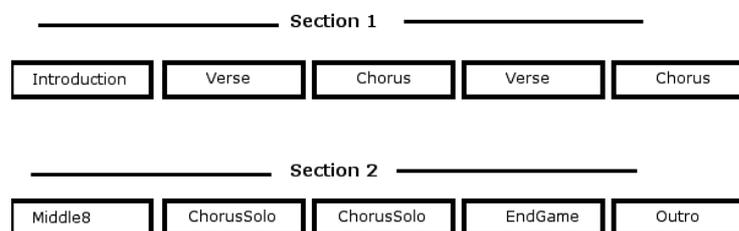


Tutorial 6: Using the Composer

In this tutorial, we're going to look at using the **Composer** to create a simple song from a collection of sequences. We'll use the Note Editor to enter the sequences and the Composer to chain the sequences together to form a song.

The song in question is a track entitled *Dust Devils* and a version of this track is available for download from the Infection Music web site for those who want to hear what it sounds like in advance. It's a fairly simple, dancy, trancey sort of thing, which may or may not be your cup of tea. However, don't let that put you off. The techniques used to put together *Dust Devils* can be applied to any other genre of music just as easily.



Let's start by looking at the overall structure of *Dust Devils*. The whole piece will consist of 27 **measures**, each of 16 steps. Each measure will be made up of one **part** (phrase), which may be the same as or different from the previous part – some parts may repeat more than once. Each part is made up of the 4 **tracks** corresponding to a particular voice part, eg. main sequence, kick drum, snare drum and bass line.

The first half of the piece (measures 1-16) contains an introduction, a verse and a chorus. The second half (measures 17-27) begins with the middle-8, a slightly reworked version of the chorus for the main solo and then finally, the end game/outro parts where we finish everything off.

ZEIT's Composer is limited to just 4 tracks and so we need to do a bit of forward planning so that everything fits together neatly. It often helps to sketch the structure of a composition on a bit of paper before you get in too deep. I like to look for short cuts –parts that repeat, parts that are silent etc.

Anyway, let's start at the beginning.

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The Introduction

The first sequence in Part 1 is just a single 16-note sequence. Enter the notes below using either the Note Editor or Step-Input and save the sequence as *DustSequence*.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C	C	F#	F#	C	C	F#	F#	C	C	F#	F#	C	C	F#	B

This is the only sequence that we want to have playing in Part 1 so the other 3 tracks must be silent. The simplest way to create a period of silence is to create an empty sequence – one where all of the steps are *muted*. Simply edit a normal, 16-step sequence like *DustSequence* but *mute* every step. The start and end steps are still 1 and 16 respectively and so the result is 16 steps of silence!

Hint: You can save a great deal of time and effort by creating a small number of blank sequences, which can be reserved for use with the Composer. For instance, *Blank16* is 16 steps long, all of which are muted. Similarly *Blank8* consists of 8 muted steps. However, remember to use the **Sequence Lock** facility in the Sequence Play Menu, which will prevent these from being accidentally over-written.

The kick drum sequence, like the blank sequence mentioned above, is another really useful template for speeding up the compositional process. As with the sequence part, either dial it in with the pitch knobs or use the Step-Input facility. Save this sequence as *BasicKickDrum*.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
bd	HH														

It often helps to create a couple of versions of this sequence, each with a slightly different feel. For instance, you can create just a basic kick drum with the same note on every step or, you can create a sequence with the kick drum on every odd step and a hi-hat on the even step for a dance/trance feel. The possibilities are endless. It's always a good idea to give these sequences a useful name like *kick16steps* and *kickhihat16* to minimise confusion later on.

The third track will be reserved for the snare drum. Here, we'll simply create a series of notes that begin at step 8 and gradually rise in velocity to produce the beloved machine-gun effect.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
								sn							

Here, the darker shading indicates a greater note velocity. Save this sequence with the name *BasicSnareDrum*.

Hint: For a more realistic feel, try using the Step-input menu when creating drum parts. Subtle differences in note velocities feel far more fluid and less mechanical. Unless, of course, you're after a very machine-like feel!

The final sequence we will need for the Introduction is the bass synthesiser part. This is very simple and consists of just 4 steps. Here's the table of notes:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C	C	F#	F#	C	C	F#	F#	C	C	F#	F#	C	C	F#	B

Save this sequence as *DustDevilBass1*.

We now have all four sequences for the *Introduction* to our specimen song *Dust Devils* but, before we can proceed, we have to make sure that the *Composer* is ready for use.

Press the *Composer* button on the front panel (Quick Select Strip) and use Page 1 to select a free song. Rename the song using Page 2. In this instance, the name is '*DustDevils*'.

```
a0 Composer 01
Song>01 DustDevils
```

Next, scroll down to page 3 and make sure that the **Composer** field is switched *on*.

```
a2 Composer 03
Composer>On
```

The *Composer* is now ready for use. However, before we start assigning sequences to tracks, we can make life easier if we assign a useful name to each one.

Scroll down the menu to page 4, the *Select Track* page, and select *Track 1*. Next, go to Page 5 and rename *Track 1* to something useful such as *MainSequence*. Scroll down to page 6 and enable *Track 1, Main Sequence*, by setting the **Act** field to *on*.

```
a5 MainSequence
Len>64 Act On Part 01
```

Repeat this operation for the remaining tracks, 2, 3 and 4. Call them *DustKickDrum*, *DustSnare* and *DustBassLine* respectively.

Finally, go back to page 4 (*Track Select*) and reselect *Track 1, MainSequence*.

All this may seem a bit tiresome, and indeed it is. You can still use the Composer without going through any of the tedious renaming bits but giving everything a proper name at this point makes it easier to follow the tutorial!

Assigning Sequences to Parts

Now we'll start to arrange the sequences.

In the Introduction, *DustSequence* plays through twice and the remaining three tracks are silent for the first 2 measures. In this example remember, a measure is 16-steps.

	Measure 1 Part 1	Measure 2 Part 2
1.	DustSequence	DustSequence
2.	Blank 16	Blank 16
3.	Blank 16	Blank 16
4.	Blank 16	Blank 16

Go to page 8, the *Select Part/Seq* page and move the cursor to the *Part* field. Use the *Data Wheel* to select *Part Number 01*. Press the *Enter* push button once to move the cursor to the next field and use the *Data Wheel* to select the sequence *DustSequence*.

```
a7 Select Part/Seq
Part>01 04 DustSequence
```

Press the *Enter* button twice so that the cursor again moves around to the **Part** field and use the *Data Wheel* to increase the *Part Number* to 2. As before, press the *Enter* button to move the cursor around to the next field and use the *Data Wheel* to again select the sequence *DustSequence*.

We now have 2 parts, each of which will play the sequence *DustSequence*. The next step is to make each of the remaining tracks play the appropriate blank sequences! So, go back to page 4, the *Track Select* page, and select *Track2*, the *DustKickDrum* track. Repeat the process described in the previous paragraph so that this track plays 2 measures of silence by selecting the sequence *Blank16* for each measure.

```
a7 Select Part/Seq
Part>01 06 Blank16
```

Finally, when you've set all of the tracks in both parts to the appropriate sequences, press the *Reset* button in the Transport Strip and then press *Play*. If everything went according to plan, you should hear the sequence *DustSequence* on its own.

That's the first half of the *Introduction* taken care of. Now, we'll tackle the second half of and add a bit of detail to the composition.

Here, we introduce the remaining voices, the kick drum, snare drum and bass line.

	Measure 3 Part 3	Measure 4 Part 4
1.	DustSequence	DustSequence
2.	BasicKickDrum	BasicKickDrum
3.	Blank 16	BasicSnareDrum
4.	DustDevilBass1	DustDevilBass1

The kick drum and bass sequence both begin at the third measure. The snare drum sequence starts at measure 4. Begin by setting up track 1 to play the *DustSequence* through on measures 3 and 4. Then, move to track 2 and set up Parts 3 and 4 so that they play the sequence *BasicKickDrum*. Track 3 still plays a silence during Part 3 but the *BasicSnareDrum* will begin at Part 4. Finally, the bass sequence, *DustDevilBass1*, plays both Parts 3 and 4.

As before, press *Reset* in the Playback strip and then press *Play*. You should hear the whole of the *Introduction* playing together.

We said earlier that these parts were a little basic and that it might be a good idea to create some variations based around these basic ideas. Well, this is the place to try them out. We can do this by putting each track into *Loop* mode so that they'll repeat until the sequencer is stopped. Also, you won't need to keep hitting the *Reset* button to go back to the start.

```
a6 MainSequence
In>03 Out 04 Loop On
```

Go to page 7, the *Track Status* page, and set the *In* and *Out* Parts to 3 and 4 respectively, and then set the *Loop* parameter to *on* for each track. As before, press *Reset* followed by *Play*. This time, the Composer will play through from the first part in each sequence but will begin looping around Parts 3 and 4.

Now you can use page 6, the *Part/Sequence Selection* page, to change the assigned sequence for each part.

```
a7 Select Part/Seq
Part>04 04 BasicSnare2
```

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Here, we're substituting the *BasicSnareDrum* sequence with a variation on the original sequence just to add a bit of colour and variety.

The First Verse

The first verse of *DustDevils* is not significantly different from the Introduction. However, we'll use a new parameter, the *Repeat Count* so that we don't have to enter each part, one by one.

The first verse of *DustDevils* is 4 measures in length. So, as before, go to track 1, the *MainSequence* track and set up Part 5 so that it plays the sequence *DustSequence*. Then, go to page 9, the *Edit Part* page and set the *Repeat Count* to 4.

```
a8 Edit Part
Repeat>04 Transpose +00
```

Repeat this process for each of the 4 tracks in the first verse so that you finish up with a structure that appears as follows:

	Measure 5 Part 5	Measure 6 Part 5	Measure 7 Part 5	Measure 8 Part 5
1.	DustSequence	DustSequence	DustSequence	DustSequence
2.	BasicKickDrum	BasicKickDrum	BasicKickDrum	BasicKickDrum
3.	SnareDrum2	SnareDrum2	SnareDrum2	SnareDrum2
4.	DustDevilBass1	DustDevilBass1	DustDevilBass1	DustDevilBass1

The measures outlined by a dotted line are repeats. Notice that for the verse, a variation of the original snare sequence is used, *SnareDrum2*, just to add a bit of variation and to help distinguish it from the Introduction.

You should also notice that using the *Repeat* parameter is a more efficient way of creating songs. You just have to remember which parts play and for how long. If you want to make each part different then you can simply stick with the first method we described.

The First Chorus

We can use the same approach when creating the chorus, which is not wildly different from the verse. In fact, the only real difference is that the bass sequence and main sequence transpose up the scale by 2 semitones. We can accomplish this very easily by using the *Transpose* parameter, which is also on the *Edit Part* page.

To help differentiate the chorus from the verse and to help propel the piece forwards by injecting a bit of energy we can make a couple of changes to the original percussive parts. Firstly, use the Note Editor to adjust all of the kick and snare sequences manually so that they are a little bit louder. Then use the *Randomise* facility in the Transform menu to vary the bass and main sequences. Make sure that force-to-scale is enabled.

	Measure 9 Part 6	Measure 10 Part 6	Measure 11 Part 6	Measure 12 Part 6
1.	DustSequence2	DustSequence2	DustSequence2	DustSequence2
2.	KickDrumHiHats	KickDrumHiHats	KickDrumHiHats	KickDrumHiHats
3.	SnareDrumLoud	SnareDrumLoud	SnareDrumLoud	SnareDrumLoud
4.	DustDevilBassX	DustDevilBassX	DustDevilBassX	DustDevilBassX

So, this is the structure of the Chorus section. Again, the *Repeat* facility in the Edit Part page is used so that we don't have to set up each part individually. Notice that although we're at Measure 9 in the piece, we're still editing Part 6.

To transpose the sequence parts, we again use the Edit Part page.

```
a8 Edit Part
Repeat 04 Transpose>+02
```

It's important to remember two things here. Firstly, don't transpose the percussive parts *KickDrumHiHats* and *SnareDrumLoud* because they probably won't sound right and, secondly, switch each track out of *Loop* mode using the *Track Loop* page otherwise *ZEIT* will loop around the wrong parts and you won't hear the chorus at all. Alternatively, change the *In* and *Out* parts so that *ZEIT* loops around the Chorus instead.

Our song, *DustDevils*, now consists of two introductory sections, a verse and a chorus. We can use exactly the same techniques discussed above to create a second verse and a second chorus. As before, try playing around with each of the sequences to make them slightly different though not enough to make them unrecognisable, just enough to retain the feel and content of the piece without throwing away the essential elements.

The Middle 8 and Solo Sections

The Middle 8 is deliberately simple and consists of little more than the basic kick and snare sequences used in the Introduction. We don't really need to consider these much, except to say that in the real piece, the break was used for two purposes: firstly, to improvise some ambient chords around the main theme and, secondly, as a queue to remember to set up the external synths ready for the Solo.

	Measure 17 Part 7	Measure 18 Part 8	Measure 19 Part 9	Measure 20 Part 9	Measure 21 Part 9	Measure 22 Part 9
1.	Blank16	DustSequence2	DustSequence2	DustSequence2	DustSequence2	DustSequence2
2.	BasicKickDrum	BasicKickDrum	KickDrumHiHats	KickDrumHiHats	KickDrumHiHats	KickDrumHiHats
3.	BasicSnareDrum	BasicSnareDrum	SnareDrumLoud	SnareDrumLoud	SnareDrumLoud	SnareDrumLoud
4.	Blank16	DustDevilBassX	DustDevilBassX	DustDevilBassX	DustDevilBassX	DustDevilBassX

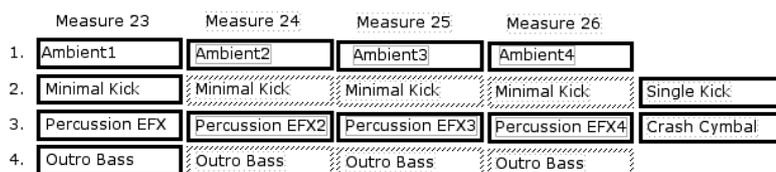
The Solo is, essentially, a modified version of the Chorus although the drums were beefed up a bit and the Note Editor was used to add some bite to the first note in every bar. Again, these were all saved as separate sequences.

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The Middle 8 is made up of two individual parts created in the same way as we created the Introduction. The Solo section is defined once, at Measure 19, and each part repeats 4 times.

And to the End...

The End section is the simplest section of all. Here, we create a basic kick drum playing once every bar instead of the usual *four-on-the-floor* pounding. We also create some new sequences to generate some additional percussive effects and apply these to the snare track. They're all individual sequences and so we don't use the *Repeat* function.



For the *Main Sequence* track we create some variations on another theme and chain them, one after the other, each transposed by an octave to create a dynamic, improvised feel.

Finally, to finish the whole track off with a bang, we create two new sequences, which consist of little more than a single kick drum and a single crash cymbal, a simple way of adding a full stop to the piece.

And that is *DustDevils*. To listen to the original version plus a couple of other variations we put together based on the original sequences, log on to the Infection Music Web site, click on *ZEIT Sequencer* and look for *DustDevils* in the Downloads section.

Hopefully, you should have seen that the Composer is a very powerful tool for quickly creating ideas and arrangements from very simple elements.

If you would like us to host your own version of *DustDevils* then please get in touch with us at the Infection Music Web site.

