



The value of logic

Down in the depths of Cubase lurks Logical Edit: Steven Helstrip unearths its creative possibilities.

Logical Edit is a powerful yet seldom-used editor found lurking in Cubase's drop-down menus. It is rarely used since it can be difficult to grasp, but once you have uncovered how it works, it can save you hours of ploughing through grid and piano-roll editors sifting out unwanted data.

It can also be used as a sophisticated "search and replace" tool, enabling you to convert, say, volume to panning information while deleting any other Continuous Controller information (see *Hands On Sound*, February '96).

Logical presets

When Cubase is first installed it sets up ten Logical edit routines that can be found in the Functions menu (see *Fig 1*). Such presets include Fix and Fade-Out Velocities. As with all editing in Cubase, only selected parts are affected.

To get a feel for what Logical Edit does, first record and quantise, say, a percussion track that includes many instruments. Next, select the part and apply each Logical preset one by one, listening to the effect it has. The presets mentioned above carry out simple, yet useful, functions. But there are some less obvious presets, like Push Forward and DelShrtNotes, that may need explaining.

DelShrtNotes deletes notes below a certain length that are likely to have been keyed in by mistake when playing a diffi-

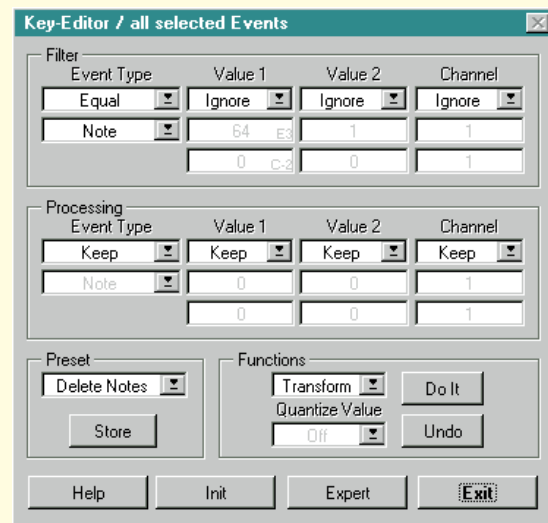


Fig 2 The Filter, Processing and Functions areas of the Logical Edit page

cult part. It's possible to change the criterion that specifies a "short note" (this will be covered later). Push Forward and Push Back behave similarly to track offset and permanently move data according to how it is set up. Half-tempo reduces the speed at which the selected part, or parts, are played back. It doesn't physically change the tempo at which Cubase is playing, or any parts other than those selected.

Editing presets

Before editing the presets it may be useful to understand how Logical Edit works.

Very simply, Logical Edit performs its tricks once filters and other criteria, such as ranges, have been set in the edit page. Filters "tell" the editor which data to work

with, and ranges specify values: for example, only process notes between E2 and E3. You can access the edit page from the edit menu or by pressing [Control]-[L].

Logical Edit operates in two modes; easy and expert. Most edits can be set up using the easy mode and this is what we'll examine now (expert mode and the more complex areas of easy mode will be tackled next month).

The Logical Edit page is split into three sections: Filter, Processing and Functions (see *Fig 2*). There is an additional dialogue box for naming and storing presets.

Filter

There are four columns in the Filter section that are used to select the events and ranges you wish to manipulate. The first column, Event Type, is fairly self-explanatory.

Events you can select include notes, CCs, poly pressure, aftertouch, program change and pitch bend. You cannot select velocity as an event since it is part of note information.

The first row, in column 1, enables you to set the basic condition for the filter and the second selects the event type. There are three conditions from which to choose: Ignore, Equal and Unequal. When Ignore is selected, all MIDI events will be affected by the filter. When the condition is set to Equal, only those events that are selected in the second row will be affected. If Unequal is selected, everything except the selected event will be affected.

When dealing with note events, the second column, Value 1, refers to MIDI note numbers (or pitch). If you are dealing with CCs, then Value 1 becomes CC number, etcetera. Like Event Type, Value 1 has conditions. These include Ignore, Equal, Unequal, Higher, Lower, Inside and Outside. Ignore means that all events (in this case, notes) will be affected. By setting the condition to higher, all notes higher than the value in row 2 will be affected.

Chord of the Month

This month's number is C7 with a flat ninth. It works nicely as an extended Dominant chord when playing in a jazz style in the key of F major.

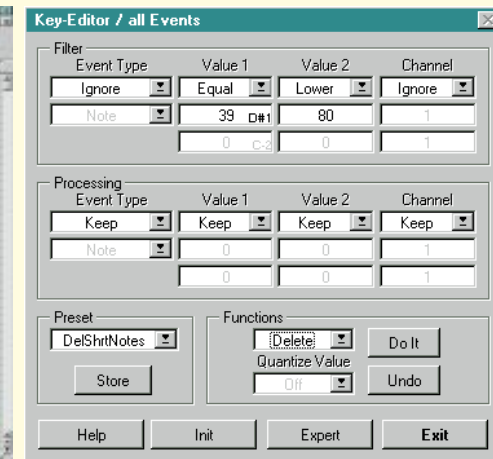
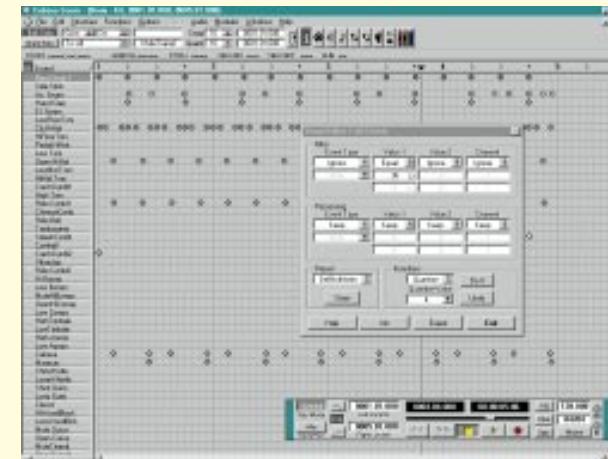


Fig 3 (far left) Un-quantised percussion

Fig 4 (left) Same track, different claps

Fig 5 (below) Delete certain aftertouch events

There is a third row for columns two, three and four. These enable you to set conditions that affect events within a range. For example, setting the condition to "Inside" allows you to set two values. If these values were to be set to 64 and 127, only events that are between 64 and 127 will be affected.

The third column, Value 2, relates to velocity (or CC values when working with CCs) and has exactly the same conditions as Value 1. The fourth column, which is rarely used, applies to MIDI channels. Sometimes it is only necessary to use the filters section to achieve results that would normally take forever using the list editor (see *Figs 3, 4 & 5* for examples).

Fig 3 shows a typical unquantised percussion track with many instruments playing the same part. The following example shows how to quantise just one instrument, or sound, within that part to retain a natural, or "live" sound. The instrument, or sound, to be quantised is the kick drum, which is mapped to C1, or MIDI note num-

ber 36. Under Value 1 in the Filter section, enter the condition "Equals" and the figure 36. This tells the Logical Editor to deal with this note only. Then, you need to tell the editor what to do with it. In the Functions dialogue, select Quantise with a value of four. And finally, press "Do it".

Fig 4 is based on the same percussion track. This example, though, is set up to delete all hand claps that have a velocity below 80. It involves setting up Value 2 to "Lower" than 80 and selecting delete in the Functions dialogue.

Fig 5 is set up to delete all aftertouch events greater than two.

Processing and Function

Once you have mastered the Filter section, the Processing dialogue becomes a very powerful and useful tool. It looks very similar to the Filter section, yet instead of setting Conditions you apply Operators. These define a process that Logical Edit should apply to the filtered events. Operators include Keep, Plus,



Minus, Multiply, Divide, Fix, Value 2, Dynamic and Random.

The best way to get acquainted with the Processing dialogue is to select preset Logical Edits to see how they are set up. For instance, if you look at Fade Out Velocity (*Fig 6*), you can see that the Filter is set up to deal with note events only. Value 2 (Velocity) in the Processing section is set to Dyn (Dynamics) and has a

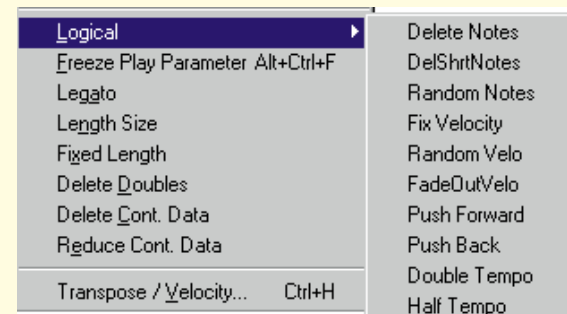


Fig 1 It's logical, Ed

D-Zone Solo AWE-32 Compilation and Wav

D-Zone's Loopisms for the AWE-32 compilation came into my possession several months back. With over 850 samples, it contains nearly half of D-Zone's entire sound library. The Solo compilation contains most of the rest of D-Zone's archive and is available as two separate CDs in either sbk or wav format.



You get more than 550 digitally recorded and edited samples ready for use in every conceivable style of dance-orientated music. The samples are compiled from the three volumes of WorkStation and Jungle Joose CDs. You also get working demos of Steinberg's entry-level sequencer, Cubasis, and Cool, a Windows wave editor. WorkStation 1 features samples from Roland's last attempt at making a decent analogue-style synth, the JD800, while WorkStations 2 and 3 are packed with "live" instruments from the E-MU Proteus range. Jungle Joose contains around 30 loops and, allegedly, the only bass sounds you will ever need — don't think so.

Samples are sensibly arranged within folders, which makes it easy to quickly find the right sounds and loops. There are also "low RAM" versions of the larger samples, enabling instruments to be loaded within the standard 512Kb on the AWE-32. This is a fantastic collection of dance sounds for an equally impressive price (see PCW Contacts).

● D-Zone Solo AWE-32 Compilation is distributed by Time + Space.

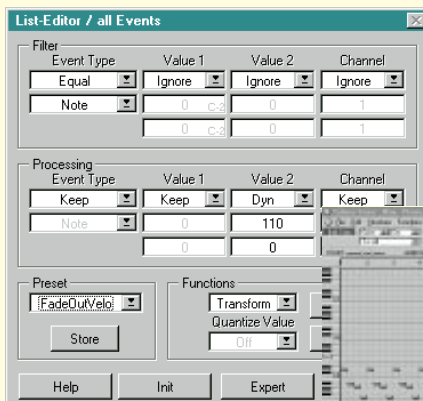
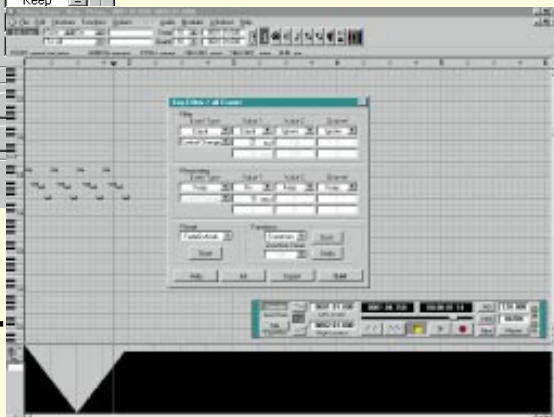


Fig 6 (above) Create a fade
Fig 7 (right) Go ahead: "do it"

Transform has been selected within the Function dialogue. When "do it" is clicked, all volume CCs are converted, or transformed, to pan CCs. If "Insert" is selected within the Function dialogue, then volume CCs are copied to pan CCs.



starting value of 110 and a final value of zero. Therefore, when the process is applied, a fade, or diminuendo, is created over the length of the selected part. To create a fade-in, or crescendo, simply exchange the two values. The values can be changed to begin and end at any level or velocity value you choose. To save the edit parameters, click "Store" while holding down the Alt key. You can then give it a name by double-clicking the preset that was replaced.

The next example (Fig 7) changes volume information (Continuous Controller no. 7) into panning messages (CC no. 10).

In the filter section, the Event Type has been set Equal to Control Change and Value 1 Equal to 7. This tells Logical Edit only to look for, or filter, Volume information. In the Processing department, Value 1 has been "fixed" to a value of ten and

Next month, we'll be delving deeper than deep into the depths of logical editing. Until then, have fun with these examples. If anyone has created any useful edit routines and would like to share them with other readers, please let me know.

PCW Contacts

Readers' contributions to the Sound column are music to our ears. If you have any hints or tips, any MIDI-related items or general comments, send them to the usual PCW address, or to steven_helstrip@pcw.cmail.compuserve.com

Time + Space (D-Zone Solo AWE-32 Compilation, £24.95) **01442 870681**

