CED eNews

The eNewsletter from Cambridge Electronic Design

#34 ~ March 2008 Established 1970

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News

Spike2 and Signal Training Days

Our U.K. Spike2 and Signal training courses will take place on Thursday 27th and Friday 28th of March at St. John's Innovation Centre, Cambridge. We have now been able to secure additional room at the Innovation Centre and have re-opened bookings for the Spike2 sessions for a limited time only. There are still places available for Signal users and those interested in attending the script or workshop sessions.

If you or any of your colleagues would like to attend, please follow the links to view the <u>training day program</u> and complete the <u>registration form</u>. Please give a short description of the type of research that you do and analysis that you are interested in. This will allow us to tailor sessions for specific requirements.

New distributor for China

We are pleased to announce that <u>Shanghai Qichi Instruments Co. Ltd.</u> are acting as our distributor for mainland China. For contact details please click on the link above.

Meetings and events

Physiological Society Focused Meeting: Cardiac & Respiratory Physiology University of Leeds Leeds, UK March 17th – 19th 2008

Experimental Biology 2008

Booth 244 San Diego, California April 5th – 8th 2008

Chinese Educational Conference of Physiology Guilin City Guangxi Province, China

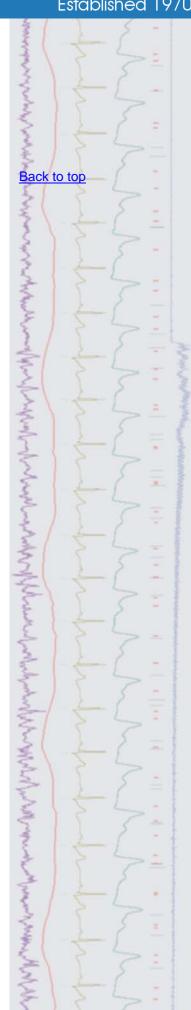
Guangxi Province, China April 10th – 13th 2008

18th Annual Meeting of the Society for the Neural Control of Movement

Naples Beach Hotel Naples, Florida April 29th – May 4th 2008

Vision Sciences Society Annual Meeting

Naples Grande Hotel Naples, Florida May 9th – 14th 2008



Latest versions of Spike2 and Signal

Updates for Spike2 and Signal are available from the <u>CED downloads</u> page, or by clicking on the links in the table below. Demonstration versions of the latest software are also available.

Spike2 downloads	Signal downloads
Spike2 version 6.07	Signal version 4.00
Spike2 version 5.19	Signal version 3.10
Spike2 demo	Signal demo

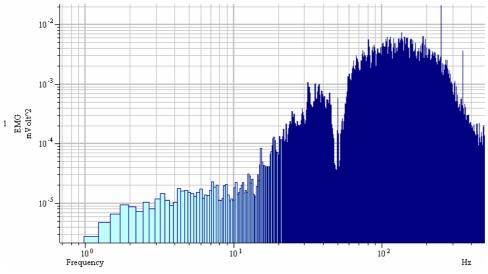


- Q. Can I display a power spectrum result with log axes?
- A. You can choose to display data in result and XY views using logarithmic axes. Both the X and Y axis dialogs have checkboxes to enable the log axes display.

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Y-range dialog

With the logarithmic checkbox enabled, the large tick spacing field controls the multiplying factor between large ticks and is set to 10 by default. The Show Powers checkbox is also enabled and will display the axis labels at large tick marks as powers of 10 if checked.



Log axes display on the X and Y range

From the Display tab of the Edit preferences dialog you can also set the number of decades to display by default when you select Logarithmic mode in the X and Y-axis dialogs.

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Spike2 preferences	×		
General Display Sampling Conditioner Scheduler Compatibility			
Settings Line thickness for: <u>A</u> xes Hairline <u>D</u> ata Hairline <u>D</u> ata			
Metafile output resolution for picture export Width scaled to 8000 units			
Use enhanced metafile format (EMF) for clipboard and pictures			
Use lines in place of rectangles to draw metafile axes			
Do not compress metafile waveform output when many points per x pixel			
Standard Display shows lowest numbered channel at the top			
☐ Y axis drag may not invert axis range			
Log axis default decades 4 芸 Sonogram Colours			
OK Cancel Apply Help			

Edit preferences dialog

Signal

- Q. How do I set a waveform channel from a given frame to be used for arbitrary waveform output in the pulse dialog?
- A. You can copy and paste frame data in Signal simply by using the Edit menu Copy and Paste commands or the standard keyboard shortcuts of Ctrl+C for copy and Ctrl+V for paste. The data copied to the clipboard is that which is displayed in the selected window. In this way data can be copied and pasted between data files, result views and XY views as well as used for arbitrary waveform output.

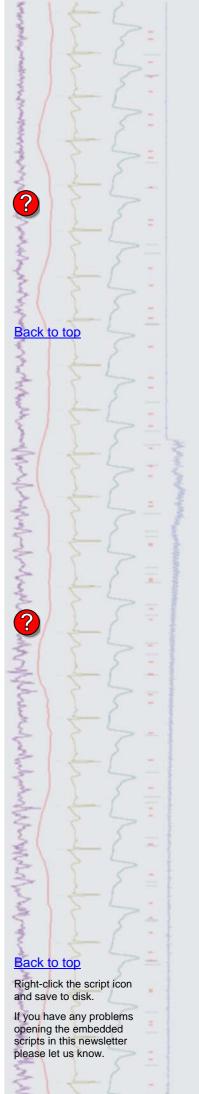
You can set up an arbitrary waveform play area in the pulses dialog by clicking and dragging the arbitrary waveform output icon from the palette and dropping it on an enabled DAC output to create an output wave area as seen below. With the area selected you can paste data from the clipboard using Ctrl+V or rightclicking in the play area. You can match the output play rate to the original sampling rate used to acquire the data from the Paste waveform dialog.

		Paste waveform	<u><</u>	
	Clipboard holds 3222 points on 1 channels sampled at a frequency of 62500 Hz, (duration 0.051552 seconds).			
		Use clipoard data starting at data offset		
DAC		Waveform pulse item outputs is 3222 points of data on 1 DAC channels at 62500 Hz (duration 0.051552 seconds).		
9		Modify 1 outputs, start on DAC 0		
		Overwrite 3222 points starting at offset 0		
	0.00 s 🛛 🔽 Output length set to end of pasted data			
	K > Del Copy			
	Arbitrary waveform to	OK Cancel		
	几月几 DAC select 1	Start (s) U.UU4	Ţ	
	🛄 🕂 🗠 Rate (Hz) 62500	Points 4222 Cancel		
(Help		

Pre-recorded action potential data copied for waveform output

Scripts: Spike2

- Q. Is there any way to test on-line scripts on existing data files? It is quite time consuming to set-up and run an experiment each time I want to test the on-line script that I am currently working on so it would be very useful to be able to use a re-running data file for testing purposes.
- A. The attached script, OnlineTest.s2s, is an example 'skeleton' that can be used to test on-line control and analysis functions on an existing data file. The script contains an idle routine which replays a selected channel in a data file and



keeps track of the current time. You can insert your own code for on-line analysis into the idle routine in this example.

Scripts: Signal

- Q. Is it at all possible to control older Magstim 200 series models that don't have a serial line connection? There is a modification available for these units that introduces a parallel port which can be used to control the intensity settings so is there any way to interface to this from the 1401?
- A. The attached script, Ctrl200series.sgs, can be used to control older Magstim 200 models that have been fitted with the parallel port modification, using multiple states to control the 1401 digital outputs. The script creates a suitable sampling configuration and allows the user to specify the Magstim output intensities and interval between outputs for each state used. The connection between the Magstim parallel port interface and the 1401 digital outputs can be achieved with a modified cable (contact us for details).

Did you know ...?

The automate tab in Spike2 and Signal sampling configurations now contains options for generating file names for data files that include the data and time at which the file was created.

Sampling configuration - C:\Spike6\LAST.S2C*		×
Channels Resolution Mode Sequencer Play waveform	Automation	(
Automatic file name generation		
Directory path C:\Spike6\data\		Browse
Name template Data_00	yymmdd_000: ddmmyy_000:	080304_000 040308_000
Data security Starting Flush to disk every 2 minutes Image: Comment file at end of sampling Image: Starting Image: Save file at end of sampling Image: Starting Sample bar Starting	Month (01-12): Year (00-99): Year: Hour (00-23): Minute (00-59): Second (00-59):	
Label Comment		
OK Cance	l Run now	Help

Spike2 sampling configuration with file name template options

Recent questions

- Q. I would like to be able employ reusable functions in Spike2 scripts. Is there a way for scripts to call functions stored in other scripts without having to copy and paste them into every script that needs them?
- A. The script language in both Spike2 and Signal support #include statements. This allows the user to include existing script files that contain definitions or userdefined functions and procedures into a script, rather than copying and pasting sections of code from one script to another. See the on-line help for more information on using the #include statements in scripts.

User group

If you have any comments about the newsletter format and content, or wish to unsubscribe from the mailing list for this newsletter, please notify <u>sales@ced.co.uk</u>.

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