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## News

### Training Days

Once again this year, we will be holding our US Spike2 and Signal training course on Thursday 12<sup>th</sup> and Friday 13<sup>th</sup> of October, prior to the Society for Neuroscience meeting in Atlanta. The venue will be the [Sheraton Atlanta Hotel](#). These training days are for both existing and prospective users of Spike2 and Signal and cater for the beginner – with introductions to the software, through to advanced users – with sessions on script writing and output stimulus generation and control. There is our popular Workshop thread where you can discuss your particular requirements with a CED engineer or programmer in a small group environment.

If you or any of your colleagues are interested in attending the course, please follow the links to view the [training day program](#) and complete the [registration form](#). 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.

### Meetings and events

#### **Society for Neuroscience Annual Meeting 2006**

Atlanta  
October 15<sup>th</sup> – 18<sup>th</sup>

#### **American Heart Association Scientific Sessions 2006**

Chicago  
November 12<sup>th</sup> – 14<sup>th</sup>

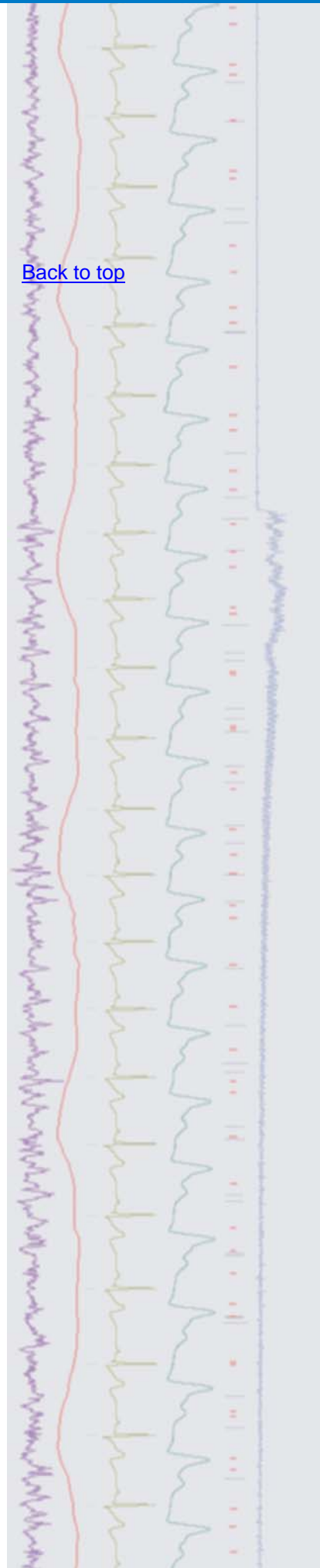
### Latest versions of Spike2 and Signal

The latest updates for Spike2 and Signal are available from the [CED downloads](#) page, or by clicking on the links in the table below. Demonstration versions of the latest software are also available. Spike2 version 6.01 will soon be ready for release as the first revision update for registered users.

Spike2 downloads	Signal downloads
<a href="#">Spike2 version 5.15</a>	<a href="#">Signal version 3.07</a>
<a href="#">Spike2 version 4.24</a>	<a href="#">Signal version 2.16</a>
<a href="#">Spike2 v6 demo</a>	<a href="#">Signal demo</a>

A full list of the new features and changes in the latest software versions is available from the website.

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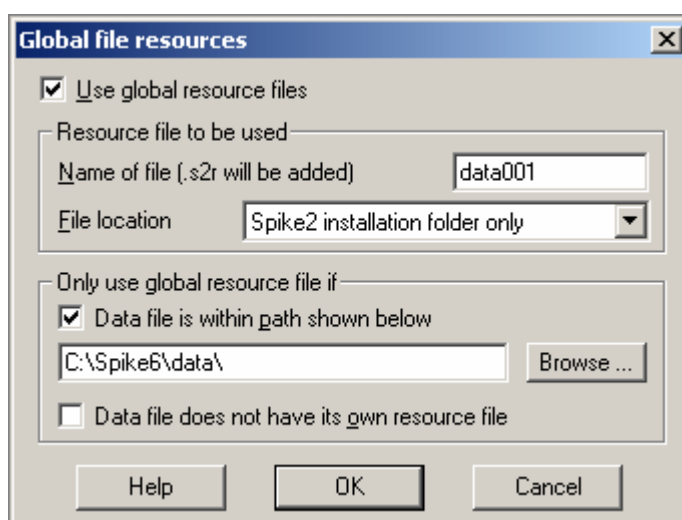




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- Q. I use active cursors to automate measurements from my data and would like a way to copy cursor settings to each file in a given folder.
- A. Spike2 data files are saved with an associated resource file. This will have the same name but with the extension .s2r. These resource files contain information about the channel display, cursor positions, active cursor parameters and other settings so that the file can be re-opened with exactly the same screen appearance and cursor settings it had when the file was closed. Using the Global resources command from the File menu it is possible to nominate a single resource file to apply to multiple data files. This is particularly useful when reviewing data stored on a read-only medium such as CD's or DVD's, as Spike2 is not able to update or add a resource file.

For this example, to apply settings from one file to all data files in a given folder, open the resources dialog and enable it by checking the 'Use global...' checkbox. You can then enter the name of the resource file you want to use (this will have the same name as the file you want to copy the settings from) and set the resource file location from the drop-down list. Additional fields in the dialog allow you to specify which files should have the resources applied. Set the data file path to only apply settings to files in a single folder.



*Global resources dialog*

## Signal

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- Q. I am using a Micro1401 and Signal for EMG recording and generation of precisely timed TMS pulses. I have written a script which controls different recording conditions and I am now looking for a way to pause and continue the script via a foot switch while recording. Is there any way to do this?
- A. User-defined toolbars can be created via the script language to give control and allow interaction with the running script. Buttons created in the toolbar can be linked to functions in the script such as starting and stopping sampling and can be linked to hotkeys on the keyboard for easier access. The attached example, `KeyboardPause.sgs`, generates a toolbar with buttons to create a new file and pause and resume sampling. This pause button is linked to the Spacebar on the keyboard so the pause and resume can be controlled from a single keypress.

There are foot switches available that can generate keyboard characters via a USB connection to the host computer and these could be used to control button presses in a script. We currently have a customer testing a foot switch control; example equipment can be found [here](#) to give entry of up to 4 individual keys.



**Scripts: Spike2** 

- Q. Is it possible to apply a time shift function to event and marker channels? I know how to do this to waveform channels using the Channel Process functions but would like to be able to shift events as well.
- A. The Channel Process functions can only be applied to waveform channels, as often they directly affect the data point values. The attached script, `TimeShiftEvents.s2s` can be used to copy event or marker times from the currently selected data file to a new permanent channel in any open data file. The script creates 2 cursors with which you select the data range to copy and you can apply an optional time shift by selecting the start time for the data in the new channel.

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Right-click the script icon and save to disk.

If you have any problems opening the embedded scripts in this newsletter please let us know.

**Scripts: Signal** 

- Q. I would like to be able to produce spreadsheet text output of a nominated channel that includes all overdrawn frames.
- A. The attached script, `OverdrawnAsText.sgs` will create a spreadsheet format text file of data from all frames in the frame display list of the current data file. The user nominates the channel to extract the text values from and the script collects the channel data from all frames in the display list. The user is then prompted to save the spreadsheet output as a text file, which can then be opened in Signal or in a spreadsheet program.

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Right-click the script icon and save to disk.

If you have any problems opening the embedded scripts in this newsletter please let us know.

**Did you know...?**

You can create or fetch vertical cursors in Spike2 by holding Ctrl and pressing the appropriate number key on the keyboard. For example, `Ctrl + 1` will create or fetch `Cursor(1)` in the current view. In Signal vertical cursors are created using the `Ctrl + |` key in compatible view types.

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**Recent questions**

- Q. I have just recently joined a research group that has a Power1401. There are only 8 ADC inputs on the front of the unit and I would like to use up to ten channels. Is there any way to expand this unit to include more channels?
- A. The Power1401 comes with 16 ADC channels as standard. 8 of these are found on the front of the unit as BNC connectors and a further 8 channels are available as pin inputs on the rear analogue expansion port. This rear expansion port also includes two additional DAC outputs to give 4 in total. We offer several expansion options in the form of top-boxes for users who require more inputs and outputs than are available on the Power1401 main unit. Top-boxes that offer ADC and DAC channels are always in addition to those already available on the standard unit, so, 8 ADC inputs and 2 DAC outputs are always available for use from the analogue expansion port.

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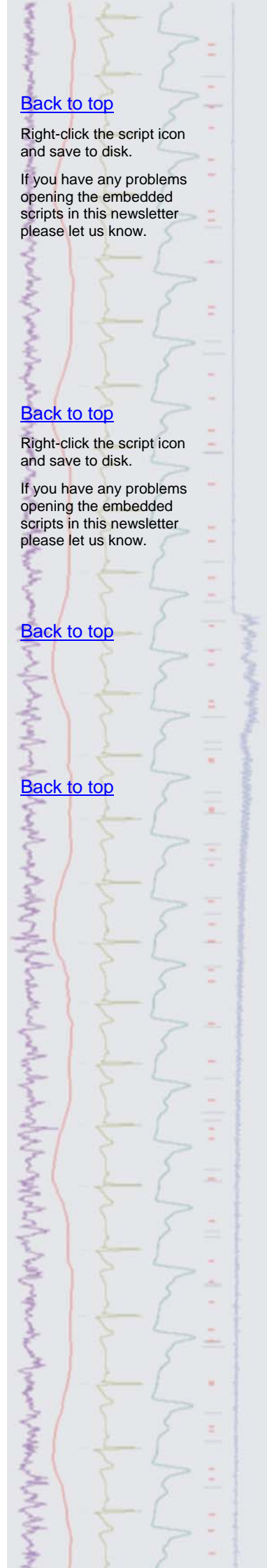


Rear-panel analogue socket



Pin	Function	Pin	Function
1-2	No connection	31-32	No connection
3-10	GND	33	ADC input 8
11-12	No connection	34	ADC input 9
13-14	GND	35	ADC input 10
15	No connection	36	ADC input 11
		37	ADC input 12
16-30	GND	38	ADC input 13
		39	ADC input 14
		40	ADC input 15
		41-42	No connection
		43	DAC output 2
		44	DAC output 3
Screen	Mains earth		

*Power1401 625kHz analogue expansion socket*



## 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 [sales@ced.co.uk](mailto:sales@ced.co.uk).

