CUBASE No.

Score Printing and Layout

Stambarg

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1

How the Score Editor works

In this Chapter you will learn:

- · How the Score Editor and MIDI data relate.
- What Display Quantize is and how it works.

Welcome!

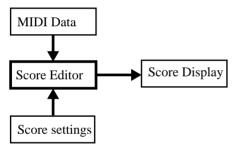
Welcome to Cubase Scoring! The Score Editor has been created to allow you to get any possible piece of music displayed as a score, complete with all the symbols and formatting needed. It allows you to extract parts out of a full orchestra score, to add lyrics and comments, create lead sheets, score for drums, create tablature, etc. In other words: just about any type of notation you could ever desire!

There are a few basic principles to how the Score Editor works, which you just have to understand to make full use of it. So please bear with us during this chapter, we'll try to be as concise as possible.

How the Score Editor operates

The Score Editor basically does the following:

- Reads the MIDI notes out of the Parts/Tracks.
- Looks at the settings you have made.
- Decides how the MIDI notes should be displayed according to the settings.



Score Edit takes MIDI data and settings as input and produces a Score as output.

Score Edit does all this in real time. If you change some of the MIDI data (for example by moving or shortening a note) this is immediately reflected in the score. If you change some of the settings (for example the time signature or key signature) this is also immediately apparent.

You should not think of Score Edit as a drawing program, but rather as an "interpreter" of MIDI data.

MIDI Notes vs Score Notes

Cubase MIDI and Drum Tracks hold MIDI notes and other MIDI data. As you may know, a MIDI note in Cubase is only defined by its position, length, pitch and velocity. This is not nearly enough information to decide how the note should be displayed in a score. The program needs to know more: What type of instrument are we talking about, Drums? Piano? What key is the piece in? What is the basic rhythm? How should the notes be grouped under beams? etc. You provide this information by making settings and working with the Tools available in the Score Editor.

An example of the MIDI/Score relation

When Cubase stores a MIDI note's position it makes the measurement in an absolute value, called ticks. There are "always" 15360 ticks to a quarter note. Have a look at the example below.



A quarter note at the end of a 4/4 measure.

The note is on the fourth beat of the measure. Now, let's say you change the Time Signature to 3/4. This shortens the length of a "measure" to only three quarter notes - 46080 ticks. Suddenly our quarter note is in the next measure:



The same note in 3/4.

Why? Because by changing the Time Signature you are not changing the MIDI data in the Track/Part (since that would ruin your recording!), the note is still at the same absolute position. It's just that now each "measure" is shorter, which effectively moves the note in the score.

What we are trying to get across here is that Score Editor is an "interpreter" of the MIDI data. It follows rules that you set up by making settings in dialog boxes, on menus, etc. And this interpretation is "dynamic", or in other words, it is constantly updated whenever the data (the MIDI notes) or the rules (the Score settings) change.

Display Quantize

Let's say you used the Arrange window to record a figure with some staccato eighth notes. When you open the Score Editor it displays it like this:



This doesn't look anything like what you intended. Let's start with the timing - obviously, you were off at a couple of places (the third, fourth and last note all seem to be a 1/32nd note late). You could solve this by Quantizing the figure, but this could make the passage sound too "stiff", and not fit in the musical context. To resolve this problem the Score Editor employs something called "Display Quantize".

Display Quantize is a setting which is used to tell the program two things:

- How precise Score Edit should be when displaying the note positions.
- The smallest note values (lengths) you want displayed in the score.

In the example above, the Display Quantize value seems to be set to 1/32nd notes (or a smaller note value). When reading the next chapter (and when following the Tutorials) you will find out how to set the Display Quantize value yourself.

Let's say we change the Display Quantize value to sixteenth notes in the example:



With Display Quantize set to sixteenth notes.

OK, now the timing looks right, but the notes still don't look like you intended. Maybe you can understand that from a computer's point of view, you did play sixteenth notes, which is why there is a lot of pauses. But that's not how you meant it. You still want the Track to play back short notes, because it is a staccato part, but you want something else "displayed". Try setting the Display Quantize value to eighth notes instead:



With Display Quantize set to eighth notes.

Now we have eighth notes, as we wanted. All we have to do now is to add staccato articulation which can be done with one simple mouse click using the Pen tool (you will find out about this in "Working with Symbols").

How did this work? By setting the Display Quantize value to eighth notes you give the program two instructions, that would sound something like this in English: "Please, display all notes as if they were on exact eighth note positions, regardless of their actual positions" and "Please, don't display any notes smaller than eighth notes, regardless of how short they are". Please note that we used the word display, which leads us to one of the most important messages of this chapter:

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