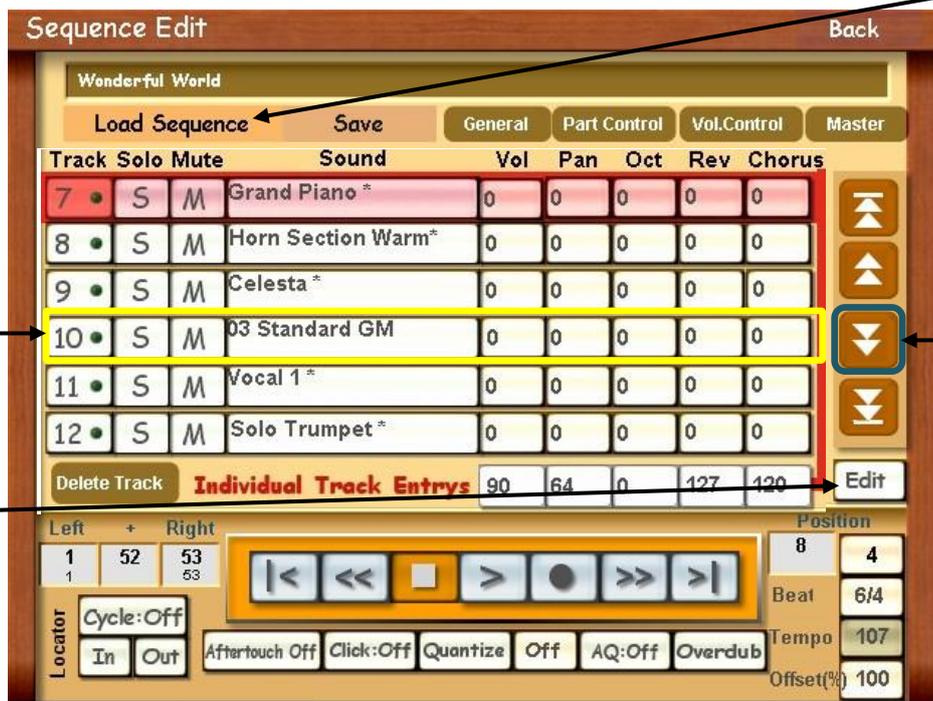# The OAS-7 Sequencer

3 : Editing an Existing Wersi MIDI-File – (b)

We shall continue to use the Wersi Midi-File "Wonderful World". Select **Settings > Edit Sequences** to give the screen shown below.

Use this button to load "Wonderful World"

We'll start by having a close look at Track 10, the Drums Track. Touch the number 10 to highlight this Track, then touch the **Edit** button to produce the screen shown below.

I've used this third button down to navigate the Midi Event sequence so that Track 10 shows.
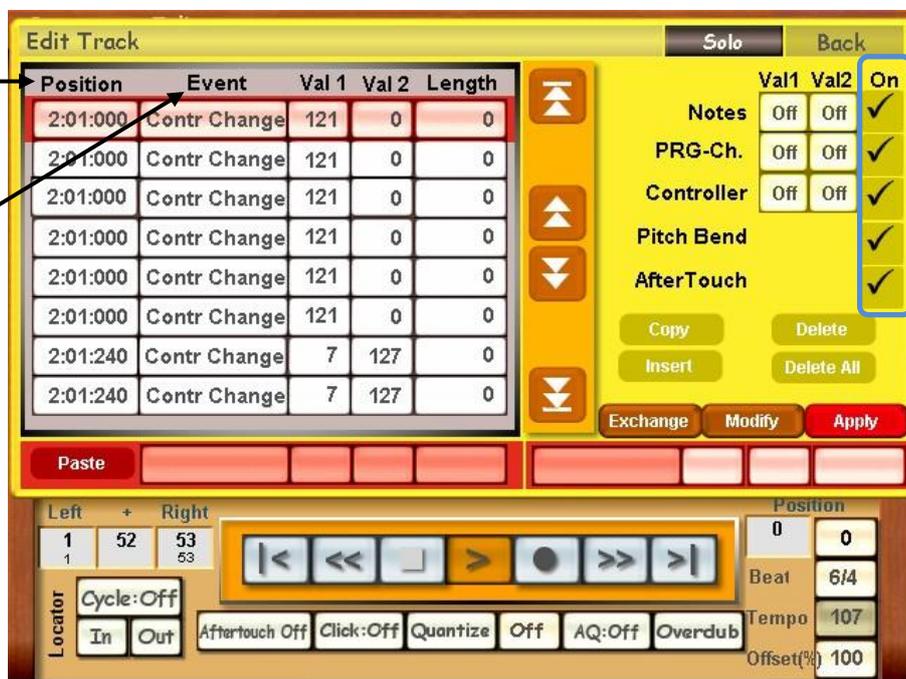
Position
Bar:Beat:Tick
This is explained in more detail on the next page.

Event
Contr(ol) **Change**:
PRG Change
(Programme Change):
Note

Val 1, Val 2 and Length are explained in more detail below.

Control Change and **Programme Change** are the subject of the next article.

To reduce the amount of information showing in the Event column, these boxes can be unticked as required. To begin with, untick all boxes except **Notes**. The result is displayed on the screenshot on the next page.

Position

This is presented as three figures separated by a colon, eg **2:01:000**

The first figure is the **Bar Number**.
The second figure is the **Beat Number** within that bar.
The third figure is the **Tick Number** within that Beat Number.

Tick Number : There is a maximum of 480 ticks per quarter note (crotchet).
Beat Number : Depends upon the number of beats in the bar. In this example, 6/4 time, there are 6 beats in the bar.
Bar Number : In the above screenshot, the first bar to be represented is bar 2. This is a variable situation. If professionally produced the Midi-File may well be edited to start on bar 1. If you're recording one yourself you may find the list starts with bar 3, if you've been a little slow to start playing after touching "Record"! The actual number of the first bar of playing doesn't seem to matter but if you use notation software on the file there will be blank bars at the beginning if your Event List doesn't start at bar 1.

It's the Tick Number which is not intuitive here so let's have a look at the screen which is produced when only "Notes" is ticked "On" in the right hand table and all other events are not ticked (so "Off").

The first Note occurs at Position 3:04:000, ie. Bar 3, Beat 4 (out of 6) and Tick 000 (ie at the start of that Beat).

The second Note occurs at the same time (Tick 000).

The third Note occurs at Tick 240 in the same Beat. As 480 Ticks = 1 crotchet (ie 1 Beat), a Tick Position of 240 here represents halfway through the Beat.

Only Notes is ticked as "On"

The **Length** of each Note is approximately the same, at 120 Ticks. With 480 Ticks to the crotchet, 120 represents a quarter of a crotchet, ie a semiquaver.

The **Val 2** value is a volume level (0-127). Though strictly called a Velocity Level it still delivers a higher volume the larger the value.

The **Val 1** value is the really interesting one here because this is the list of notes actually played. If you've recorded your own Midi-File and played a wrong note you can correct it in this list. You just have to find that note!!

That is where the **Position** comes in. Before we look at this more closely, it may seem strange that there is a list of notes for a Drums Track. However, if you go into Edit Drumsets (on the Settings screen), you will find that all the percussion instruments of a Drumset are allocated to a particular key (eg Eb4, C1 etc). This is how Manual Drums works on the Lower Manual and that also happens if you load a Drumset into a sound layer, eg UM1.

To help explain the relationship between **Position**, **Val 1** and **Length**, touch the double down arrow to the right of the Event List and move the List down until Position 4:01:000 is at the top (careful, there are two Events in that position – we need the first one at the top!). The screen should change to that shown below where only the Event List has been selected to be displayed (a computer possibility, not a Wersi one!). Just below that picture is a second edited shot where the double down arrow has been used to move the List down so that Beat 04 of Bar 4 is at the top. The two pictures together give the full list of Note Events for Bar 4.

Inspecting the 03 Standard GM Drumset provides the following information:

F#1 = Hihat Closed 1b
Eb4 = Clave
C1 = Bass Std 2

The best way to see a Midi-File as notes is to load it into a good piece of Notation software. Here we're interested in bar 4 as an example of what the Midi Event List means in terms of actual notes on a stave. This becomes more significant when the Track being investigated is that of an instrument playing actual notes.

For a Drums Track, we can still use a stave, as shown below where rests have been omitted. This is all Bar 4. The boxes show Beat : Tick.

Position	Event	Val 1	Val 2	Length
4:01:000	Note	F#1	59	120
4:01:000	Note	C1	49	120
4:01:240	Note	F#1	35	120
4:02:000	Note	F#1	35	120
4:02:240	Note	Eb4	58	121
4:02:240	Note	F#1	54	120
4:03:000	Note	F#1	35	120
4:03:240	Note	F#1	38	120
4:04:000	Note	F#1	64	120
4:04:000	Note	C1	49	120
4:04:240	Note	F#1	35	120
4:05:000	Note	F#1	35	120
4:05:240	Note	Eb4	55	121
4:05:240	Note	F#1	60	120
4:06:000	Note	F#1	31	120
4:06:240	Note	F#1	33	120

By comparing the above notation with the Event List of Notes on the right, the way the Notes are represented can be easily seen. Two or more notes occurring together (a chord by any other name) are listed as individual Events next to the same Position value which is repeated as many times as necessary to cover the chord. This will be seen again in a future article when we look at a note-playing instrument instead of the Drumset.

In the next article we shall look at Control Changes and Program Changes in the Drums Event List of this Midi-File.

This column (Val 2) represents how loud each Note is. The variations in the values provide the expression within the drumming and should be maintained. If the overall volume is too quiet or too loud there is a way of making a global adjustment to the whole Track, thereby maintaining the relative differences in the values. This will be covered in a future article.

Colin
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