



Welcome to Soundshaper 6! This version introduces several new features designed to improve workflow.

## INTRODUCTION

For newcomers: Soundshaper is a front-end for CDP sound-transformation programs (though it can also run CSOUND scripts). CDP is a very comprehensive system, though it doesn't run in real-time, so it has not been developed as a set of plug-ins for a DAW. Instead, it processes soundfiles. Soundshaper assembles a custom script for each chosen process and runs this in the background.

Soundshaper is a standalone program built around a very simple model:

- Choose an input sound on the **MAIN PAGE**
- Choose a process, also on the **MAIN PAGE**
- Set some parameter values for the process, on the **PARAMETER PAGE**
- Run the process and return to the **MAIN PAGE**

Processes are typically chained together to create a **patch**. The chains are depicted in a Patch Grid on the Main Page, reading from left to right along a row:

	1	2	3	4	5	< 6 >
A >>	PvocAnal	Tstretch	PvocSynth	Vibrato	Stack	Loudness
B						
C						

Each cell in a row is the input to the cell on its right and the output of the cell to its left (if any). Each row represents a separate chain of audio processing.

## PREVIEWS

The core of the new features in Soundshaper 6 is a preview facility on the Parameter Page, allowing the user to quickly experiment with and compare different parameter settings, before returning the chosen one to the Main Page.

A soundfile display has been added to the Parameter Page, mirroring that on the Main Page. Loops and marker settings can be shared between the two pages. Parameters are now grouped in threes across the page.



To run a preview with the current set of parameters, click the **PREVIEW** button instead of **RENDER** (formerly the **OK** button). The soundfile display then shows and plays the previewed result, while a preview number appears below the **PREVIEW** button:



You can compare this with the source sound by clicking the checkbox **Play Source**.

The preview up/down arrows allow you to re-select an earlier or later-numbered preview and its set of parameters. 99 preview slots are currently available. (Do not click Preview each time, as each click of the **PREVIEW** button generates a new preview.)

## RENDER

When you are satisfied with a choice of parameters, click **RENDER** or hit **CR** to return it to the Main Page. Until you have selected a new process, you can still return to the Parameter Page and your Previews. Note that clicking **CANCEL** deletes the current set of previews; however, you could save parameter sets via the Snapshot buttons if you're not sure.

There is no obligation to generate a Preview, of course. You can also recall a Preview, tweak a value or two and go straight to **RENDER**.

For Spectral processes, the Parameter page displays and plays the **.wav** equivalent. The soundfile length is shown below the display, but the Infile Length of the true input file – the spectral one – is also given; this is invariably slightly longer.

If a Preview is not possible, the **PREVIEW** button is not shown. In addition, some kinds of input file cannot be displayed. This particularly applies to Pitch Data files (**.frq**) and Envelope files (**.evl**).

## DATAFILE EDITING

Automation in CDP and Soundshaper is achieved using "breakpoint" text files (**.brk**) of time-value pairs. The editing of these and other datafiles has been overhauled, with a soundfile display also added to the redesigned **Graph-Edit** page and synchronised with the editing of time-values. All CDP datafiles, especially non-breakpoint ones, have been catalogued, so that Soundshaper knows the requirements of each and can edit them graphically where appropriate.

When automation is selected, normally by clicking a **T-V** ("time-vary") checkbox, a **Data Memo** appears, initially with some default values. (If the datafile is compulsory the Memo appears whenever that parameter is selected.) If there are no default values, you are invited to accept some very basic default ones, so that there's something to edit further.



The Option to auto-scale time-varying datafiles (Shift+F8 on either the Main or the Param. page) should normally be left checked, to ensure that time-values do not exceed the length of the file. However, the intermediate times between start and end may not always be appropriate, which is where some new editing features come in.

## MARKERS and LOOP POINTS

As on the Main page, time points can be entered as Markers on the Parameter page. The number of available Markers on both pages has been increased to 100.

Markers chosen on the Main page are normally passed to the Parameter page, and vice versa. This action is controlled by **Option F3**.

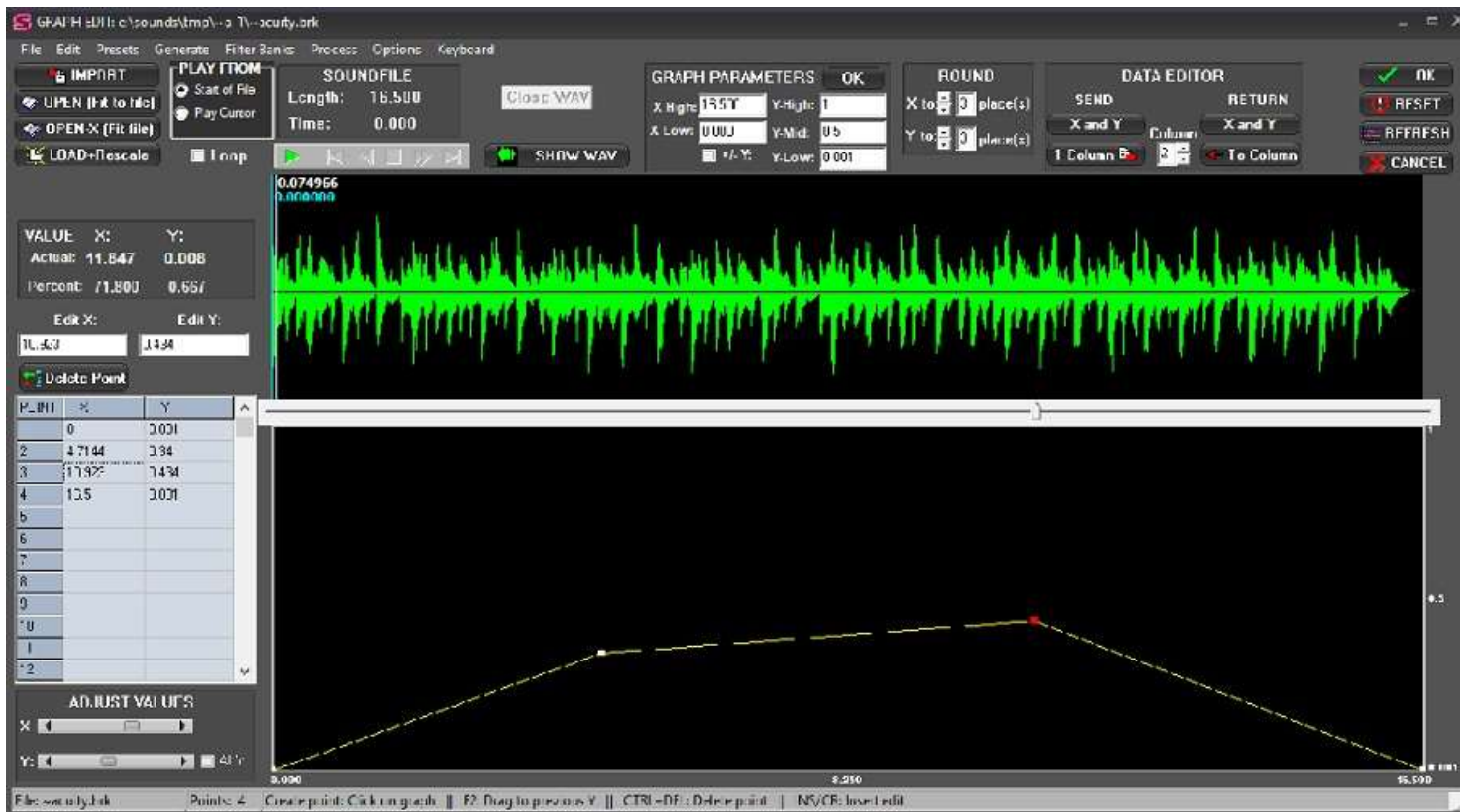
The **LoopPoint** and **Endtime** buttons add the current loop-start and file-length values to the Markers list, as on the Main page. This allow you to step through the sound, adding suitable time-points one by one. Additionally, on the Param. page, if a datafile is open in the Data Memo and the **LoopPt to Data** checkbox is checked, the time-point is also added to the data list. This applies similarly to adding the End Time.

Alternatively, LoopStart to Left Marker (see Markers Menu) puts the Loopstart time into the Left Marker slot, which must be empty. If **LoopPt to Data** is also checked, it replaces the time on the current line in the Data Memo (where the cursor is). Another option is Play Point to Markers (F3), which adds the play-cursor time to Markers; this can be done while the sound is playing.

**Markers to Data Memo.** You can send all the Markers to the Data Memo, or send times from the Memo to Markers. Both of these operations are found in the Markers Menu. For **Markers to Data Memo**, a popup query offers a choice of overwriting the existing times (but not the values) or clearing the Memo and putting in the marker times and basic default values (the non-time-varying default is used). This latter option is a good starting point for graphic editing (see below). Some care may be needed, with the overwrite option, that the resulting times within the Data Memo are still in ascending order. (This is a basic requirement for times within CDP datafiles.)

## GRAPH-EDIT PAGE

If the parameter is Graph-Editable (and all breakpoint files should be), an **EDIT** button is visible below the Data Memo (as before). The Memo contents are sent to the Graph-Edit page which now also has a soundfile display (if appropriate):



For technical reasons, the soundfile display is a screenshot of that on the Param. page (and a small snippet of audio may be heard when it is made). The sound is playable, but there are no Markers or Loops. Dragging an edit point left or right moves the play cursor in turn, to align it with the display. Clicking **OK** returns the table values to the Param. page Data Memo, as before.

For short sounds, the Graph-Edit display is automatically zoomed. This is currently a fixed zoom. The soundfile display on the Param. page, from which it is taken, fills the full width of its display canvas at 20 seconds; the zoom factor is therefore 20 divided by the soundfile-length, if the length is less than 20 seconds (otherwise there is no zoom). It may be possible in future to have a similar zoom on the Parameter page too.

## SAVE CHANGES

Any changes to the Data Memo brings up the **SAVE CHANGES** button, as before. **It is important that this button is clicked before clicking PREVIEW or RENDER.** This is so that changes can be saved to an appropriate temporary file.

You may notice that the name of the datafile changes during Previews. While this is just an automatic procedure, an explanation may be helpful for some users.

Default parameter breakpoint files are normally stored in <User-Folder>\<Process-name>\<Parameter-name>.brk (and other datafiles similarly). You can save your own default values to this file if you wish (using the Data Memo **SAVE** button). You can of course load your own datafiles as appropriate for a particular process or project.

When **SAVE CHANGES** is clicked, the data list is saved to a temporary file for the current patchgrid cell. This makes the patch portable and leaves the default or project version intact. A typical name might be **~A\_1\~width.brk**. Previews use a notional patchgrid row X, so if **PREVIEW** is clicked, the name might change to **~X\_1\~width.brk**, then when **RENDER** is clicked, it will change back to **~A\_1\~width.brk**, though possibly with different values from before, according to the selected Preview.

These name-changes are internal workings to accommodate the endless datafiles within CDP. The main thing for the user is simply to click **SAVE CHANGES** before **PREVIEW** or **RENDER**.

## CDP RELEASE 8

Soundshaper 6 has provision for many of the forthcoming CDP Release 8 functions. Until CDP8 is released, however, the appropriate programs will not be in your **\_cdprogs** folder, so cannot be run (a warning is given), but their functionality and parameters can still be explored.

## PROGRAM GROUPS AND MERGERS

To accommodate the new programs without selection menus becoming swamped, various functions have been grouped together into process groups on the same Parameter Page.



Others have been amalgamated as modes of a single Soundshaper process (for example, see Wavesets\Frequency). As this could affect existing preset collections, the old single processes are still available as legacy items (XTRA menu) and will still run within existing patches.

Two menus have been split up to avoid being too large: **EXTEND/SEGMENT** and **RE-ORDER**; and **MORPH** and **FORMANTS**.

## NEW COMPOSITE FUNCTIONS

Some processes involving pitch-data files normally extracted from the same source have been implemented as composite (multi-command) functions. The originals are still available, for experimentally running them with pitch traces from other sources. The processes concerned are BARE and ALT HARMONICS in the SpecUtils menu, and the REPITCH group of Spectral Pitch processes – APPROXIMATE, EXAGGERATE etc.

## MINOR CHANGES

### COPY CELL: SIMPLE vs EDITABLE

The copy-cell mechanism has been revised to reflect the original intention. Consider this patch:

0	< 1 >
A	Speed
B	Copy A_1
C	Speed
D >>	Speed

The sources (A\_0 and C\_0) are identical, as are the processes (A\_1 and C\_1). The first copy (B\_1) is a **SIMPLE COPY** – it is a copy operation: whatever is in cell A\_1 is copied to B\_1. In that sense it acts as a cell splitter.

The second copy was made with the new checkbox **EDITABLE COPY** selected. This cell shares C\_0 as its input, but it is a **SPEED** process in its own right and can have different parameter values from cell C\_1. One could transpose up and the other down, for example. That is not possible with the Simple Copy.

## OTHER CHANGES

- The **SPARE FILE** slot can no longer be used to load soundfiles.  
This slot is now purely for textfiles or other files that cannot be loaded or output to the patchgrid. Selecting a new soundfile or process now closes SPARE FILE automatically. For Information functions that output textfiles, these are still sent to SPARE FILE, but are automatically opened for reading.
- **Single presets (.prm files)** – added provision to include a preset description. When such a file is loaded to the Param. page (Load Snapshot or drag-and-drop), it is shown in the Presets box, though not added to a Preset collection.
- Some **keyboard shortcuts** have been altered, to achieve more consistency between MAIN and PARAM pages.
- **MAXSAMP**– For soundfiles, the maximum level (CDP: maxsamp) of each channel is now shown. This will help with normalising output where required.
- **F8 repeat process**– This now applies only to functional processes, not to information and equivalent functions.
- **Time as sample-count**– Some editing processes offer modes with time in samples or sample-groups. A new parameter has been added for these, as time in samples is not currently graph-editable.
- **Settings icon** has been added to toolbar at top of page.

## THEMES

The default theme (or "skin") has changed: a dark theme – Office2007 Black – is now the default. The previous default theme, Pulsar, is still available, however.

Although the default theme is embedded, if you have a specific theme mentioned in your Settings file, this is loaded instead. That is chosen under Settings | Change Skin and saved when you save your Settings (**Soundshaper.cfg** file). The new theme takes effect when you next open Soundshaper. To change theme while Soundshaper is running (and experiment with the options), click FILE | THEME and choose from the selection.

The choice of themes has been reduced to eliminate some that are not very effective. The remaining ones are:

- **DARK:** Office2007 Black (new default), Cold (darker background), Nautilus, WMP2008, TV-b (less effective)
- **MEDIUM:** Pulsar (former default), Dark Glass (not that dark), Gray Plastic
- **LIGHT:** MacMetal, XPSilver, Elegant, Next Alpha.