SOME HINTS ON HOW TO USE THE NEW ANALOOK

Catherine Caddle and Lindy Lumsden
Arthur Rylah Institute
Heidelberg, Victoria.

Having just spent some time familiarizing ourselves with Chris Corben's new ANALOOK program (version 3.5), we thought that it might be of value to share some of what we have learnt with others who might be wanting to use Analook. As there is no manual or extensive Help menu available it may save you some time, although this is certainly not an exhaustive description of what this program can do. There are some functions which we have not used and as there are some fairly experimental aspects to the program, we shall leave it to someone else to explain the hard bits! We have found Analook very useful in several capacities; it is an excellent way to clean up and organize your call library, by deleting or moving files between subdirectories and changing text information easily; and it is brilliant for extracting call parameters and establishing data on reference calls, and as an aid to identifying unknown call sequences. If you don't have a copy of the latest Analook (it is now included on the Anabat5 disk) , it is available from David Titley, or it should be on Herry's web site (Bat calls of south-eastern Australia).

GETTING STARTED

Analook can be saved into it's own subdirectory and then accessed through Windows, File Manager or through the DOS prompt by typing 'Analook'. Initially you are presented with a graphics screen from which you can enter the Help menu by pressing 'Backspace'. The File Menu can be entered by pressing 'Shift L', and drives, directories and files can be accessed in the same way as in Anabat5. Once in a file, 'Shift {' or 'Shift }'can be used to flick backwards and forwards between files. This makes it really quick to identify a batch of call files, and is especially good for getting comparisons between calls by toggling between them. Greater detail is given in Help Menu 4 about these functions.

MOVING FILES

First mark all the files that you wish to move, copy or delete by pressing 'Alt m': files can be marked either in file menu mode when the file name is highlighted, or with the file open. The words *file marked* will flash up if the file is open and a cross will appear next to the file name. By pressing 'Alt v', 'Alt c' or 'Alt d' you will then respectively move, copy or delete the marked files. If moving or copying files you will then be required to specify the destination subdirectory by going to it in file menu and pressing enter when it is highlighted. If moving files you will then be asked if files are to be deleted, this is referring to the files in their original location, so you can answer yes. You can unmark files by pressing 'Alt u' or universally reverse the marking by pressing 'Alt r'. This is covered in Help Menu 2.

TEXT HEADER INFORMATION

Once a call is on the screen the text header information is displayed at the bottom of the same page, with the file name and graphics information beneath it. It is great to have all the information displayed on the same screen, (although you will loose this information when you enter measurement mode). Rewriting the text header is straightforward in Analook, press 't' and the text header is highlighted and changes can then be made, these changes can be saved by pressing 'Alt s', or not saved by simply entering or escaping out of text mode. This is outlined in Help Menu 3.

GRAPHICS PRESENTATION

The graphics presentation can be displayed either with a linear or log scale by pressing '+' or '-' respectively. There is real and compressed modes which are toggled between with the space bar, but expanded mode and the horizontal cursor, found in Anabat5, are not available. Expanding the calls using the 'F stops' and horizontal movement with the cursors or the '1' to 'f' markers are the same as in Anabat5. Refer to Help Menu 1 for more functions.

ENTERING MEASUREMENT MODE

By pressing 'm' when a file is open, you enter measurement mode and call parameters of the displayed sequence are calculated. These will appear at the bottom of the screen in place of the header text. The parameters given are the mean values for all the pulses currently on screen. They are displayed from top left to bottom right, as follows:

N	number of calls currently displayed on screen
St	location of displayed pulses within sequence
Sl	initial slope of pulse
Sc	slope of the characteristic section
Qu	quality of call (indication of how smooth the call is, lower values are better)
Fmax	maximum frequency
Fmin	minimum frequency
Fmean	mean frequency (which is weighted by time spent at each frequency)
Fc	characteristic frequency (referring to the flattest part of the pulse)
Fk	frequency at the knee (i.e. the point where the slope changes from Sl to Sc)
Dur	duration of pulse (msecs.)
TBC	time between calls (msecs.)
Ntbc	the number of time between calls
Tc	time into the pulse when the characteristic frequency is reached
Tk	time into the pulse when the knee is reached
Qk	quality at the knee (Chris is still working on this one - he advises that at the moment it is not all that useful).

To use Analook to extract parameters you require a computer with a colour screen. How a sequence is displayed can be changed by altering the filters using 'Alt 1' to 'Alt 0'. If filter 0 is employed then no dots will be excluded from the calls and you will have a display in two colours. We use Filter 1 which displays the call in three colours. One colour will show all dots excluded from the parameter calculations, a second colour will highlight the initial slope of each call and a third colour will highlight the characteristic slope of the call, (colours can be customized by pressing 'Alt o' and selecting the part you wish to change and the new colour). This is explained in Help Menu 5.

EDIT MODE

Analook makes some decisions which may not be to your liking, with nonsensical parameters generated as a result, making it necessary to edit the sequence manually before recording the parameters. By pressing 'Alt e', you will see that the mouse becomes activated, and when the mouse is held at the level of the text then a series of icons will appear overriding the text, these will disappear again if the mouse is raised above the text. You may for a start wish to mark on points as part of a pulse which Analook excluded, and this can be done by clicking on the 'Mark on points' icon. Next, drag the mouse across to form a box around those points you wish to include, after taking your finger off, these points should change to the included colour. The same can then be done to exclude points except click on 'Mark off points' and again define the area. 'Mark to exclude' and 'Mark to include' can change whole pulses and maybe useful if two bats have been recorded together at once and you wish to include only one of them. A whole pulse can be marked on or off by clicking on a single dot in its makeup, however we

have found this to be a bit erratic if there are differences in what the computer and operator are defining as a distinct call. Analook has also determined where the change in slope occurs, which may need to be changed using the 'Modifying bodies' icon. By dragging the mouse over a section of the pulse you will redefine that section as being the new characteristic slope. If you are wishing to extend the characteristic slope you will need to highlight the original part as well as the new bit. You may encounter problems if a call is of poor quality as Analook will then view the call as being two distinct calls on top of each other. The parameter calculations are based on everything that is on the screen so make sure you only have good pulses showing - either expand it out to fill the screen by using the F stops or use the horizontal cursors to manipulate the display to obtain a good sequence on screen.

Once you are happy with the look of the call displayed, the parameters can be saved to an Excel file by clicking the 'Send to file' icon or pressing 'Ctrl q'. At the bottom of the screen will appear *Parameters saved to file Parmas.txt*. Unlike the parameters shown at the bottom of the screen, which are means for all the pulses on the screen, the parameters for each individual pulse are saved. Parameters will be sent to this one file from all call files within a subdirectory. It is a good idea on first entering Parmas.txt to save it as an excel worksheet and rename it, as you can potentially generate confusion with multiple Parmas.txt files in different subdirectories. Summary statistics can be performed for all parameters and graphs plotted. This is a great way to characterize a group of reference calls from a particular locality and then use Analook to run through your unknowns and have their parameters displayed for comparison with your reference call parameters. You will probably find different parameters of greater value than others for this purpose. If you wish to analyze files saved with earlier software than Anabat5 then Analook may not be able to read them, but if you load them into the Analook subdirectory and go into filecon.exe, it will convert them into 5.1 compatible files.

Analook is a great aid for detector analysis and the best way to get the hang of it is to have a play around, so have fun using it! When you want to exit Analook, it is 'ctrl x'.

We'd like to thank Chris Corben firstly for writing the program and secondly for showing us how to use it!