

Video Script

Kaleidoscope 5

Batch Processing and Manual ID for Bats

Welcome to Wildlife Acoustics and Kaleidoscope software.

In the previous video in this series, I explained how to download the free installation of Kaleidoscope software and how to use the Viewer window to examine and audition a bat recording. In this video we'll take a look at how to rapidly review multiple recordings. I'll also explain how to do batch file conversion and how to create metadata notes and manual ID reviews for individual recordings.

I'll launch Kaleidoscope. This video is for people who are using Kaleidoscope for reviewing recordings of bats, so I'll set defaults and make sure Kaleidoscope is in Bat analysis mode.

I'm going to open a standard wav file in the viewer, and this file is one of many stored in a folder called Dataset 1. There's also a second set of recordings in a folder called Dataset 2. Both of these folders are within the same overall folder or directory.

The selected file opens in the Viewer window. If I want to view other files in the same folder I can use these arrow buttons. I can also use the up and down arrow buttons on my keyboard as a shortcut. In order for the keyboard shortcut to work I must first click on the spectrogram to make it the window of focus.

In addition to toggling through the files in the same folder, I can also advance Kaleidoscope to look at the second folder of recordings. This is a very fast way to review multiple recordings that are organized within different folders or directories.

If I want to create field notes and manual ID reviews for these recordings, that's where batch processing comes in.

I'll close the Viewer and I'm back to the Control Panel. With the exceptions of the Batch tab and Signal Params tab, all the other tabs across the top of the window have red exes, showing those features are not available. If I want to do bat auto-ID, cluster analysis or noise level analysis, I can upgrade to Kaleidoscope Pro and those tabs would then be available for use. This is the free download of Kaleidoscope, so I'm going to do a very basic batch file process.

I'll press the browse button to assign the Input Directory for my recording files. I'll select the larger folder which contains the two dataset folders. I need to select a place for the output results, so I'll create a folder on my desktop and designate that as the output directory.

Drive label has to do with database functions, which are only available within Kaleidoscope Pro, so I'll skip that setting for now.

Include subdirectories is checked, which means when I do a batch process of files, all the files in both dataset folders will be included

I can choose to include WAC files in the batch process. WAC is an older format of file compression. I can choose to include WAV and W4V files. W4V is the newer Wildlife Acoustics file compression format. I can also choose to include any zero-crossing files that may be in the input directory.

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If there is GPS information in the audio files I can choose to partially obscure the GPS metadata on output.

Here is the project form. This allows me to add field note metadata to all my outputs files and results. To show how this works I'll just write something simple in here for now.

When I run a batch process I have the choice to re-create my input files as output files. The reason I might want to do this is if I want to add field note metadata to the audio files, or possibly I want to do some sort of file conversion such as converting wav files to zero crossing files. If all I want to do is look through my recordings to create a spreadsheet describing those recordings, I do not need to re-create new audio files on output.

If I do re-create audio files on output I can choose to limit the file size of output recordings.

Files larger than the maximum set duration will be split into smaller files.

I'll check this box if I want to create wav files on output. If I don't want to make new copies of the audio files on output I can leave this unchecked. If I do create new audio files on output I have the option to reduce the file sizes using W4V compression.

And here is the option to create zero crossing files on output. I'll leave these both unchecked for now.

When I do the batch process of my bat recordings, Kaleidoscope will look through the recordings to see if there are any noise files. Whether Kaleidoscope considers a file to be noise with no useful bat calls is determined by the settings under the Signal Parameters tab. I can disable noise filtering. If I create WAV or zero crossing files on output I can have any output files designated as noise automatically deleted. I can choose the option for Kaleidoscope to move any output files it considers to be noise to a separate Noise folder.

And lastly, I have the option to output GPS information from the files to a .csv or .kml file. My example recordings don't have any embedded GPS information, so I'll leave that option disabled.

That's it. Now I'll run my batch process.

Once the batch process is complete I'll take a look in the designated output directory.

The db-batch file used to upload metadata to a database.

The log file keeps a record of each step of the batch process and can be used for diagnostics if something goes wrong.

The settings file keeps track of all the settings of Kaleidoscope that were used in the batch process. A settings file can be opened from the Control Panel file menu to restore all settings that were used in the batch process.

And finally, here is the meta.csv file. I can open this file by choosing Open Results from the Control Panel File menu. When I do that, the Viewer window opens to display the first file from the batch. A second window has also opened and this is the Results window that represents the underlying meta.csv file. I'm going to edit the visible columns in the Results window. I'll choose to show the notes column.

Now you can see the field note I added to the output results.

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Back in the Viewer I can use the arrow buttons to navigate through the audio files and subdirectories. The currently visible file is highlighted in the Results window.

I can add manual IDs that are specific to each file. I can write into the Identification field and press Enter or Return. You can see that the ID has been added to the Manual ID column in the Results window. It's important to know that manual IDs are written to the meta.csv file but not to the actual audio files.

If I want to add the same note to more than one file I can right-click an empty button label and type whatever I like. If I click the Auto Next file button, then clicking on a button label applies that label and moves to the next file in the list. If I don't want to add a manual ID note I can click on a blank button label, or just use the arrow buttons or keys.

Perhaps for this recording I'd like to create a manual ID that lists more than one species.

Once I've done my manual ID labeling I'll choose Save from the Results window File menu. This updates the underlying meta.csv file. And if I now go to the outputs directory and double-click directly on the meta.csv file, that will cause it to open in my spreadsheet application. And here are the results of the batch process, field notes, and manual IDs, all displayed in Excel.

As always, it's worth reading through the Kaleidoscope User Guide, and for further information about the Kaleidoscope Pro features, be sure to check out our on-line tutorial videos.

Thank you for watching.