

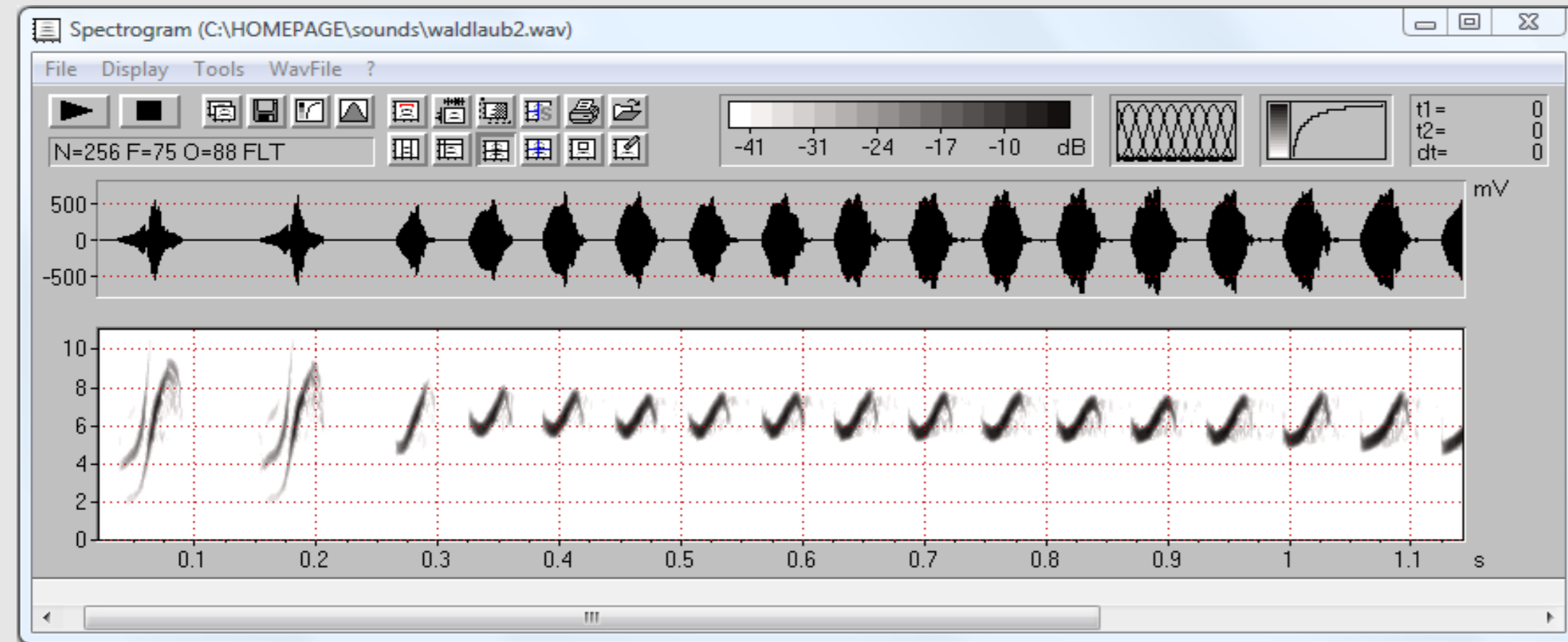
New versions of Avisoft-SASLab Pro, RECORDER and UltraSoundGate



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SASLab Pro

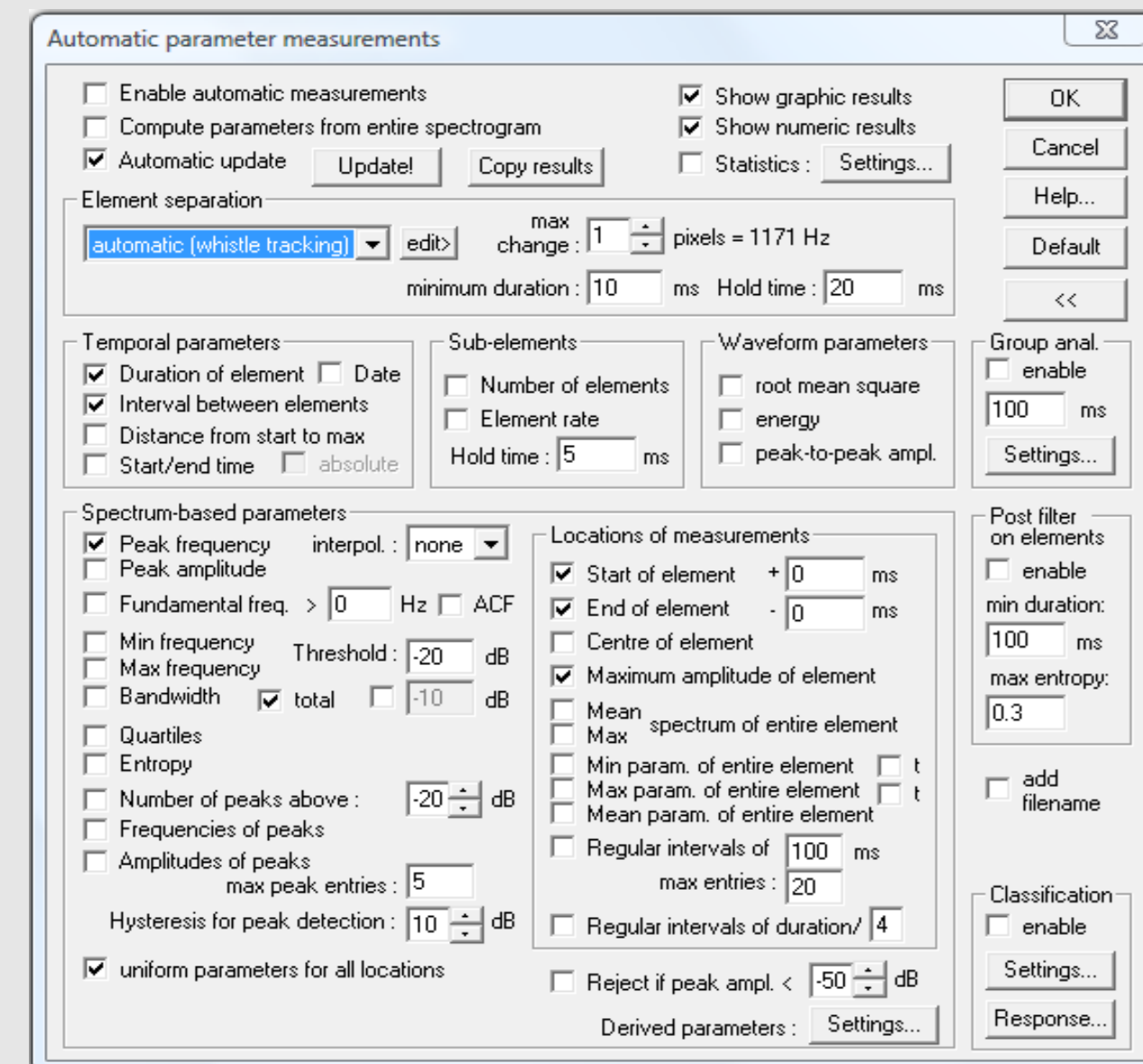
Since the Avisoft-SASLab Pro sound analysis software was introduced in 1993, it has been evolved into a versatile tool for supporting many aspects of bioacoustic research. The most recent version provides a couple of new features that are presented here.



A Syllable classification tool that is based on a spectrogram cross-correlation with templates allows identifying and counting certain spectrogram patterns in large sound files. A related batch processing command can run this classification procedure on a couple of sound files at once.

Filename	Band 1	Band 2	?	in	OK
8605.wav	573	2	6	383	
8606.wav	1577	80	116	1773	
8607.wav	584	24	12	620	
total number	2734	106	134	2074	

Sample screen shot of an automated call classification procedure discriminating two classes of ultrasonic rat calls ('Band 1' and 'Band 2') that has been applied to a batch of large sound files. Detected calls that do not meet the predefined class criteria have been assigned to the '?' class.

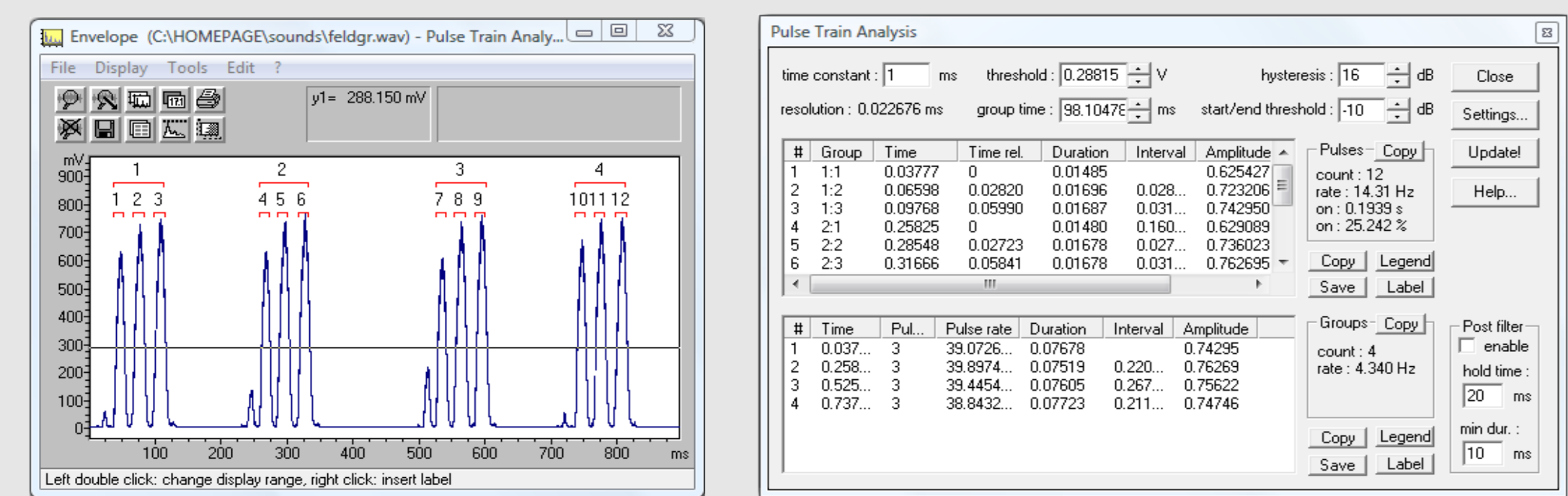


The Automatic Parameter Measurements tool has been further improved.

A whistle tracking algorithm now allows detecting even very soft whistle-like vocalizations that are almost buried in the background noise.

An additional parameter averaging option allows for instance to acquire the mean frequency of syllables.

A separate pulse train analysis option is dedicated to the analysis of the temporal patterns of various kinds of signals:

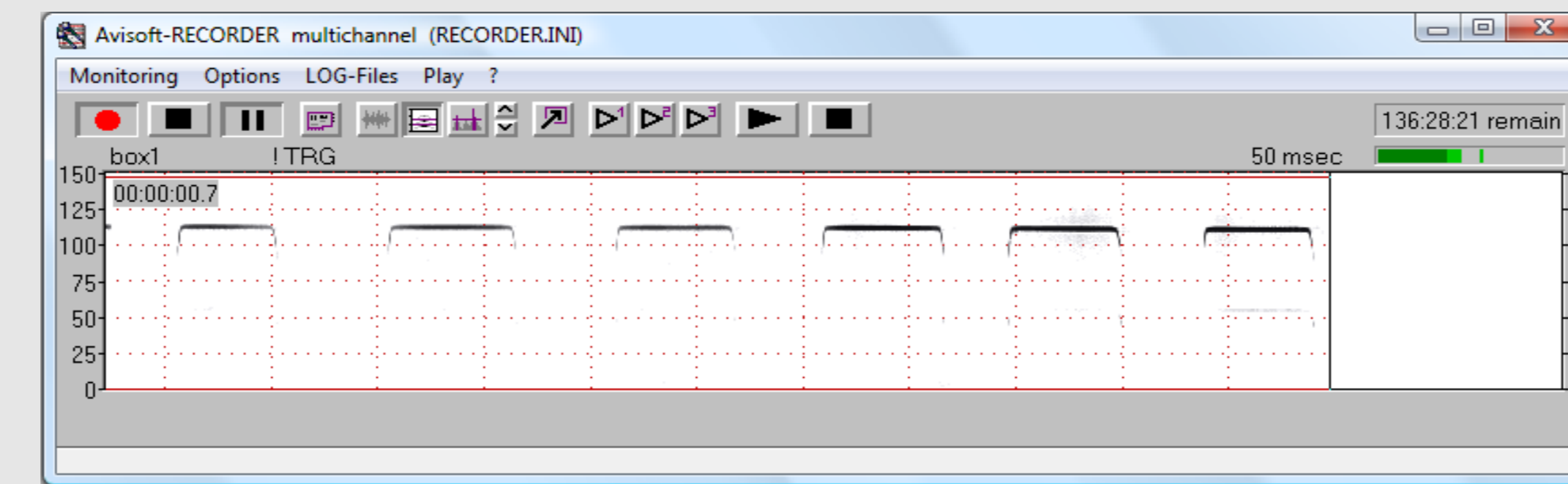


The Graphic Synthesizer module has got a few new commands that allow for instance to remove frequency modulations from natural whistles.

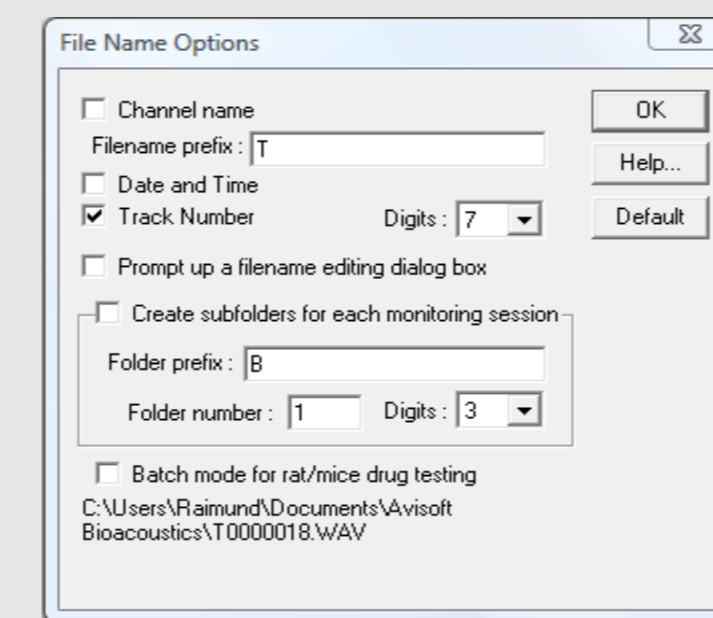
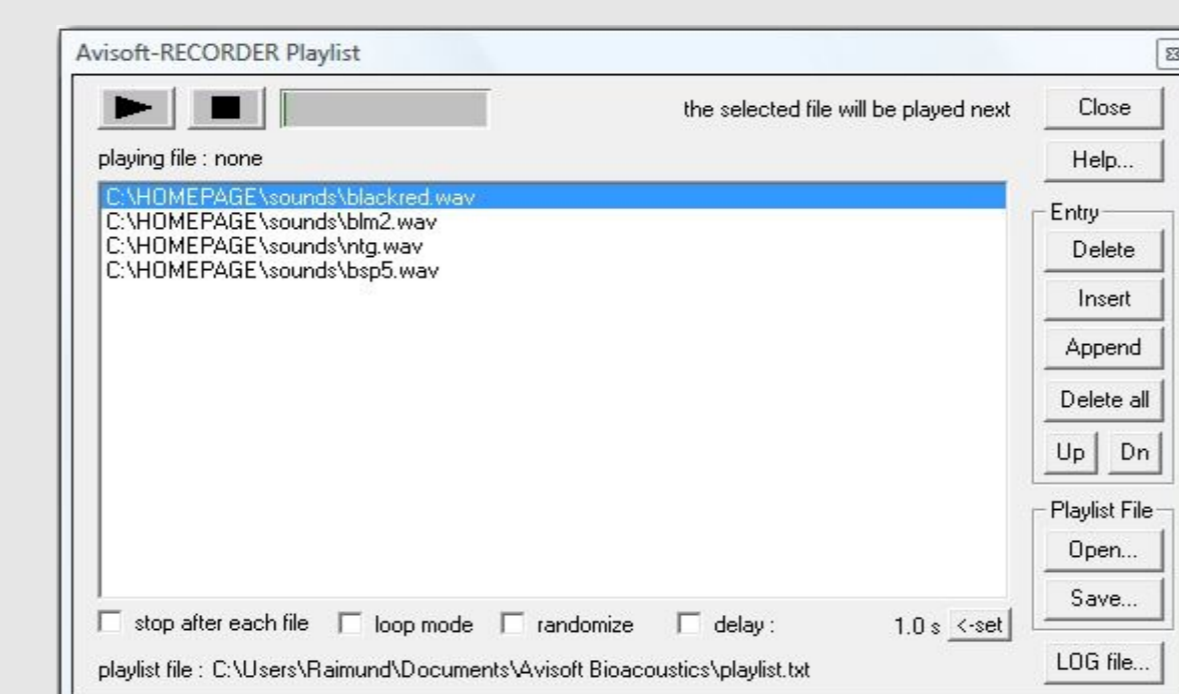
A georeferencing tool can combine GPS track log data (collected by a common GPS handheld unit or a GPS data logger) with the .wav sound files that have been recorded with a digital field recorder. The generated .kml or .gpx files can then be displayed in GIS applications such as Google Earth™.

RECORDER

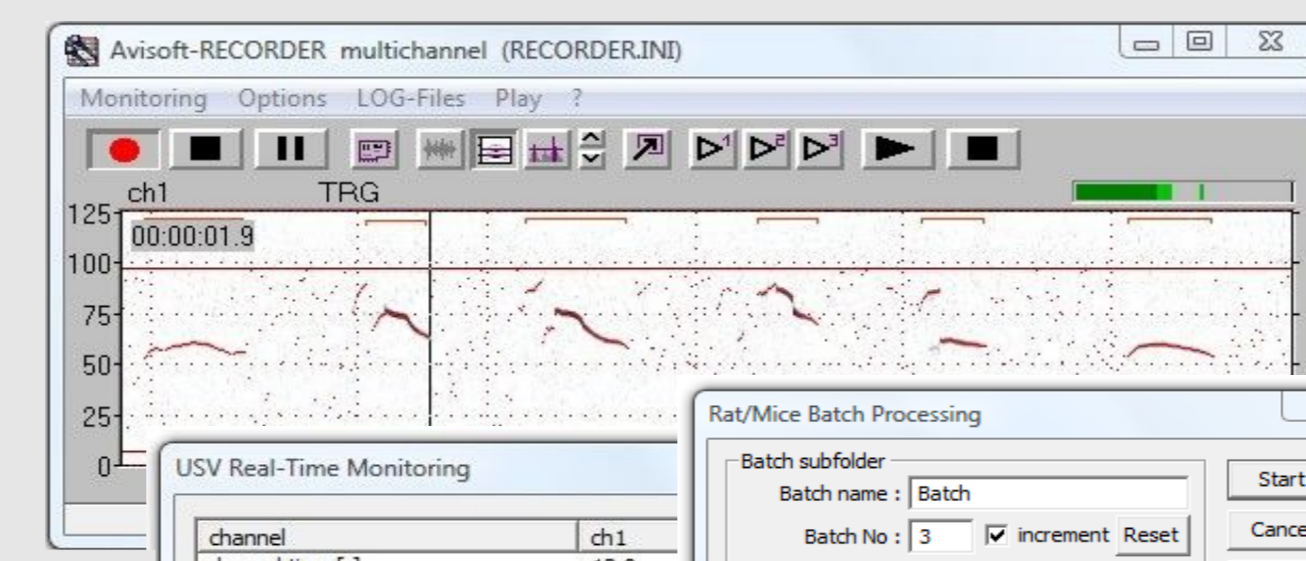
The Avisoft-RECORDER software has been further extended in order to support more applications and to better suit the users needs.



The playlist feature can play the selected .wav files in various ways. For instance, they can be played in a randomized order and at random intervals. For interactive playback experiments, the files can be assigned to user-defined keys:

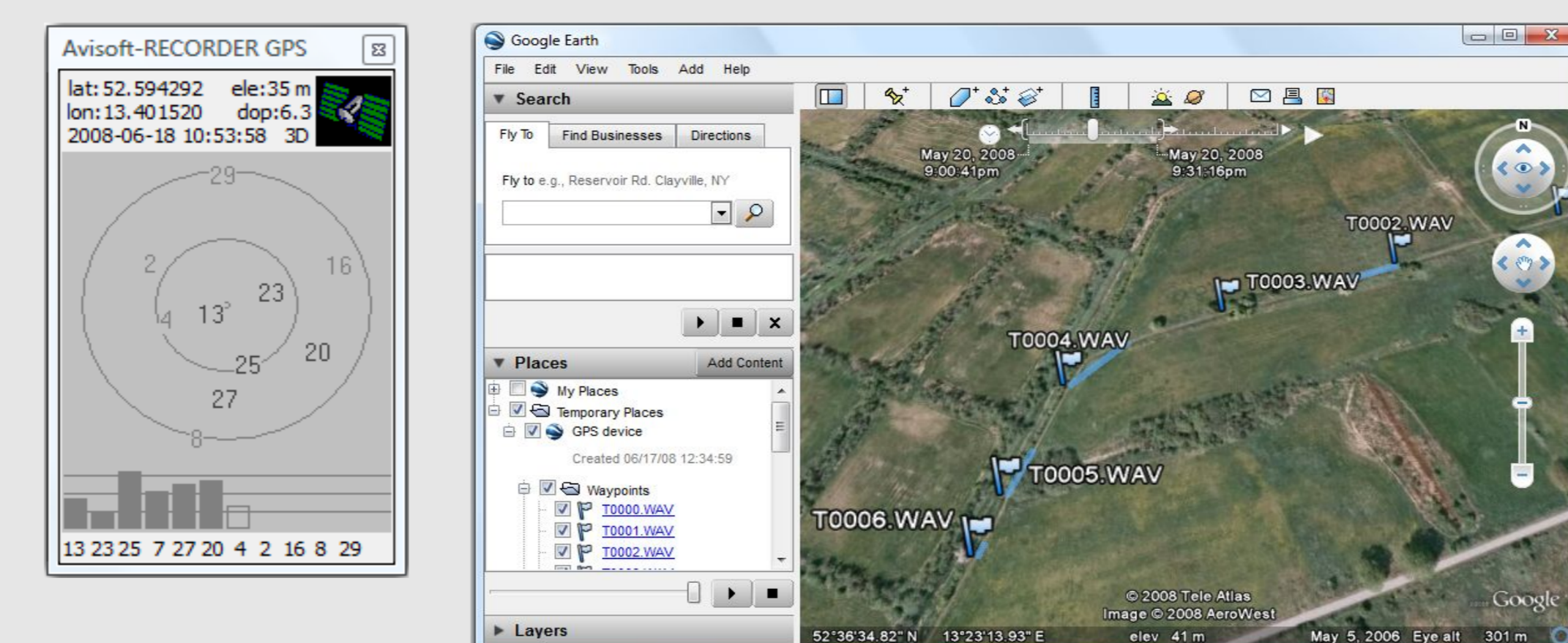


Additional filename options provide more flexible folder structures.



A couple of new options support recording soft ultrasound vocalizations (USVs) emitted by laboratory rodents during behavioural experiments or drug tests. The optional batch mode can help processing large numbers of animals.

A GPS data logging tool has been added for precisely documenting field surveys (certainly in conjunction with the UltraSoundGate 116Hm). Any NMEA-compatible GPS receiver, such as a Bluetooth / USB GPS mouse or a handheld GPS unit can be attached. Similarly to the related geolocation tool in SASLab Pro, the geographic coordinates of the recorded sound files are saved directly into common .kml or .gpx files. In this way, the navigation through the recorded sound files is quite simple.

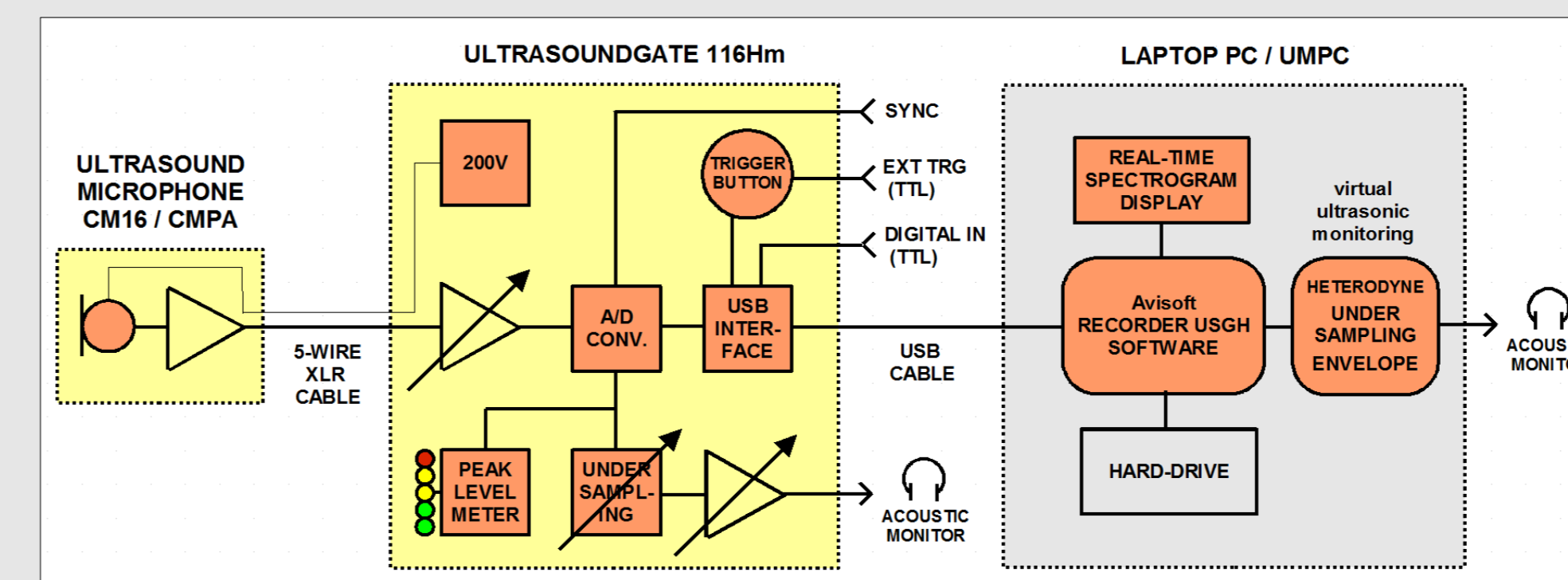


UltraSoundGate

The ultrasound recording hardware product line UltraSoundGate has been renewed in order to overcome the bus-bandwidth limitations associated with the previous 4-channel recording units and to better match the specific requirements in different applications both in the lab and in the field.

The USB 2.0 high-speed interface now enables recording units with up to 12 analog input channels that can all be sampled at up to 750 kHz. The new single channel units provide a maximum sample rate of 1 MHz and are available in different versions for either stationary lab use or mobile field use. Stripped-down models with limited I/O functionality and reduced maximum sample rates have been introduced in order to provide solutions for cost-sensitive applications.

All UltraSoundGate units can still be powered from the USB bus, which means that there is in most cases no need for extra power supplies.

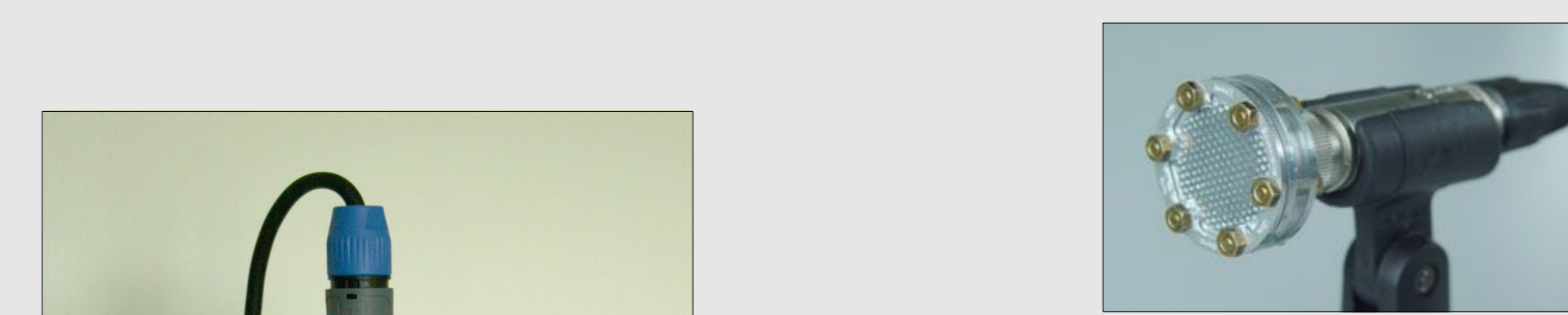


Functional principle of the single-channel unit USG 116H



An optional charge amplifier allows connecting passive hydrophones that are fitted with a BNC connector.

The new bus-powered UltraSoundGate Player includes a 16 bit D/A converter that can be clocked at up to 500 kHz, a 10 W power amplifier and a 200V bias voltage generator for driving electrostatic speakers:



The electrostatic speaker ESS CM16 provides a frequency range from 25 to 200 kHz (+12dB)



The dynamic speaker ScanSpeak can produce very high sound levels in the frequency range from 1 to 120 kHz.



The UltraSoundGate 116Hm has been optimized for mobile handheld use in the field. In combination with a small notebook computer and the supplied RECORDER USGH software, this unit provides an efficient way for identifying and recording air-borne ultrasounds in the field. Mini notebook computers (also referred to as subnotebook, UMPC or netbook) suited for this application are now available from various manufacturers for less than \$500.

The optionally available universal notebook carrying frame can hold the USG 116Hm, a GPS receiver and the notebook computer.



The model 116H has been designed for stationary use in the lab or in the field.



The bus-powered model 416H provides 4 channels that can be sampled simultaneously at up to 750 kHz.



The bus-powered model 1216H provides 12 channels that can be sampled simultaneously at up to 750 kHz.