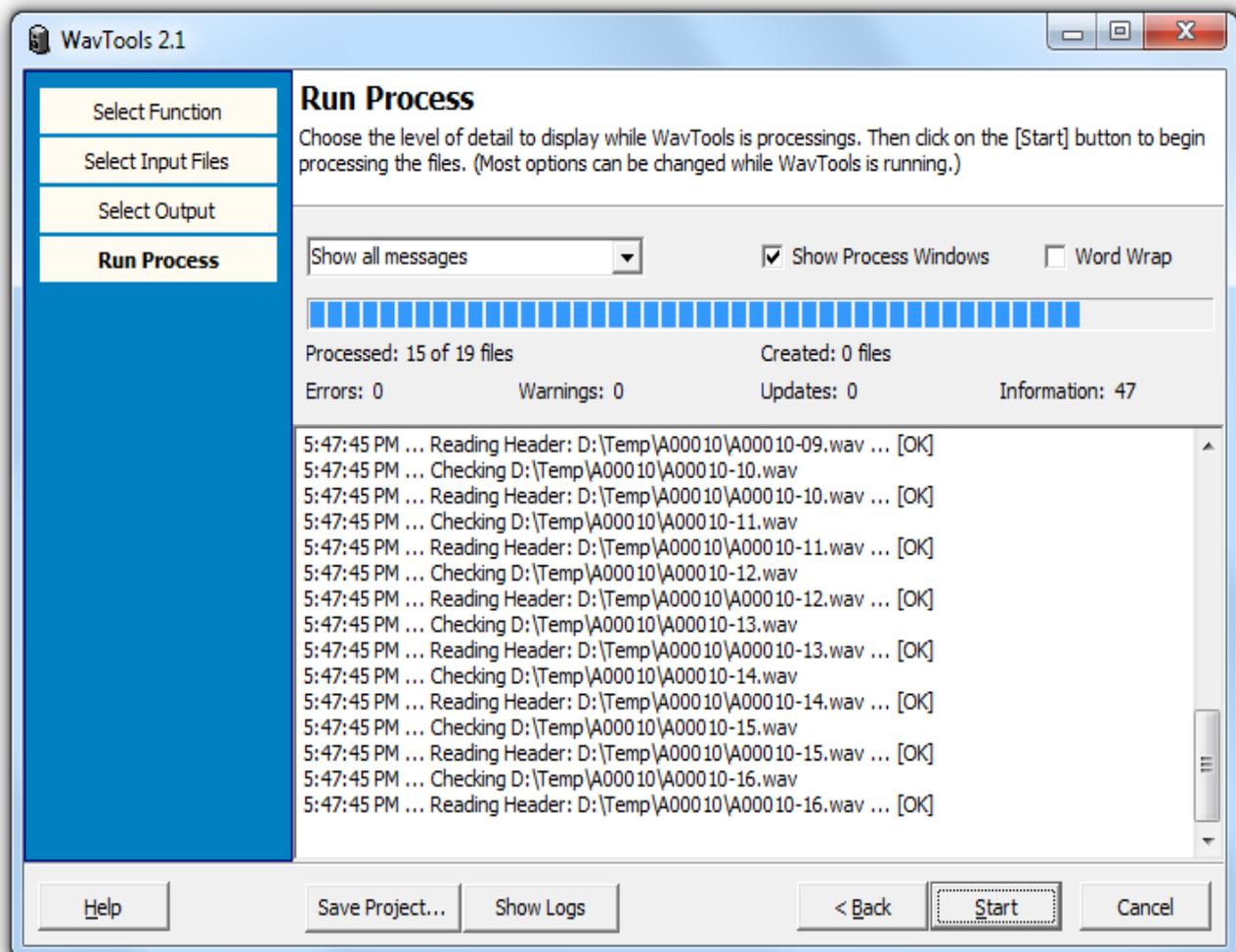
The **Show Process Windows** options allows you to show or hide the popup windows for SSRC and LAME. These windows can be shown while troubleshooting, but they effectively prevent the computer from being used for other work while they are continually being shown.

The **Word Wrap** option allows lengthy messages to be wrapped around so they can be seen within the window.

When ready, click on the **Start** button to begin processing the input files.

During processing

When the **Start** button is activated, and processing begins, the **Run Process** page shows information about what WavTools is doing. A progress bar indicates relative progress. There are counts of files processed and created, and a complete log of all files checked, deleted, created or modified.



The options on the Run Process page can all be changed during processing, however you cannot go back and change any other project options while WavTools is processing.

Click on the **Cancel** button to stop processing. Note that it may take a few seconds to respond if WavTools is in the middle of converting a large WAV file.

Click on the **Save Project** button to store all the current project options.

Click on the **Show Logs** button to open the folder where all previous WavTools log files are stored.

Additional Information

INI File Format for ID3 Tagging

INI files always contain data in the following structure

```
[Section Name]
Tag Key 1 = tag data
Tag Key 2 = tag data
Tag Key 3 = tag data
```

As each line in the INI file can only contain the data for one tag, this implies that there must be a line in the INI file for every unique tag.

Some tag data, such as Track titles, may be unique to each file, but other data, such as Album name, may be common across a number of files, and still other data, such as Website, may be common to every file.

To enable the INI file to be as compact as possible, tag data may be structured so as not to duplicate lines that are the same for groups of files.

In a WavTools INI file, the Section Names can represent the filename, the program-track, the program, the progid-track, the progid, or a global default. The Tag Keys represent the specific tag or tag-track. Use appropriate combinations of Section Names and Tag Keys to specify all the different tags without having to duplicate a lot of data.

Example

Take the following list of files:

```
A02790-01.mp3
A02790-02.mp3
A02790-03.mp3
A74792-01.mp3
A74792-02.mp3
A74792-03.mp3
```

We can set up to 12 different tags, named as follows:

1. Artist
2. Album
3. Title
4. Track/Tracks
5. Copyright
6. Year
7. Composer
8. Disk
9. Genre
10. Website
11. ImageName (the INI file lists the filename but the MP3 file will contain the actual image)
12. Comment

For this example we'll set three: Album, Title and Website.

Example 1

We could structure the INI file like this, using the filename

```
[A02790-01.mp3]
Album=Words of Life 1 Tamil C02790 tam
Title=Invitation to the Saviour!
Website=www.globalrecordings.net
[A02790-02.mp3]
Album=Words of Life 1 Tamil C02790 tam
Title=Do You Know God?
Website=www.globalrecordings.net
[A02790-03.mp3]
Album=Words of Life 1 Tamil C02790 tam
Title=Oh, Happy Day
Website=www.globalrecordings.net
[A74792-01.mp3]
Album=Good News Tamil C74792 tam
Title=Music & Introduction
Website=www.globalrecordings.net
[A74792-02.mp3]
Album=Good News Tamil C74792 tam
Title=Picture 1
Website=www.globalrecordings.net
[A74792-03.mp3]
Album=Good News Tamil C74792 tam
Title=Picture 2
Website=www.globalrecordings.net
```

Example 2

As the Album names are consistent across a whole program, and the Website is consistent across all files, we can represent the INI file more compactly like this

```
[Default]
Website=www.globalrecordings.net
[02790]
Album=Words of Life 1 Tamil C02790 tam
[A02790-01.mp3]
Title=Invitation to the Saviour!
[A02790-02.mp3]
Title=Do You Know God?
[A02790-03.mp3]
Title=Oh, Happy Day
[74792]
Album=Good News Tamil C74792 tam
[A74792-01.mp3]
Title=Music & Introduction
[A74792-02.mp3]
Title=Picture 1
[A74792-03.mp3]
Title=Picture 2
```

Note that Program Numbers (ProgNo) have an alphabetic prefix of 'A', 'C', 'P' or 'V', eg 'C00010'. Program Ids (ProgId) do not have any alphabetic prefix, eg '00010'. Both styles can be used, as in the example above.

Example 3

A slightly different way of representing this would be to use a program-track or progid-track style instead of filename, like this:

```
[Default]
Website=www.globalrecordings.net
[02790]
Album=Words of Life 1 Tamil C02790 tam
[A02790-01]
Title=Invitation to the Saviour!
[A02790-02]
Title=Do You Know God?
[A02790-03]
Title=Oh, Happy Day
[74792]
Album=Good News Tamil C74792 tam
[74792-01]
Title=Music & Introduction
[74792-02]
Title=Picture 1
[74792-03]
Title=Picture 2
```

Example 4

Or yet another way would be to use the tag-track style, like this:

```
[Default]
Website=www.globalrecordings.net
[02790]
Album=Words of Life 1 Tamil C02790 tam
Title-01=Invitation to the Saviour!
Title-02=Do You Know God?
Title-03=Oh, Happy Day
[74792]
Album=Good News Tamil C74792 tam
Title-01=Music & Introduction
Title-02=Picture 1
Title-03=Picture 2
```

The order by which WavTools looks for tag data is as follows:

	<i>Section Name</i>	<i>Tag Name</i>
1	Filename (eg "A00010-05.mp3")	Tag (eg "Composer")
2	ProgNo-Track (eg "A00010-05")	Tag (eg "Composer")

3	ProgNo (eg "A00010")	Tag-Track (eg "Composer-05")
4	ProgNo (eg "A00010")	Tag (eg "Composer")
5	ProgId-Track (eg "00010-05")	Tag (eg "Composer")
6	ProgId (eg "00010")	Tag-Track (eg "Composer-05")
7	ProgId (eg "00010")	Tag (eg "Composer")
8	"Default"	Tag-Track (eg "Composer-05")
9	"Default"	Tag (eg "Composer")

Command Line Parameters

- filename* The name of a project file to load. Include the “.wavtools” file extension. Use a fully qualified path name unless the file is in the default directory.
- /r* Run on start. Automatically begins processing on the specified project file. Should be used in conjunction with a *filename* parameter.
- /v* Verbose mode. Shows all popup messages and workings of SSRC and LAME windows. If used in conjunction with the */n* or */q* parameters then the last one on the command line will take precedence.
- /n* Normal mode. Shows popup message at end of process, but otherwise runs SSRC and LAME minimised. If used in conjunction with the */v* or */q* parameters then the last one on the command line will take precedence.
- /q* Quiet mode. Shows no popup messages at all. If used in conjunction with the */v* or */n* parameters then the last one on the command line will take precedence.
- /x* Exit on completion. Close WavTools as soon as processing is finished. Should be used in conjunction with a */q* parameter.

To run WavTools completely in batch mode would require this combination of parameters:

```
wavtools filename /r /q /x
```

Support

This software is provided as-is, free of charge, with no warranty as to its accuracy or fitness for any particular purpose.

The author of this software can be contacted at grid@globalrecordings.net

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