

INSTRUCTIONS FOR USING THE ECHOCLASS ACOUSTIC ID PROGRAM (Version 1.0)

U.S. Army Engineer Research and Development Center

COMPATIBILITY

This software is compatible with acoustic files created with zero-crossing bat detectors. Full-spectrum data can be used provided that it is either converted to a zero-crossing format or has had parameters extracted following a consistent methodology. For specific instruction on parameter extraction, please refer to the owner's manual of the equipment being used.

DOWNLOADING AND INSTALLING THE SOFTWARE.

1. Before installing the software, make sure there is not a MCRInstaller already installed on your computer. If installed this program will show up as a MATLAB Component Runtime XX in the program list available under the control panel. If there is a version already installed, make sure to uninstall the Matlab program from any previous versions of the EchoClass Acoustic ID program using the uninstall program feature under Control Panel.
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 version (32 or 64-bit; zipped folder is approx. 400 MB) from the USFWS's Indiana Bat Summer Survey Guidance Website <http://www.fws.gov/midwest/Endangered/mammals/inba/inbasummersurveyguidance.html>
4. Unzip the folder. There should be 3 files in it. Run the MCRInstaller file. This will provide the files needed to run the program. You only have to do this once. After the installation is complete, run Echoclass.exe to start the analysis program.
5. You do not need to do anything with the Echoclass.ctf file.

ORGANIZING THE DATA

For data derived directly from a zero-crossing system

Your data file structure must have at least 2 levels (no maximum) of folders for the program to run. Here is the suggested structure:

Bats2012

Project1

Site1

20120601 (named by CFCread, Do NOT change)

Keep the folder names short with no spaces in the name. Also, the night directory (e.g., 20120601) must be 8 numerical characters. Assuming the above file structure, you could point the program (using the Browse button) to either the **Bats2012**, **Project1**, or **Site1** folders and analyze all of the files contained in the lower levels. If you point to the night directory (e.g., 20120601) it will not work.

Adding new Project, Site or Date level folders after those folders have been analyzed causes no harm. The original results will not change, but new additional results will merely be appended to the previous results.

For data derived from conversion of full spectrum to zero-crossing

Utilize the naming convention of the software used for the conversion. Then simply put all files in the same 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, including MYSO (*Myotis sodalis*) and MYGR (*Myotis grisescens*) are 0-3:

- 3 = 99% probability of presence
- 2 = 95% probability
- 1 = 90% probability
- 0 = not detected

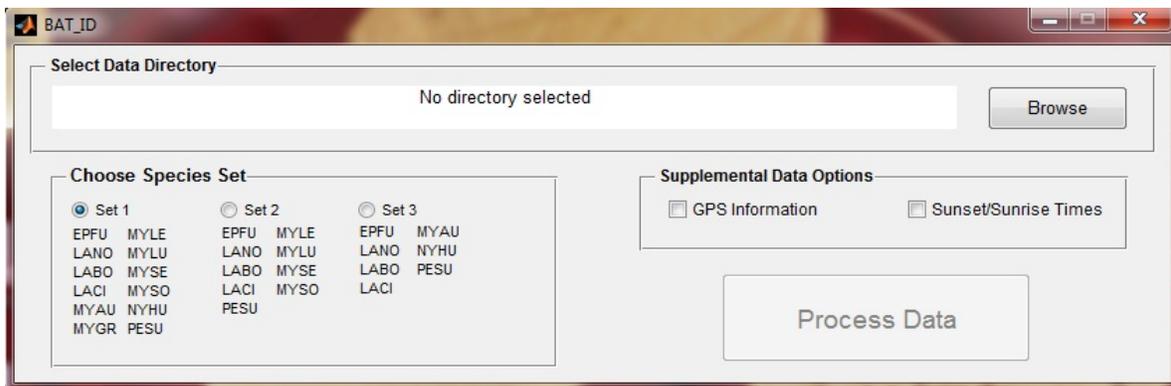


Figure 1. Screen shot of BAT_ID pop-up window.

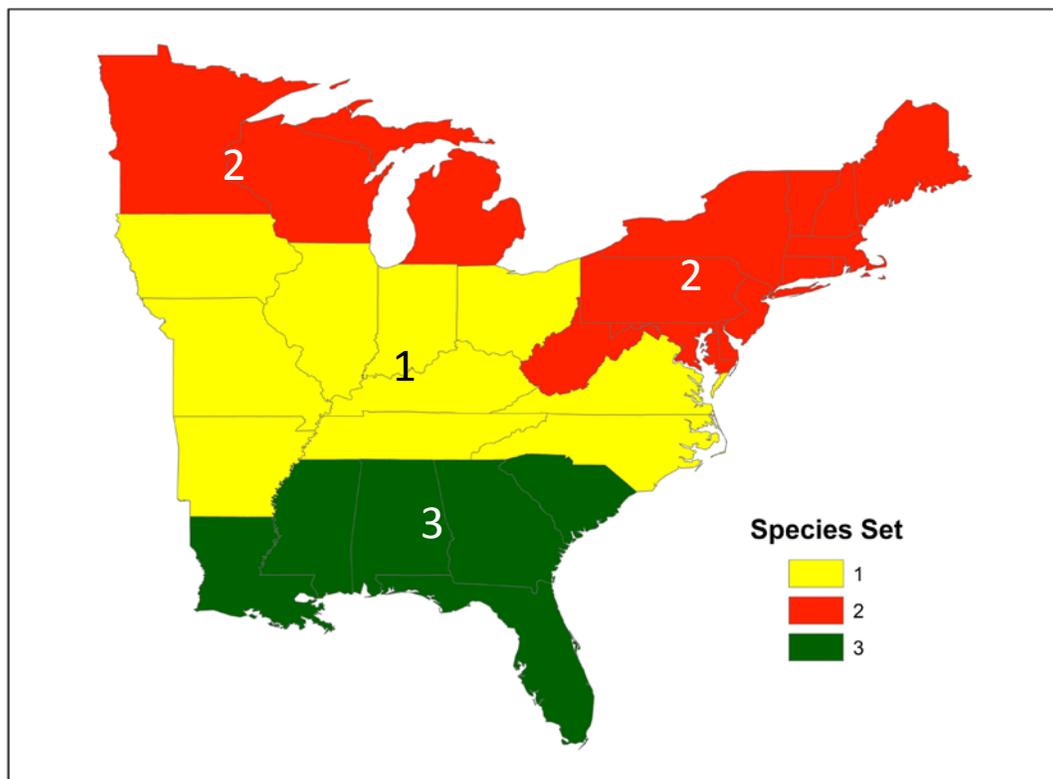


Figure 2. Generalized species set selection map.