

# INSTRUCTIONS FOR USING THE ECHOCCLASS ACOUSTIC ID PROGRAM (Version 1.1)

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## IMPORTANT NOTES

1. This program is still in the testing and development phase. As such, please do not use in any official capacity (i.e., project reports). Revisions to this program will be made this fall in response to comments received.
2. This is a revision of the EchoClass program (v1.0) that allows for greater flexibility in filename structures to be utilized.
3. This program includes options for GPS and Sunset/Sunrise. Do not click these options. There are specific instructions for the correct use of these options that will be provided later. Clicking them without having followed the proper procedure will result in an error in the program.
4. Output of this program is an Excel file with 3 sheets. Thus, you need to have Excel installed on the computer in which the program is running.

## COMPATIBILITY

This software is compatible with acoustic files created with zero-crossing bat detectors. Currently, it can also accept full-spectrum data that has been converted to a zero-crossing format. Future versions will allow for full spectrum data that has had parameters consistent with zero-crossing recordings extracted from it.

## DOWNLOADING AND INSTALLING THE SOFTWARE.

1. If you have utilized a previous version of the EchoClass software make sure to check that you have the appropriate version of the Matlab Compiler Runtime. Go to the control panel and then the list of programs. If you have Matlab Compiler Runtime 7.16 then you have the version you need and you can simply download the new version of the EchoClass exe file. If you have a previous version of the Matlab compiler then you need to remove it. Once a previous version is gone or you determine it is not installed, then you must download the MCRinstaller and EchoClass exe file.
2. Determine if your computer is running a 32-bit or 64-bit operating system.
  - a. If your computer uses Windows XP or Windows 2000 then chances are you do not have a 64-bit system and you should download and install the 32-bit version as instructed below.
  - b. If you are running Windows Vista or Windows 7, Click **Start**/ Right click **Computer**/ Click **Properties**. Under “System” or “System & Securities”, view the system type. If you see the phrase “64 bit” then you need to download and install the 64-bit version as instructed below.

3. Download the appropriate zip file from the USFWS's Indiana Bat Summer Survey Guidance Website  
<http://www.fws.gov/midwest/Endangered/mammals/inba/inbasummersurveyguidance.html>

There are 4 zipped files available for download.

1. The 32 bit version of the EchoClass exe file
  2. The 32 bit version of the MCRinstaller and the EchoClass exe files
  3. The 64 bit version of the EchoClass exe file
  4. The 64 bit version of the MCRinstaller and the EchoClass exe files
4. Downloading simply the exe files is short (~ 2MB), however if you have to download the installer the file increases to about 400MB. Thus if you have to download the installer please be patient as the internet connection may time you out before completion.
  5. Unzip the folder.
    - a. For the exe only files: there should be 2 files in the zip file (the exe file and the .ctf file). Simply place these files in the same location.
    - b. For the installer and the exe files, run the installer. Once installed then place the exe and ctf file sin the same location.
  6. To run the program, simply double click the exe file to get the menu to pop up.

## ORGANIZING THE DATA

Your data file structure must have at least 2 levels (no maximum) of folders for the program to run. Keep the folder names short and do not include the "&" symbol in any folders or filenames. Also, all of the files must be in a folder named with 8 numeric characters (e.g., 20120805). As the output of the analysis software includes information from the directory structure, following the below example directory structure will populate the output with project and site information that is then ready for inclusion in a report.

Example structure :

```
Bats2012  
  Project1  
    Site1  
      20120601  
      20120602
```

Examples

1. If you select the folder **20120601** the output file would be empty
2. If you select the folder **Site1** you would get results from all of the folders named with 8 numeric characters under the **Site1** folder

3. If you selected the folder **Project1** you would have get results from all of the folders named with 8 numeric characters in all of the sites under the **Project1** folder
4. If you selected the folder **Bats2012** you would have get results from all of the folders named with 8 numeric characters in all of the sites of all of the projects under the **Bats2012** folder

## RUNNING THE PROGRAM

1. Double click the file **Echoclass.exe**. A window should pop up titled **BAT\_ID** (Figure 1).
2. Click the Browse button and select the desired directory. In the example above, navigate to and select Project 1 to run all of the files contained in that project.
3. Select the appropriate **Species Set**. The map in Figure 2 is provided as a guide in selecting an appropriate species set for your area. Surveyors with detailed knowledge of the bat community for a specific sampling location should select the species set that is most appropriate.
4. Click the Process Data button.
5. As the program runs a series of popups will appear and disappear. Once completed, a Microsoft Excel file titled **User ID Report** will be created in the directory that was selected in Step 2.

## EXCEL USER ID REPORT OUTPUT

The quantitative output (i.e., maximum likelihood) results you could potentially get for each species are 0-3:

- |   |                                |
|---|--------------------------------|
| 3 | >= 99% probability of presence |
| 2 | >= 95% probability             |
| 1 | >= 90% probability             |
| 0 | <90% probability of occurrence |

**Figure 1.** Screen shot of EchoClass pop-up window.



