SimpleSeq

Rick's Simple MIDI Sequencer

v0.17

* Hello World!
by Rick, 2023/09/17

4/4, ♩=90 (bpm)
1 Acoustic Grand Piano
♪ Semiquaver ♪

Click to place/select
Press F1 for help
09:55:31, 2023/10/18

Introduction

I never found I got on with notation. While it isn't that hard to understand, there is no obvious relationship between the notes as they appear, and their durations. For example, each of the bars below take the same amount of time. As you can see, the smaller the note durations, the more there are, so the more space it takes. It's sort of back to front, isn't it?

A sequencer is a different way of looking at music, in which there is a simple and direct temporal relationship between the notes played, and how long they play for.

The screen is drawn as a large grid. Up and down this grid are the musical notes. There are sixty one notes available, which corresponds to the size of an entry/mid level keyboard such as one of the Yamaha PSR series, or a Roland Juno-DS, etc.
Across the grid represents time. In *SimpleSeq*, the smallest possible note duration is a *semiquaver*, or a quarter of a *crotchet*. There are therefore four per beat, and (in $\frac{4}{4}$ time), four beats to a bar (also known as a measure).
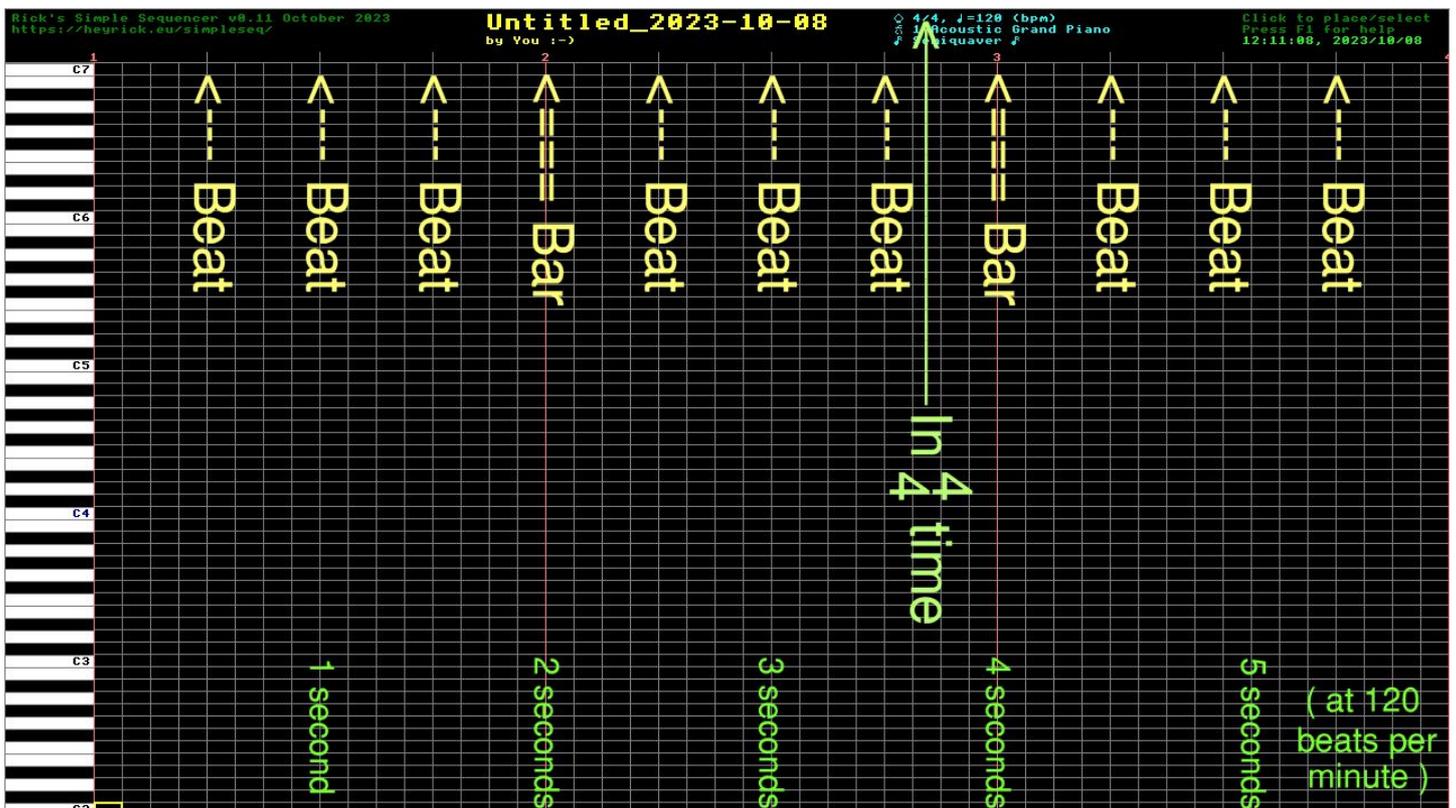
In $\frac{4}{4}$ (common) time, at 120 beats per minute, this means each crotchet/beat happens every half second, and every semiquaver happens every 12.5 centiseconds, or an 8th of a second. Obviously, you can change the time signature and the tempo.

Beyond that, it's pretty much a point-and-click method of creating music.

Limitations

As this is a simple sequencer (clue in the name), let's get a few things out of the way, so you can decide if this software may prove useful to you, or not.

- Only 61 notes/keys will be supported. Companies such as Yamaha feel that this is a perfectly adequate size for many consumer-level keyboards, it is the size of my keyboards (a Yamaha PSR E-333 and a Roland E-16), and ought to be sufficient for creating many types of music. Note that there is an octave shift function that can be applied to a channel, so while the default range is C2 to C7, you can set any channel to span a five octave range between C0 and C9 (see page 19 for details).

- The smallest note supported is a semiquaver. That's a quarter of a beat (if each beat is a crotchet, there are two quavers to a crotchet and two semiquavers to a quaver). At a rate of 120 BPM (kind of normal), each beat happens every half second. Which means you can have eight notes per second, each lasting 0.125 seconds. Granted, it's probably not suitable for epic metal, but then this is a simple sequencer.

- There is a hard limit of 3,840 columns. What this translates to depends upon the BPM, but at $\frac{4}{4}$ with a BPM of 120, it's eight minutes. Therefore, it'll be four minutes at 240 BPM, or about $10^2/_3$ minutes at 90 BPM.

- The saved files are large (and sparse), as is the memory consumed. Speed of access was chosen in preference to clever encoding. It's basically one word per note per channel per column so a full piece would take around 16MB. SimpleSeq, however, only saves to file as much as is necessary. There is also an optional compression if file size is important.

- Available time signatures are $\frac{2}{2}$, $\frac{2}{4}$, $\frac{3}{4}$, $\frac{4}{4}$, $\frac{6}{4}$, $\frac{9}{4}$, $\frac{6}{8}$, $\frac{12}{8}$. For most intents and purposes, this simply alters how and where the guide markers are drawn. Time signatures (and BPM) are fixed in a piece and cannot be changed.

- This software runs single-tasking. It is not envisaged that this will ever become a desktop application.

- Two display modes are supported: `1280×720` (HD), or `1280×1024`. There are two separate executables for each mode. A little program run at the start will try to pick the most appropriate for your machine, but you can force it by simply choosing to run *!RunImage* (1280×1024) or *!RunIm720* (1280×720).

If you have issue with any of these limitations, I'll remind you again, this software is a SIMPLE sequencer.

The screen layout

At a first look, the screen is split into three parts. There's some information at the top, some piano keys down the left, and the grid taking up most of the space.

Let's first look at the top of the screen.

```
Rick's Simple Sequencer v0.15 October 2023        Lame demo 1              ♀ 4/4, ♩=120 (bpm)           Click to place/select
https://heyrick.eu/simpleseq/                     by Rick Murray (2023/08/27)  ♫ 1 Acoustic Grand Piano    Press F1 for help
                                                                              ♪ Semiquaver ♪              10:29:03, 2023/10/18
        1                                             2                                  3
    C7
```

The stuff on the left in green is just some information on the software and the website address.
Centre left, in yellow/gold, is the music title and author.

Centre right, in cyan, is some information on the music and editor status.
The first symbol is a sort of lightbulb and it is showing that the display is not in dark mode.
You can press **F10** to toggle between light and dark modes of display.
Following this, the "4/4" is the time signature. The crotchet symbol followed by a number is telling you the tempo. Here, it's 120 beats per minute.
On the next line, you are informed which channel you are looking at (1) and what the assigned instrument is (Acoustic Grand Piano).
The final line tells you if you are in Semiquaver (normal) mode, or Quaver mode. This allows you to see more on-screen at once.

On the right, in green again, is the clock and a reminder to press **F1** for help.

Looking along the top of the grid, you will see some of the grid lines are in red with numbers. These are the bars. The slightly extended vertical grid lines represent the beats. This allows you to line up your music. The placement of bar and beat markers depends upon your selected time signature.

Down the left of the screen, for all channels except channel ten, are the keys. High notes at the top, low notes at the bottom. Feel free to move the mouse pointer and click on any of them. If a MIDI keyboard is connected, you'll hear the same note, in the voice of the selected instrument.
The default range is C2 to C7, matching a basic 61 key keyboard, however with octave shift you can alter this plus or minus two octaves, so a channel could instead span C0 to C5 (for bass instruments) or, say, C3 to C8 (for things like the piccolo). Refer to page 10 for details of octave shifting.

Channel 10 is special. It is used as a percussion channel. Therefore it will be drawn in green instead of piano arrangement, and it will be annotated with brief reminders of what sounds each note represents.
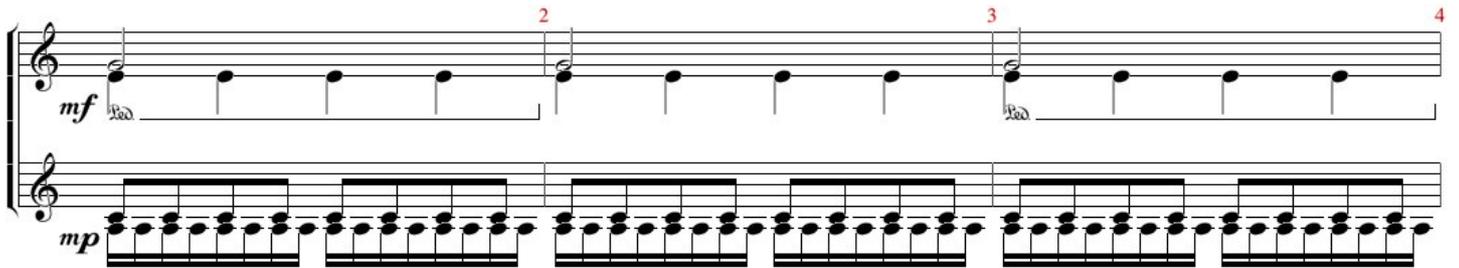
Examples of both styles of keyboard are shown on the right.

SimpleSeq user guide - 4
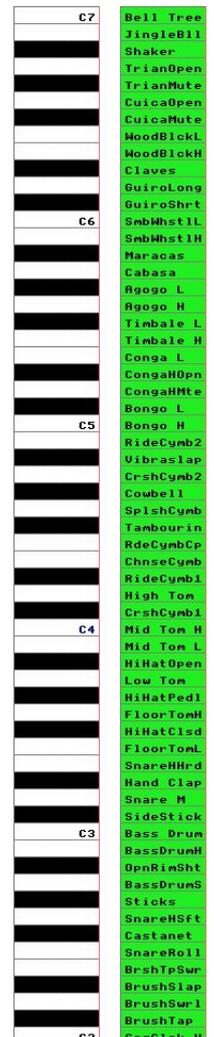
The main area of the screen is the editor grid. This is where music is created.
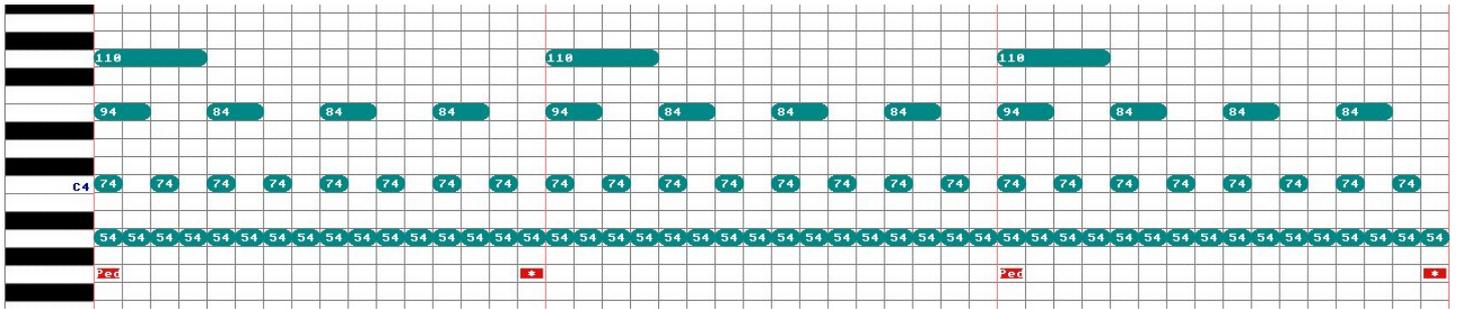
For those who read music, the above is something sort of like this.

Except, in the sequencer, it's possible to give each note an individual velocity/intensity which could be tricky to notate. For instance, I have marked *mf* (moderately loud) and *mp* (moderately quiet), but in the sequencer there are four different note intensities. I'm sorry, but my understanding of notation isn't good enough to know how to actually notate that. Suffice to say, it's only an example to show the correlation between the two methods of writing music.

You'll notice that the lower left box is highlighted in yellow (note that this may appear elsewhere if you have loaded a file). This is the marker for the current editor position. You can use the **Cursors** to move it around the screen.
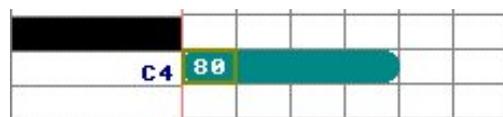
Making music!

Move the highlight **Up** until is is beside the key marked "C4" (this is Middle C).
Now press **Space**.
You will see a note appear, with "80" written in it.
The eighty is the note's *velocity*, which means how hard it is to be played.

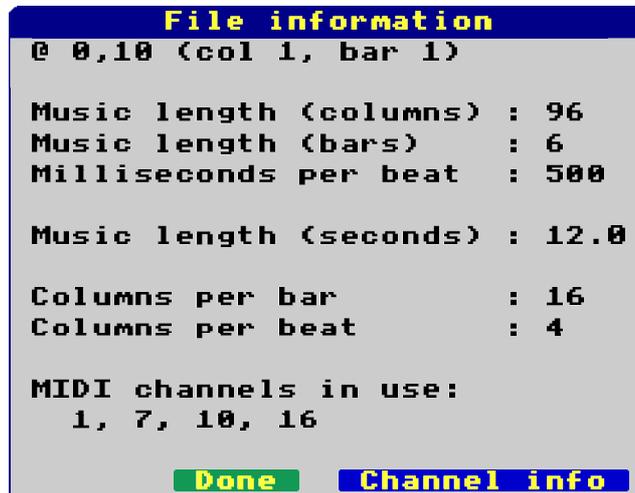Now press **C** to make it be a crotchet (four squares).

Now... simply move the highlight and repeat the process. You can just press **Space** to create semiquavers, then press the first letter of the desired note length: **Q**uaver, **C**rotchet, **M**inim, **S**emibreve, or **B**reve. If you make a mistake, don't worry, just press **Delete**.

Using dialogues

There are numerous dialogues that may appear. These ask you for information or give you warnings about things.
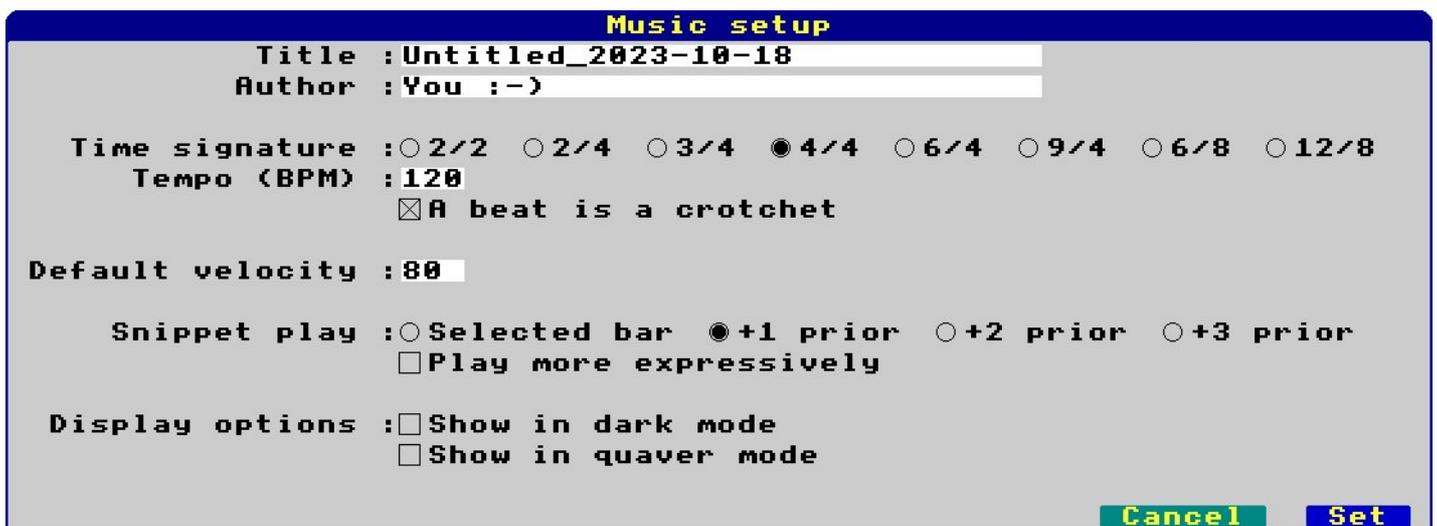
Here are some examples of dialogues.

An informational dialogue:

```
                File information
@ 0,10 (col 1, bar 1)

Music length (columns) : 96
Music length (bars)    : 6
Milliseconds per beat  : 500

Music length (seconds) : 12.0

Columns per bar        : 16
Columns per beat       : 4

MIDI channels in use:
   1, 7, 10, 16

                    Done      Channel info
```

An error:

```
                    Load error
This file could not be loaded because:

File "ThisIsNotAFile" not found.

                               Continue
```

Something that wants input from you:

```
                     Music setup
        Title :Untitled_2023-10-18
       Author :You :-)

Time signature :○2/2  ○2/4  ○3/4  ●4/4  ○6/4  ○9/4  ○6/8  ○12/8
  Tempo (BPM) :120
              ⊠A beat is a crotchet

Default velocity :80

   Snippet play :○Selected bar  ●+1 prior  ○+2 prior  ○+3 prior
                 □Play more expressively

Display options :□Show in dark mode
                 □Show in quaver mode

                                        Cancel     Set
```

There is also a "warning" that is like the red error message, but has a magenta border instead of red.

In each case, you'll see there is a *blue* button at the lower right of the screen. In most cases, pressing **Enter** will do the same thing as clicking on that button.

Some dialogues also have a second *greeny-blue* button that is typically used to cancel the action. In *all* cases, pressing **Escape** will behave as if this button had been pressed, *even if the button isn't visible on the screen.*

Where there is a dialogue that you can interact with, there are four types of object that you may encounter, which are demonstrated in this example:

In these sorts of dialogues, you can press **Tab** to bring up a highlight that is a dashed line around one of the editable objects. Here you can see the second one down is highlighted. This means that you can use keypresses to alter the object's state. Press **Tab** to go to the next object.

The first object is a *check box*. This is a simple yes or no choice. Click the check, or press **Space** when highlighted, to toggle its state between checked and unchecked.

The second object is a *radio choice*. Like an old-fashioned radio, you can choose *one* option of those presented. Click the little circle to the left of the descriptive text to select that option (the others will be automatically deselected). When the object is highlighted, you can press **Left** and **Right** to choose.

The third object is *string entry*. This is where you can enter some text, and press **Enter** when you are finished (which will go to the next string if there is one), or press **Tab** to go to the next object. You can click to move the insertion point (the red caret) or move it using **Left** and **Right**. Press **Delete** to delete the character to the left of the caret, or **^U** (that's **Ctrl** and **U** together) to delete everything.
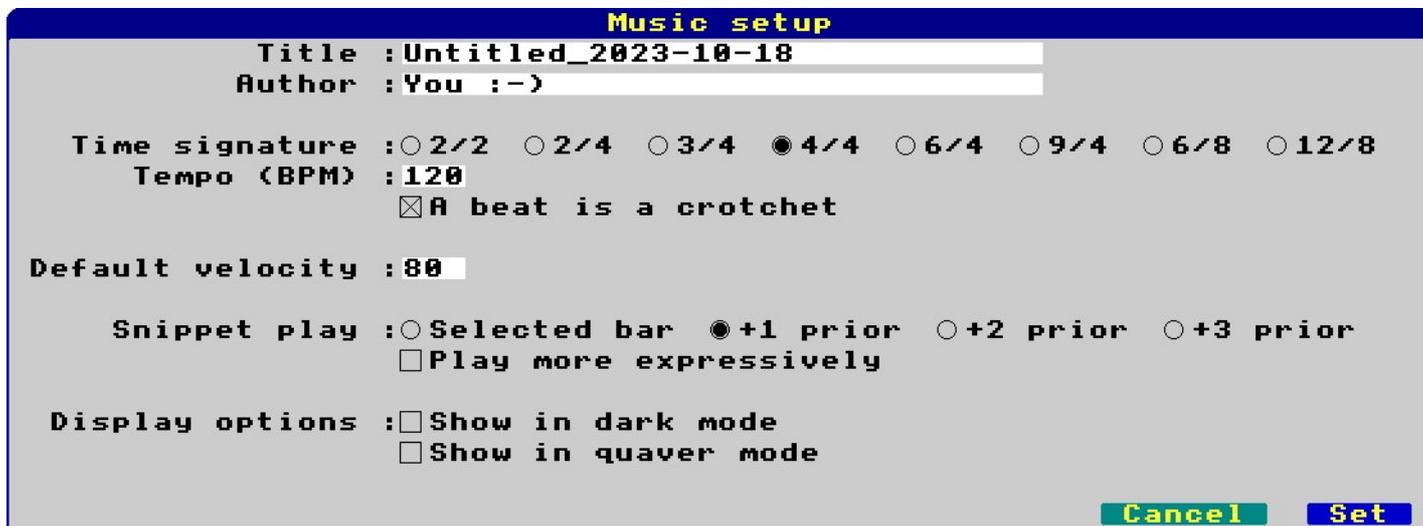
Note that in some cases you may be constrained. File input, for example, won't permit characters such as $ or # that have special meanings, and some inputs only accept numbers.

The final object is the *choice selection*. This will list provide potentially numerous options and you can choose one by clicking the up and down arrows, or by pressing **Up** and **Down**. Hold down **Shift** at the same time to skip ten options at a time, or hold down **Ctrl** to go to the first or last option in the list.

Setting the options

One of the first things you'll want to do is to set up the options. To do this, there are two separate dialogues, the general options and the instrument assignments.

For the general options, press **F8**.

```
                          Music setup
              Title :Untitled_2023-10-18
             Author :You :-)

   Time signature :○2/2  ○2/4  ○3/4  ●4/4  ○6/4  ○9/4  ○6/8  ○12/8
      Tempo (BPM) :120
                   ☒A beat is a crotchet

 Default velocity :80

     Snippet play :○Selected bar  ●+1 prior  ○+2 prior  ○+3 prior
                   ☐Play more expressively

 Display options :☐Show in dark mode
                   ☐Show in quaver mode

                                              Cancel      Set
```

Here, you can define various attributes of the piece of music that you are creating.

- *Title* - a free form entry string.
- *Author* - a free form entry string.

- *Time signature* - you can choose $\frac{2}{2}$ (often used for marches), $\frac{2}{4}$ (polka, bolero...), $\frac{3}{4}$ (waltzes, minuets...), $\frac{4}{4}$ (common time, frequently used), $\frac{6}{4}$ (compound duple), $\frac{9}{4}$ (compound triple), $\frac{6}{8}$ (double jig. some polkas...), or $\frac{12}{8}$ (shuffle, doo-wop, etc).

- *Tempo* - numeric entry, any value between 30 and 360 is acceptable.
  At 30 BPM, beats will happen every two seconds, and the shortest note will be half a second, while at 360 BPM, there will be about six beats per second, with the shortest note being a 24th of a second.

- *A beat is a crotchet* affects how the timing is calculated. If this is checked, then it will always be assumed that a crotchet represents a beat regardless of what the time signature is. This is how music is usually timed these days.
  If this is unchecked, then the timing will be determined by the time signature. The bottom number will specify what a beat is (2 = minim, 4 = crotchet, 8 = quaver), while the upper number says how many are in a bar. To me this is a more logical way of doing it, but people stopped doing it like this some time in the early 19th century...

- *Default velocity* specifies what velocity notes are initially given when you press **Space** to enter one in the editor.

- *Snippet play* chooses how much music is played when you are playing a "snippet". There are two methods of playing, either "everything" or "the currently selected bar" (which is referred to as a snippet). However in order to give context, you can also choose to play up to three bars before the current bar as well.

- *Play more expressively* will add a tiny (+/- 2 centisecond) adjustment to each column of music as it is played in order to make it just slightly less regimented and robotic sounding.

- *Show in dark mode* will display the screen with a black background. This is the default and it is easier on the eyes. You can toggle this in the editor by pressing **F10**.

- *Show in Quaver mode* will display the screen with two notes per column to fit more music on-screen. You can toggle this in the editor by pressing **F11**.
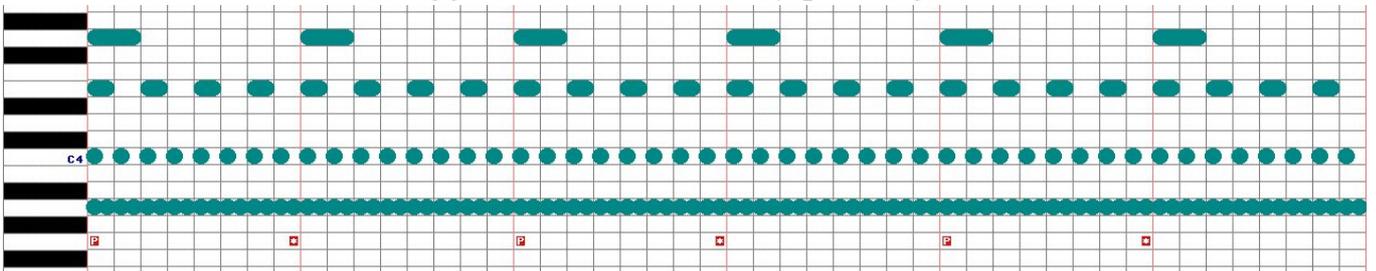
Note that in Quaver mode, when you press **Space** to add a note, you will be adding quavers, not semiquavers. The normal editing mode is semiquaver mode...

Click on **Set** to accept your changes (or press **Enter)**, and next to set up the MIDI channel. You do this by pressing **F7**.
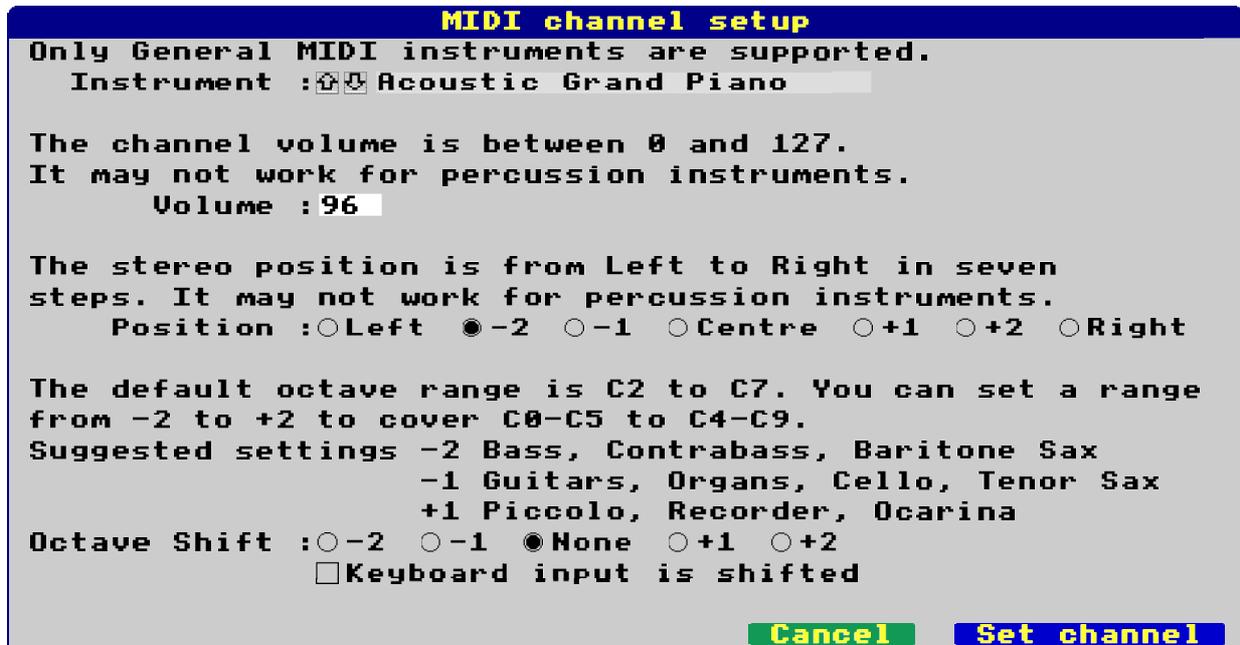

The *instruments* presented are those defined in the *General MIDI 1* specification. Extra voices (patches) such as Yamaha XG / XG-Lite or Roland GS are not supported at this time.

You can also set up the *volume* of the channel, with a range from 0 (silent) to 127 (maximum), the *stereo position* of the channel (in seven steps from full left to full right).

Note that some instruments, particularly the percussion channel, may not respond to one or both of these settings.

The bottom half of the setup relates to *Octave Shift*. The software, and a lot of consumer level keyboards, offer 61 notes, usually in the range of C2 to C7, which lies in the middle of the full range of C0 to C9.
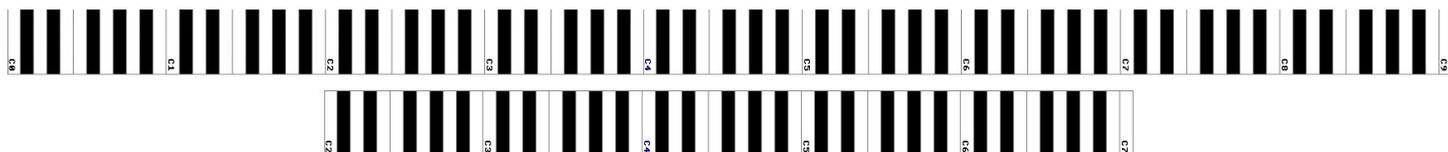
Some instruments require notes that are outside of this range. How my keyboard handles this is to simply shift the entire range covered by the piano according to the instrument in question. For example, when selecting a guitar the notes output are in the range C1 to C6, which means that to play a middle C, one must press the C5 key.
Some instruments (Contrabass, etc) are even lower, spanning the range C0 to C5, which means you'll find middle C on the C6 key.

SimpleSeq takes a similar approach. You can set an instrument, and then shift the entire range up or down one or two octaves as necessary. This applies to an entire channel.

The *Keyboard input is shifted* option is for use when you switch your piano to the instrument in question and it outputs notes in a shifted range. This allows you to match *SimpleSeq*'s octave shift to that used by your piano.

If you just leave your keyboard set as a Grand Piano and turn the volume down to enter the notes, then no shifting is necessary – your piano will match the editor grid (so if you have shifted down two octaves, then pressing middle C will set a note at the C2 position, which is where middle C would normally be).

Generally, it is more useful to set your piano to the instrument in question and to enter the notes directly with input also being shifted.

On my keyboard (yours may differ):
     Shift −2 :   Bass, Contrabass, and Baritone Sax
     Shift −1 :   Guitars (all), Organs (all), Cello, and Tenor Sax.
     Shift +1 :   Piccolo, Recorder, Ocarina.

Manually entering music

Move the highlight box with the **Cursors**, or place it by clicking the mouse.

Shift-Left and **Shift-Right** will hop from bar to bar.
^Left and **^Right** will change which bars are visible on-screen.

Shift-Up and **Shift-Down** will move up or down ten notes at a time.

Home will go to the beginning (the first bar), and **End** will go to the last bar used.

Once the highlight is in place, pressing **Space** will set a note at that location, with the default velocity.

Automatically entering music

Set the highlight in the column that you want to place the music in, and play the notes on your piano. They will appear in the editor.

Press **Enter** to move to the next column to the right.

If you hold down the notes on your piano as you press **Enter**, the notes will be extended into the new column. This makes it easier to enter longer notes.

Editing music

If you add a note by accident, simply press **Delete** to remove it.

If you want to try out some melodies before entering them into the sequencer, simply move to an empty column and play whatever you like. Don't worry that all these notes will be recorded. When you're done, simply press **^Delete** to wipe the entire column.

If you are entering manually, you can press various keys to alter the length of the current note:

Q	Quaver (two columns)
C	Crotchet (four columns, usually a beat)
M	Minim (eight columns)
S	Semibreve (sixteen columns, a bar at $\frac{4}{4}$)
B	Breve (thirty two columns, two bars at $\frac{4}{4}$)

You can also make unusual note lengths because the count of how much to extend a note by goes from the current cursor location.

So, if you want to make a note that is three columns long (equal to a dotted quaver), simply press **Space** to create a note, then **Q** to make it a quaver.

Now move one place to the right and press **Q** again.

Adjusting the velocity

The velocity is how hard the note is played. Roughly, this correlates to the note volume as notes played more softly are quieter.

When you are entering music by pressing **Space**, the notes are given the default velocity (which is 80 unless you have altered it). When playing notes on a piano, the notes receive the velocity information from the piano.

You can change the velocity of a note by setting the highlight to the beginning of the note and pressing one of the following keys *on the numeric keypad*:

    8   Increase the velocity by one (this key is often marked with an up arrow)
    5   Set the velocity to default (this is between the up and down keys)
    2   Decrease the velocity by one (this key is often marked with a down arrow)
    0   Set this note to the last used velocity (this key is usually bigger)

    Shift−8 and **Shift−2** will increase or decrease the velocity by ten.
    ^8 and **^2** will set the velocity to the maximum or minimum respectively.

It can be useful, if you have a range of notes to change to the same velocity, to set the desired velocity for the first note, and for the rest just press the numpad **0** key to directly set that same velocity for each subsequent note.

Musical accents and controls

To make your music even more expressive than just altering the velocity, there are various controllers available. Which are actually supported depends upon your instrument. Refer to your device's *MIDI Implementation Chart* for specifics (see page 22). This software supports:

1	Modulation wheel	71	Timbre
7	Channel volume	72	Release time
10	Pan	73	Attack time
11	Expression	74	Brightness
64	Sustain	84	Portamento

To set a control, press **^M** and enter the desired value.

```
                    MIDI Control Change
     Control support depends upon your equipment,
     please refer to your device's manual.

         Control change :⇧⇩64 Sustain

     Parameter (1-127) :0

     For Sustain, 0 is OFF, 127 is ON.
     (you can use # and ~ for sustain on/off)

                              Cancel    Insert change
```

You cannot set a control at the beginning of a note (as the value that would be used as the control parameter is used to give the note velocity).
You can, however, insert controls in the middle of notes, or – the recommended option – in an unused space. *If you delete a note containing a control, the control will also be deleted.*

As the Sustain pedal is a widely supported, and commonly used, control, there are two keypresses to directly set Sustain. Press **#** to turn it on, and press **~** (**Shift-#**) to turn it off. If you are entering music from a piano, then the Sustain pedal will be understood and entered into the music when pressed and released.

When a control has been inserted, you'll see a little red marker with three letters inside to say what the control is: MdW, Vol, Pan, Exp, Tmb, Rel, Atk, Bri, and Prt.
Sustain is denoted using "Ped" for the start, and " * " for the end, as is common with music.

Channels

There are sixteen possible channels. Modern equipment supports all 16, older equipment may be more limited.
Pretty much everything that isn't ancient reserves channel 10 for percussion.

You can change which channel appears in the editor using **Page Up** and **Page Down**.
You can also press the number keys **1** to **0** to directly go to a channel (0 means channel 10).

Playing music

To play the current bar, press **P** (depending on settings a few bars prior may also play).
To play the entire piece, press **^P**.
You can stop playing the music by pressing **Escape**.

Loading music

Music is stored within *SimpleSeq* in the directory *Music*. At this time, this behaviour is fixed.

Press **^L** to open the dialogue for loading music.

```
                        Load file
 Available files ('*' means there's a backup):
  lamedemo (*)                    lamedemo/mid (MIDI)
  TwinkleBend

 Filename :|

                                  Cancel      Load
```

The available files will be scanned, and up to 32 will be listed. Backups are not shown, but the presence of a "(*)" after the file implies that a backup exists.
MIDI files are also listed, but *SimpleSeq* is not capable of loading those.

Simply enter the name of the file (suffix "/bak" if you want to load the backup instead) and then click on **Load**.
If the file was saved compressed, it will be automatically decompressed upon loading.

Saving music

Music is always saved to that same location. Press **^S** to open the save dialogue.

```
                        Save file
 Filename :lamedemo|
              ⊠Save file compressed

                                  Cancel      Save
```

Enter the filename that you wish to save the file as (it will default to the name it was given when loaded), and then choose whether or not you would like the file to be compressed.
Then click on **Save**.
Prior to the file being saved, the copy that is already on disc (if there is one) is renamed with "/bak" suffixed, so it is possible to revert to the previous version should you need to do so.
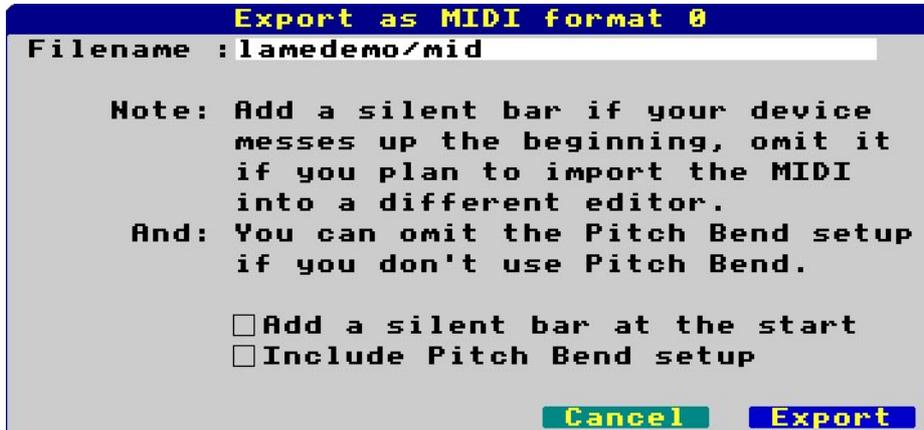
Compression is performed using the built in Squash module, so it is quick. Every note (sixty one of them) in every channel (sixteen of them) in every used column of music is a word in length (or four bytes). It was done like this for speed, making it very simple to know exactly where each part of the music is in memory.
When a file is normally saved, the entire music array is written out. It can be large. The "lamedemo" example, if not compressed, is 394,016 bytes. However, since music simply doesn't sound every note in every channel every semiquaver, much of the array is empty. This makes it an ideal candidate for being compressed. The compressed file? A tiny 2,724 bytes.

MIDI export

Now it's all good and well having *SimpleSeq* work with it's own files, but it is much better if you can use your creations elsewhere.

Therefore, *SimpleSeq* provides a MIDI export function. As well as playing to a MIDI device, it can also save standard format 0 (single track) MIDI files that you can then upload to a piano or edit on other software.

```
              Export as MIDI format 0
Filename :lamedemo/mid

     Note: Add a silent bar if your device
           messes up the beginning, omit it
           if you plan to import the MIDI
           into a different editor.
      And: You can omit the Pitch Bend setup
           if you don't use Pitch Bend.

           □Add a silent bar at the start
           □Include Pitch Bend setup

                          Cancel    Export
```

If you make use of *Pitch Bend*, then you should include this in the file. Otherwise, it can be omitted.

If you are playing directly to a hardware device (a piano), sometimes playback may be messed up at the beginning as the hardware may need a moment in order to get itself set up for the voice changes and such. If this is the case, then you should include an extra (silent) bar at the beginning to give the hardware time.
If you plan to import the music into another program, or upload the MIDI file directly to your instrument, you can omit the silent bar.

Please note that the MIDI file contains an exact reproduction of the music as entered into *SimpleSeq*, and that other software products may have differing abilities to actually handle this information.

For example, when loading MIDI into *Rhapsody* (on RISC OS), it does not reproduce the sustain pedal (and possibly other controllers, but I've not tested this), the channel volume, the stereo position, or *any* of the individual note velocities.

Advanced editing: Copying bars

Simply press **^C** to copy the current bar in the current channel.
Then go to another bar (potentially in another channel) and press **^V** to paste a copy of that bar's contents there. It will overwrite what was there before.

Advanced editing: Replicating bars

A limitation of copy-paste is that it only works for one bar at a time in the current channel. The answer to this is *replication*.

```
                     Replicate
        Starting from bar :1
        Copy this many bars :1
            This many times :1
    Offset (0=follows on) :0
    Copy which channels :◉All  ○Only #1

                          Cancel    Replicate
```

Replicate will copy a number of bars from an initial bar, to begin from another bar, repeating a number of times if desired. It can do this for the current channel, or for *all* channels.

It will perform some checks, and warn you if you are going to overwrite existing music.

By way of example, we'll start with this:

1	2	3	4	5	6
A	**B**				
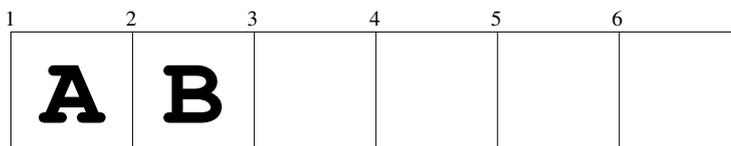
Two bars of music, labelled here A and B.

If we replicate starting from bar *one*, for *two* bars, to be repeated *twice*, with an offset of *zero*, then we will be copying A and B twice following on from the selection end (or as of bar 3):

1	2	3	4	5	6
A	**B**	**A**	**B**	**A**	**B**
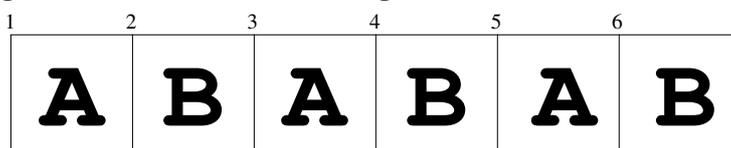
Now if we start at bar *one* for only *one* bar, copying it *three* times, to be placed at offset *four*...

1	2	3	4	5	6
A	**B**		**A**	**A**	**A**
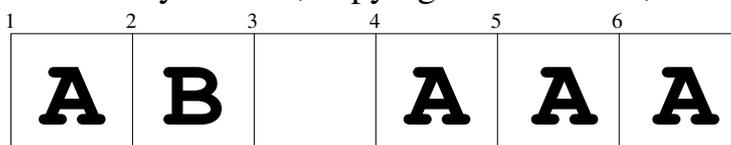
Advanced editing: Filters

There are seven filters provided to assist you. All except for the first operate on the current channel.

- *Trim*
  This will scan all music in all channels to look for the last used column, and then the music length will be set to that.

- *Transpose up*
  This will shift every note up an octave.

- *Transpose down*
  This will shift every note down an octave.

- *Beatify*
  This will examine the music and make all notes beats (or multiples of beats), that is to say, a crotchet. It will then align the start and end positions with the nearest beat. This function is also known as "quantise". It may be useful if transcribing music into *SimpleSeq* to then "*beatify*" it to make it line up with the music's markers.

- *Quieten*
  This will reduce the velocity of all of the notes in the channel by ten.

- *Louden*
  This will increase the velocity of all of the notes in the channel by ten.

- *Velocity lock*
  This will set all of the notes in the channel to the default velocity.

To use a filter, *first save your file!*

Then press **^F** to open the filter dialogue. Choose a filter and click on **Apply filter**, and then then on **Yes, apply this** in the confirmation dialogue.

Advanced input: Transcribing from piano

SimpleSeq can transcribe music directly from your piano as you play it.

To begin transcribing, ensure that the highlight box is aligned with the start of a bar, and then press `^T`.

The transcribe dialogue will appear, and you'll hear your piano ticking as *SimpleSeq* plays beat and bar markers to give you the rhythm. At this point, nothing is being recorded.

From the very first moment that you press a key, recording will begin. The ticking will reset itself to the beginning of a bar – you always start from the beginning of a bar.

```
Transcribing (120 bpm)
        Beat in bar : 4.3
  Bars transcribed : 11
   Notes received : 73
   Current column : 191
Columns remaining : 3649

Press Escape to finish.
```

As recording progresses, the dialogue will provide you with information on which beat in the bar is current, how many bars have been recorded, how many notes were received, and the current/remaining column (this is to let you know when you're about to run out of space).

Just keep playing, and when you're done press **Escape**.

Transcribing tries to match the notes as played to places on the grid. If you are playing quickly, there may be some glitches that will need to be manually resolved; for instance you could play an even *five* notes in a half second beat, but when the interval is *eight* semiquavers, clearly it won't fit evenly.
With practice you'll understand how music is transcribed into *SimpleSeq*.

If you are playing a slower piece, you may find the *Beatify filter* to be of assistance to automatically try to line everything up.
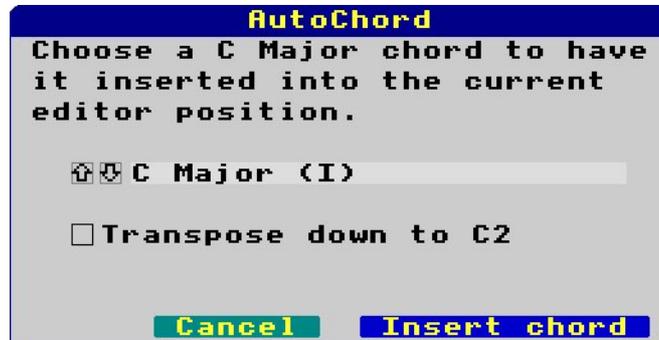
Transcribe will faithfully record all note velocities and the use of the sustain pedal.
Note that pressing the sustain pedal will also start the input, so you should do this at the *same* time as the first note if necessary.

Other things: AutoChord

AutoChord makes it easy to insert C Major chords. Press **^A** to call up AutoChord and choose which chord you would like to insert.
By default the chords are played in the C3 octave. You can optionally shift them down to the C2 octave using the option provided.

```
                    AutoChord
        Choose a C Major chord to have
        it inserted into the current
        editor position.

           ⬆⬇ C Major (I)

           ☐ Transpose down to C2


                Cancel    Insert chord
```

The following chords, all in C Major, are available:

Triad	7th chord
C Major (I)	C Major 7 (I)
D minor (ii)	D minor 7 (ii)
E minor (iii)	E minor 7 (iii)
F Major (IV)	F Major 7 (IV)
G Major (V)	G Major 7 (V)
A minor (vi)	A minor 7 (vi)
B diminished (vii)	B minor 7/b5 (vii)

Suspended 2nd	Suspended 4th
C sus2	C sus4
D sus2	D sus4
F sus2	E sus 4
G sus2	G sus4
A sus2	A sus4

Common chord progressions in C Major:

I - V - vi - IV	Pop songs: *With or Without You* (U2), *Let It Be* (Beatles), etc.
I - IV - I - V	More songs: *Brown Eyed Girl* (Van Morrison), etc.
ii^7 - V^7 - I^7	A *lot* of jazz...
I - vi - IV - V	50's style (doo-wop)
I - vi - iii - IV	Start here for power metal
I - iii - IV - vi	If you like your metal just a bit heavier
ii - vi - ii - III - vi	For the more symphonic amongst you
I - ii - iii - ii - I - V	Prog rock, just like *Come Sail Away* (Styx).

Other things: Pitch bend

The was intended to reach notes not directly supported, but this is no longer relevant now that octave shifting has been added.

It used a custom bend range that spanned an entire octave up or down from the base note, which was extremely variable as to how and if it would actually be supported. The typical pitch bend range is plus or minus two semitones (in other words, bending two keys worth on the keyboard – a C could be bent down to a B♭ or up to a D).

Some software synths do not support altering the bend range.

In general, my advice to you at this time is "don't use this". I may well, in the future, change this to be a regular (two semitone) bend.

Other things: The menu

Clicking a box in the grid with the **Menu** (middle) mouse button will set that location as the highlight, and then pop up a menu. Just in case remembering all those keypresses is hard...

```
Play snippet      P
Play piece       ^P

AutoChord        ^A
Pitch bend       ^B
Control Change   ^M
Filters          ^F
Transcribe       ^T

Replicate        ^R
Copy bar         ^C
Paste bar        ^U

Insert bar       ^I
Delete bar       ^D

New              ^N
Load             ^L

File info        F2
Save             ^S
Export as MIDI   ^E

Channel setup    F7
General setup    F8

Toggle dark      F10
Toggle quaver    F11
Show overview    ^O

Help             F1
```

Other things: Inserting and Deleting bars

You can press **^I** to insert a bar *before* the current bar, and you can apply this to the current channel or to all channels. Content that is in the current bar, and all following, will be moved up a bar.

The inverse case is by pressing **^D** to delete the current bar, again in the current channel or in all channels, shifting up following content to fill the gap.

```
            Insert bar
Insert a bar before the current bar.

Which channels :●All  ○Only channel 1

            Cancel    Insert bar
```
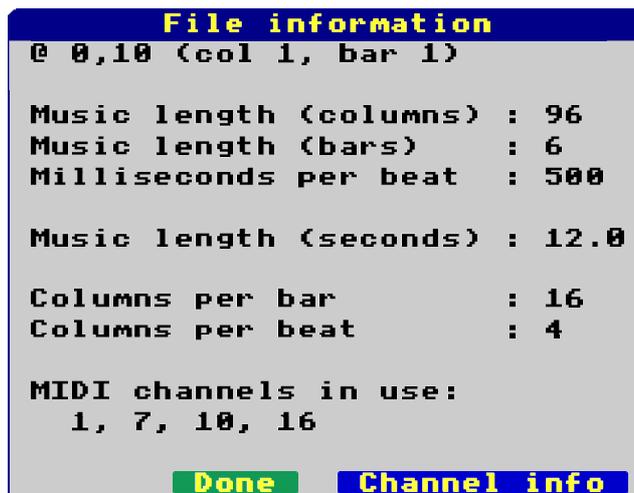
Other things: Overview

Overview briefly changes the current editor view to one that tries to display the content of all channels on the screen at once. You'll mostly see this when playing music.

Press a key to return to return to the normal editor display.

Other things: File information

Pressing **F2** will call up information on the current file.

```
            File information
@ 0,10 (col 1, bar 1)

Music length (columns) : 96
Music length (bars)    : 6
Milliseconds per beat  : 500

Music length (seconds) : 12.0

Columns per bar        : 16
Columns per beat       : 4

MIDI channels in use:
   1, 7, 10, 16

            Done     Channel info
```

This will show the editor position (at the top), the music length (in various measures), and what channels are in use.

Perhaps of more use is the *Channel info* which will give an overview of the setup of all of the MIDI channels.

```
                    Channel setup
 Ch  U  Instrument                   Vol   StereoP    Shift
 --  -  ------------------------     ---   -------    -----
  1  •  Acoustic Grand Piano          96   —■———       None
  2     Acoustic Guitar (nylon)       96   ——■——       -1 +I
  3     Acoustic Bass                 96   ———■—       -2 +I
  4     Violin                        96   ——■——       None
  5     Cello                         96   ——■——       -1
  6     String Ensemble 1             96   ——■——       None
  7     Trombone                      96   ——■——       None
  8     Tenor Sax                     96   ——■——       -1
  9     Flute                         96   ——■——       None
 10  •  Percussion                    96   ——■——       None
 11     Clarinet                      96   ——■——       None
 12     Church Organ                  96   ——■——       None
 13     Clavinet                      96   ——■——       None
 14     Accordion                     96   ——■——       None
 15     Orchestral Harp               96   ——■——       None
 16     Glockenspiel                  96   ——■——       None

                                                        Done
```

The '•' indicates that the channel is in use.

This dialogue shows the default assignments when you create a new file, with the exception of the stereo position of channels 1 and 3 that were tweaked to show the difference.

SimpleSeq user guide - 21

MIDI compatibility

This software uses, and is compatible with, the RISC OS MIDI module using the Acorn-defined API.

As this software is intended for use with RISC OS, it is supplied with my USB MIDI module for communicating with MIDI devices using a USB connection, or similar.

Please note that cheap USB to serial MIDI interfaces are often deplorable quality and tend to lose track if more than five notes happen at once (that's a simple chord and two notes of melody on *one* channel). It is strongly recommended that you don't use such a device.

Your instrument should have, most likely at the back of the user guide, a standardised "MIDI implementation chart" to say which parts of the MIDI standard are actually supported.

By way of example, on the left is the chart from my Yamaha PSR keyboard. It's a fairly comprehensive MIDI implementation for a consumer level device. The older Roland E-16 on the right has a more restricted MIDI implementation. For starters, it only supports *seven* channels (1, 3, 4, 5, 8, 10, 16) and these appear to be reserved for specific purposes. Fewer controllers are supported, but there is a pitch bender. Note, also, the program change appears to be 1-128 rather than 0-127. I'm guessing it's the same thing given it is a seven bit value... ;)

Editor keypresses

Cursors	Move highlight	**Home**	Go to the beginning
Sh-Left	Previous bar	**End**	Go to the last bar used
Sh-Right	Next bar	**Select**	Set highlight (mouse click)
^Left	Change visible bar down	**Page Up**	Select next channel
^Right	Change visible bar up	**Page Down**	Select previous channel
Space	Set a note	**1 ... 0**	Select channel 1 ... 10
Delete	Delete note	**Enter**	Go to next column, extends
^Delete	Delete column contents	**Escape**	Stop playing / Quit
#	Set Sustain pedal	**~** (**Sh-#**)	Release Sustain pedal
B	Make note a breve	**C**	Make note a crotchet
M	Make note a minim	**P**	Play current bar
Q	Make note a quaver	**S**	Make note a semibreve
F1	Help	**F2**	File information
F7	Channel setup	**F8**	General setup
F10	Toggle dark mode	**F11**	Toggle Quaver mode
^A	AutoChord	**^B**	Pitch bend
^C	Copy current bar	**^D**	Delete current bar
^E	Export as MIDI file	**^F**	Filters
^I	Insert a bar	**^L**	Load file
^M	MIDI Control Change	**^N**	New (clear current music)
^O	Show Overview	**^P**	Play entire piece
^R	Replicate bar(s)	**^S**	Save file
^T	Transcribe	**^V**	Paste copied bar

In dialogues:

Tab	Highlight an adjustable object (or go to the next one)
Space	Toggle check box
Left / **Right**	Change radio selection
Up / **Down**	Change selected option (use **Shift** for +/-10 and **^** for top/bottom)
Escape	Abandon the action (and close the dialogue)
Enter	Accept the action, close dialogue (or accept string and go to the next)
Delete / **^U**	In strings, deletes characters / deletes the entire string

SimpleSeq, **MIDI Sequencer software for RISC OS**

https://heyrick.eu/simpleseq/