Tutorial 1: Entering Notes with the Note Editor

The *Note Editor Menu* is probably the most complex menu within the sequencer and getting the most out of it requires a little patience and a little practice. This tutorial is intended to walk you through a typical edit session and perhaps show you a couple of hints and tips that will make future sessions quicker, more productive and more enjoyable.
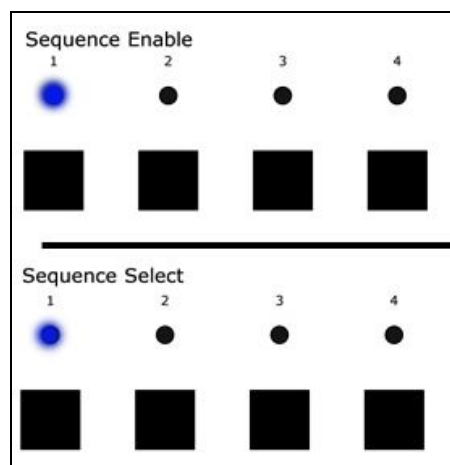
As mentioned elsewhere, there are three methods for entering note information into *ZEIT*. These are:

1) Pitch Control knobs
2) The Step Input Menu
3) System Exclusive Messages

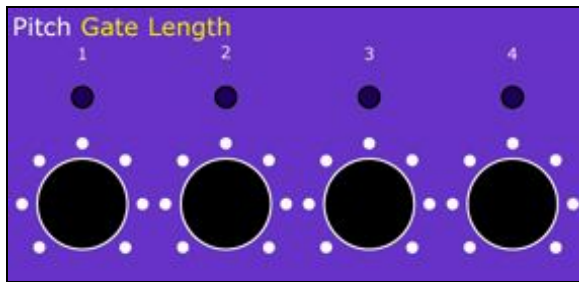In this section, we'll look at the first two methods.

Straight out of the box, *ZEIT* contains a small number of factory preset sequences. These are not protected in any way and may be overwritten by your own sequences.

Let's start with the first sequence. Use *the Sequence Enable* push buttons to make sure that only the first sequence is enabled. Next, make sure that any changes you make using the front panel affect just this sequence by pressing the *Sequence Select* push button on the bottom right of the front panel.

Press *Play* to listen to just Sequence 1 on its own and press the *Normal/Shift* push button so that the instrument is in *Normal* mode and the LED above the *Shift* push button is switched off.

Go to the top row on the front panel and slowly turn one of the pitch knobs in the clockwise direction. *ZEIT* will notice that you've changed the pitch of one of the steps and jump directly to the *Note Editor*. The display will show the new note values as you turn the knob.

The *Note Editor* can only show the pitch details for 4 steps at the same time simply because the display isn't big enough to accommodate any more steps. As a compromise, the *Note Editor* displays steps 1 to 4 followed by steps 5 to 8 then 9 to 12 and finally, 13 to 16. You can move between the steps using the *Enter* push button.

When you change a note value, the cursor jumps to the relevant step and will sit just to the left of the pitch value. You can continue to use the pitch knob to change the note value or, equally, you can use the *Data Wheel* instead.

The note values that you can select will depend upon the *force-to-scale* setting for the current scale. If *force-to-scale* is switched on then you will only be able to select note pitches within the current scale. So, if the C Major scale is selected then you will only be able to select the notes C, D, E, F, G, A and B. If *force-to-scale* is switched off then you can select any note pitch i.e. C, C#, D, D# etc.

Next, try changing a couple of pitch knobs at the same time. Notice what the display does. The display will show the new pitch value for the first note you changed but won't display any of the other notes until you've stopped changing the first knob. The step values themselves will be updated and you'll hear the new note pitch when the step is next played but you won't see the note value being updated. This is for technical reasons and stops the display jumping from one page to the next as you update the notes.

The Root Note and Octave Range

By *default* the sequencer only lets you choose notes in the range C3 to C6. Suppose that you want to select a note from a lower octave, say C2. To do this, we need to change the *Root Note* parameter.

```
06 Sequence 8      Seq 01
Root>C3 Octave 02
```

Each step in a sequence can have its own root note, however, there is a global setting in the *Sequence Play* Editor, which lets you set the root note for all 16 steps at once. This function also has a *hot-key* on the front panel in the *Pitch/MIDI* section labelled *Pitch*. Press this *hot-key* once and the cursor will point to the *Root* parameter. Use the *Data Wheel* to change the root note for all of the steps at the same time. Notice that changing this parameter does not affect the notes that the sequencer plays. This parameter only affects the notes available on the pitch knobs.

Next, notice the second parameter on this page. This is the *Octave* parameter and sets the number of octaves that the pitch knobs can cover. The lowest setting is 1 and the highest is 4. If the *Root Note* is set to C1 and the *Octave* setting is 1 then the notes available on the pitch knobs are restricted between C1 and C2. When this setting is 2 then the notes available on the pitch knobs are between C1 and C3. Why do we limit the range of notes available on the pitch knobs? The number of notes available under the MIDI specification is 128, which is over 10 octaves. Picking a specific note from such a wide range of values is difficult and so we chose to limit the range of the pitch knobs.

However, suppose that you want a sequence to have a mixture of notes from a number of octaves. As we said above, it's possible to set a root note for each step individually.

To do this, press the *Note Edit* push button on the menu bar and use the *Data Wheel* to scroll through the available pages until you find the *Root Note* as shown:

```
03 DeltaCityBlues Seq 01
Root>C5  C3  C5  C5    01
```
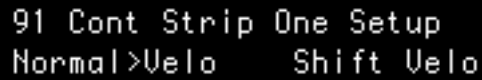
Press the *Enter* push button to step forwards through the steps. You can use the *Data Wheel* to vary the root note for each step in the sequence. This can be a bit slow and tedious and so we added another method to speed up the process.

What follows depends upon how you have the *Controller Strips* defined in the *System Setup* Menu. By default they should be configured to update MIDI Continuous Controller One and MIDI Continuous Controller Two respectively in *Normal Mode* and the Note Velocity and Root Note for each step in *Shift Mode*. For the purposes of this tutorial, go to the *System* Menu and scroll through the available pages until you come to the *Controller Setup* pages.

```
91 Cont Strip One Setup
Normal>CCOne  Shift Velo
```
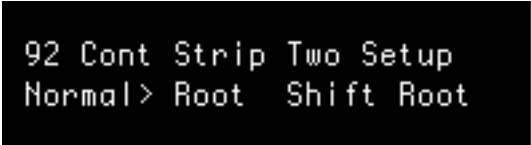
Use the *Data Wheel* to change the above settings so that Controller Strip One affects the Note Velocity in both *Normal* and *Shift* modes.

```
91 Cont Strip One Setup
Normal>Velo    Shift Velo
```

Go to the second Controller setup page and change the settings so that *Controller Strip Two* updates the *Root Note* in both *Normal* and *Shift* modes.
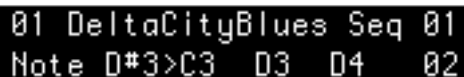
```
92 Cont Strip Two Setup
Normal> Root  Shift Root
```

Now, go to the *Controller Two* strip on the front panel and turn one of the knobs. You can now update the *Root Note* for each step directly from the front panel. Equally, go to the *Controller One* strip and turn one of those knobs. It's now possible to directly edit the *Note Velocity* for each step directly from the front panel rather than through a menu.

HINT: To move quickly from one menu to another or even to another page within the same menu, just press the relevant button on the menu quick select bar. This should save you a lot of time navigating through the various pages.

We can also input notes into a sequence using an attached MIDI keyboard. Press the *Note Editor* push button on the *menu bar* twice to return you to the *Note* page of the *Note Editor.*

```
01 DeltaCityBlues Seq 01
Note D#3>C3  D3  D4    02
```

Press the *Enter* button a couple of times so that the cursor points at *Step 2.* If you have a MIDI keyboard attached to the *MIDI In* port on the rear panel, try pressing a key. The note for the current step will take on the value of the key you just pressed. The note value is unaffected by the state of the *Force-to-Scale* setting or the *Root Note* setting for the current step and/or sequence.

Equally, if you now go to the *Note Velocity* page, you will find that the *Velocity* value for the currently selected note now reflects the velocity with which you played the note. This is a quick way of changing individual notes in a sequence but you can only change one at a time and you need to step through the entire range of steps using the *Enter* push button.

Using the *Step Input* menu

Dialling in a sequence using the pitch knobs is pretty fast but nowhere near as fast as just adding them in from a keyboard! Equally, some people find it easier to input notes directly from a MIDI keyboard and then use *ZEIT's* editing facilities to make their sequences jump around.

Press the *Step Input* push button on the *Menu Bar*. The first page is the one we're interested in.

```
e0 Step Input 1    Seq 01
Step>C4  F4   D4   E4   01
```

The *Step Input* section has a couple of operating modes that you can use to better match your compositional needs. These are addressed on *Page 2* of the *Step Input Menu* and we'll come to those shortly.

Press the *Enter* push button once so that the cursor points at Step 1. Next, press a note on your keyboard and watch the display. Step 1 will take on the value of the note you pressed on your keyboard and the cursor will jump to Step 2. This happens whether the sequencer is playing or not.

You can play as many or as few notes as you like. To skip past a note just use the *Enter* push button. When you've played all 16 notes in from the keyboard, the cursor will return to the home position. Use the *Data Wheel* to scroll to the next page.

By default the *Step Input* mode is set to *Step-Time* instead of *Real-Time*, which means that the cursor will only advance to the next step after you've pressed a key on your MIDI keyboard. In *Real-Time* mode, *ZEIT* will drop any note played on the attached keyboard on top of the current step, as defined by the step position LEDs. Use the *Data Wheel* to set the *Step Input* mode to *Real-Time* and then return to the previous page.

```
e1 Step Input 2    Seq 01
Mode>Step-Time  Skip On
```

Move the cursor so that it points to Step 1 and then play a note on your keyboard. If the sequencer is not playing, only Step 1 will be updated. Now press *Play* in the *Transport Strip* and start playing notes on your keyboard.

Changing notes in this way takes practice and patience but can create some wonderfully dynamic sequences. However, you do need to watch your settings in the *Keyboard Setup Menu* to ensure that you don't have any conflicts.

```
e2 Arpeggiator     Seq 01
Arpeggiator>On
```

Finally, we're going to look at using the *Arpeggiator* to input a sequence. Press the *Play* push button so that playback stops and, staying within the *Step Input Menu*, scroll down to the *Arpeggiator Status page*.

Use the *Data Wheel* to set the *Arpeggiator Status* to *On* and press a couple of keys on your keyboard. You won't hear anything. This is because the sequencer must be playing for the *Arpeggiator* to work.

Okay, press *Play* so that playback begins. Any other sequences that you might have enabled will begin to play back but you should notice that the currently selected sequence will not play until you press a note. Press the *Shift* push button and notice that the length of the sequence is set to 1 step and that this step is muted.

Now play and hold a couple of notes on your keyboard. Straightaway, you should hear a rising series of notes. This is the normal *Arpeggiator* function. But how do we get *ZEIT* to use the *Arpeggiator* notes as the basis for a sequence?

To do this, go to the *Arpeggiator Setup* page, change the *Latch* setting to *On* and press *Play.*

```
e3 Arpeggiator      Seq 01
Mode>Note        Latch On
```

As usual, playback begins. Carefully select the notes that you want to play and *ZEIT* will add each new note to its *Arpeggiator Buffer. H*owever, this time, they will not be released when you let go of them. These notes are said to be *Latched*. To release these notes you must stop playback, mute the sequence itself or go to the *Arpeggiator Setup* page and set the *Latch* parameter to *Off.*

Latched notes are held within the *Note Edit Buffer* for the currently selected sequence and you can use the normal *Note Editor* to change their respective values.