Operation Manual

SEQUEL

steinberg

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Introduction

Welcome

Congratulations and thank you for your purchase of Steinberg Sequel. You have now become a member of the world's largest community of music production software users. Looking back at more than 20 years of innovation in computer-based music production, Steinberg has always been the driving force behind software technology.

Sequel is a new entry-level sequencer designed to be an easy-to-use, all-inclusive music production platform. Sequel provides all of the tools needed to record, edit and mix music.

Sequel can be used in the 'traditional' way to record, edit and mix audio or virtual instruments. For example, a home musician could record himself playing an instrument (either an acoustic or a virtual instrument) or singing. An electric guitar can be plugged directly into an audio interface and then be recorded with Sequel's on-board effects.

Music enthusiasts may want to take a wholly different approach to creating music. Their starting point is Sequel's extensive library of loops and phrases. Pieces of music can be assembled based entirely on loops and without actually playing a single note on a keyboard or instrument. Typically, this is a more DJ-oriented workflow and very popular especially for current dance and electronic music styles.

Another key-application for Sequel is live performance. The concept of mixing and remixing is familiar to practically everyone today. Mixing and remixing has become a creative act in its own right and sometimes totally unrelated to creating new music itself. Sequel provides all the tools necessary to mixing and remixing (rearranging) music.

The act of performing music on stage using a computer has become standard in today's music and club scene. The goal of performing music on stage might be someone's primary motivation to use his/her computer for making music. Sequel puts a special focus on the live aspect of making music, which separates it from traditional sequencers. Instead of linear playback, it has special tools to perform and interact, by mixing and re-combining sections of a song or project.

After you have registered Sequel online, take some time to explore the community section at www.steinberg.net. You will find lots of useful information and get to know other users in our discussion forums. Registering at www.mysteinberg.com also gives you access to special offers from Steinberg in the future.

Have fun creating your own music!

The Steinberg Sequel Team

About this manual

This manual is divided into two sections. The first section guides you through several tutorials showing you how to use Sequel.

The second section gives you a brief description of every feature in Sequel. At the end of this manual you will find useful tips for your work with Sequel and information on how to set up your computer.

We are sure that after you have completed both sections you will be on your way to having a lot of fun and making exciting music.

Key command conventions

Many of the default key commands in Sequel use modifier keys, some of which are different depending on the operating system. For example, the default key command for Undo is [Ctrl]+[Z] under Windows and [Command]+[Z] under Mac OS X.

When key commands with modifier keys are described in this manual, they are shown with the Windows modifier key first, in the following way:

[Win modifier key]/[Mac modifier key]+[key]

For example, [Ctrl]/[Command]+[Z] means "press [Ctrl] under Windows or [Command] under Mac OS X, then press [Z]". Similarly, [Alt]/[Option]+[X] means "press [Alt] under Windows or [Option] under Mac OS X, then press [X]".

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System requirements and installation

About this chapter

This chapter describes the requirements and installation procedures for the Windows version and the Mac version of Sequel.

Minimum requirements

The following requirements are based on performance measurements for a typical project with an average 12 tracks (incl. 3 to 5 instrument tracks), global effects, compressor and EQ per track, measured at 512 samples buffer size. Slower computers can still be used, but with fewer tracks and/or higher buffer size.

To use Sequel, your computer must meet the following minimum requirements:

Windows

- Windows XP (Home or Professional), compatible with Windows Vista Home Basic
- Intel Pentium or AMD Athlon 2 GHz processor
- 1 GB RAM
- 6 GB of free hard disk space
- Windows DirectX compatible audio hardware; ASIO compatible audio hardware recommended for low latency performance.
- Display resolution of 1280x1024 pixels
- DVD ROM drive required for installation
- Internet connection required for license activation

Macintosh

- Mac OS X 10.4
- Power Mac G5 1.8 GHz or Core Solo 1.5 GHz
- 1 GB RAM
- 6 GB of free hard disk space
- Display resolution of 1280x1024 pixels
- CoreAudio compatible audio hardware
- DVD ROM drive required for installation
- Internet connection required for license activation

Installing Sequel

The installation procedure puts all files in the right places, automatically.

Windows

1. Insert the Sequel DVD into the DVD drive of your computer.

2. Locate and double-click the file called "Setup.exe" on the Sequel installation DVD.

3. Follow the instructions on screen.

Macintosh

1. Double-click the file called "Sequel.mpkg".

2. Follow the instructions on screen.

Whether you install Sequel on a Mac or Windows computer you will need to activate Sequel.

Activating Sequel

After installing Sequel you will have to activate the program on your computer.

- As the last step in the installation, the Syncrosoft License Control Center is opened. The "License Download Wizard" is displayed.

- Follow the instructions and enter your Sequel activation code.

Register your software

We encourage you to register your software! By doing so you are entitled to technical support and kept aware of updates and other news regarding Sequel. There are two ways to register:

- In Sequel, open the File menu and select the "User Registration..." option.
This is an Internet link that will open the Registration page of the Steinberg web site. To register, follow the instructions on screen. When you launch Sequel, you will also be prompted to launch the registration process.

- Included on the Sequel installation DVD you can find a registration form in pdf format. To register, print out the form, enter all required information and send it to Steinberg.

Read on…

…to learn how to use Sequel:

▪ First, you will find tutorials that will get you up and running quickly.

These tutorials refer to projects located in the default project folder, and video files that you will find on the program DVD.

▪ Detailed descriptions of all program functions can be found in the chapters covering the various Sequel "zones".

▪ At the end of this manual you will find information on more advanced techniques, tips on how to set up your computer system for audio work, the effects reference, and a list of the Sequel keyboard shortcuts.

3

Tutorial 1: Recording

The tutorials

The following chapters provide a quick introduction to Sequel. But first, please take a look at the figure below, as it gives you an overview of the Sequel program interface:

The Pilot Zone is explained in the chapter "The Pilot Zone" on page 37.

Details on the Arrange Zone can be found in the chapter "The Arrange Zone" on page 48.

The Multi Zone and its various pages are described in the chapter "The Multi Zone" on page 55.

In this first tutorial, we are going to show you how the Pilot Zone, Arrange Zone, and Multi Zone work together when recording audio events and Instrument parts.

Recording audio

In this section, we are going to take a look at recording a guitar line into a project, adding in a drum loop and playing it back. Make sure that you have your audio card set up. For detailed information on the audio setup, see the chapter "Setting up your system" on page 80.

Creating a new project

By default, Sequel creates a new project when you boot up the program. You can change this in the "Program Settings Page". See the chapter "The Program Settings page" on page 71 for more details.

To create a new project if a project is already open

▪ Click the "New Project" button in the Pilot Zone.

This will create a new project with nothing in it and close the project that was already open. If this contains unsaved changes, you will be asked whether these changes should be saved.

⚠ You're not done yet! So far we've created a blank Sequel project. We still need to save the project.

Setting the default save folder

In order to save projects in Sequel, it is important to make sure you know where the projects are going to be saved.

1. Go to the Program Settings page.

2. Click on the "Project Location" button.

3. A dialog pops up allowing you to browse you computer and find a suitable location. When you installed Sequel it automatically made a location for saving projects.

4. You can click "Create" to make a new folder if you would like to save your projects elsewhere.

5. Let's leave it set to the default folder Sequel has created. Click "OK".

To save a project
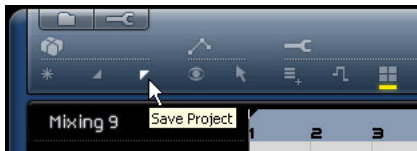
1. Click the "Save Project" button in the Pilot Zone.

2. Type in a name for your project – you can use "First Sequel Project" for example.

3. Click "OK".

The project will automatically be saved to the folder you have specified in the Program Settings Page.

Adding an audio track

⇨ The following sections make references to tutorial projects, located in the default Sequel project folder.

⚠ Load the project called "Recording" found in the "Sequel Tutorial 1" folder.

Now let's add an audio track to record onto. For our example we are going to record a guitar. You can also record guitar or whatever instrument you want. The method is the same for any instrument you wish to record.

1. Click the "Add New Track" button in the Pilot Zone.
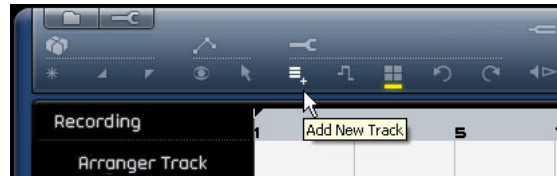
2. In the dialog that appears, select the "Audio" button.

3. Select "empty" and click "OK". This adds an audio track to the project.
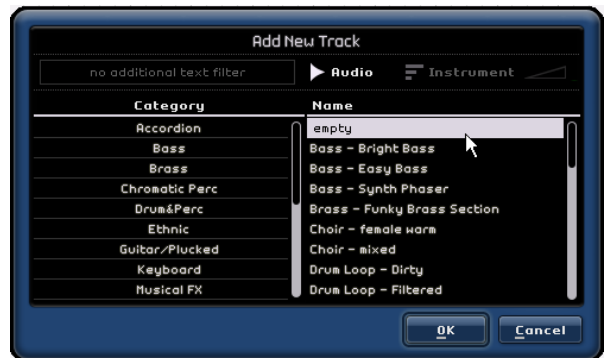
4. Double-click the track name and change it to "Guitar".

5. Select the desired input for the track from the "Input Selection" pop-up menu.

To be able to see the Input selection, make sure the track height is set to Medium track height at the bottom of the track list.

Click here to select an input.

Turning on the Metronome click

We'll want to have a click or metronome play in the background as we record the guitar so that what we record aligns with the bars and beats displayed in the Ruler.
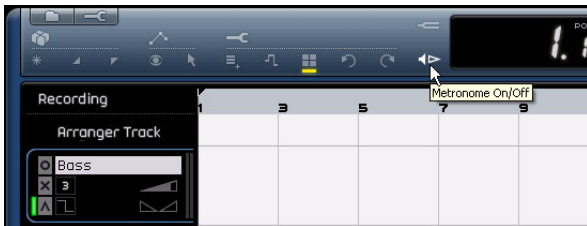
▪ Activate the Metronome button in the Pilot Zone.

The metronome is automatically set to add two bars of count-in before recording starts.

We now need to set the speed or tempo of our project. This directly affects the speed of the metronome click. You can change the tempo in the Tempo display field. For more on changing tempo, see "The Tempo (TEMPO)" on page 46.

We have a default setting of 120 which means 120 BPM or beats per minute. We can leave it at that.

Adding in a drum loop

Let's add some drums to the project.

⇨ Adding a drum loop to your project is not only great for supporting the metronome when you are recording bass or guitar, it's also great if you aren't a drummer or if you don't have the ability to record drums at home.

1. Select the Media Bay page in the Multi Zone.

2. In the Category column, select "Drum & Perc".

3. In the Sub Category column, select "Beats".

4. In the "Style" column, select a style that suits the style of guitar line that you would like to record.

5. Activate the Preview button and browse through the results until you find something suitable.
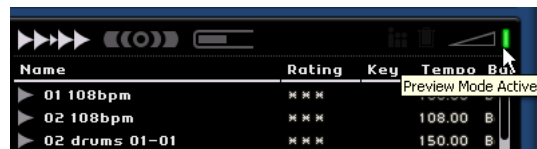
6. Drag the selected drum loop into the Arrange Zone and line it up at bar 1, just below the guitar track.

Choose a drum loop…   …and drag it to the Arrange Zone.

7. Use the Repeat function to make the loop 4 bars long. Just click in the middle of the right edge of the event and drag right until the loop is repeated to the beginning of bar 5. See "Repeating events" on page 53 for more detailed information on repeating.
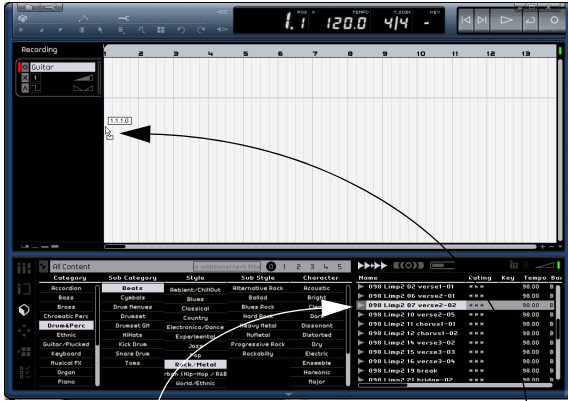

8. Rename the track "Drums".

⇨ Notice that the tempo of the project has now changed to match the drum loop. When you drag a file into a project and it is the first file to be added, its tempo will define the project tempo.

Read more about defining or changing the project tempo in "The Tempo (TEMPO)" on page 46.

Setting levels

In our example, we have a guitar playing through an amplifier with a microphone in front of the amplifier's speaker. This microphone is plugged directly into the Steinberg MI|4 microphone input. We have set the level on the MI|4 so that we have enough volume without clipping.

Activating the "Record Ready" button will allow us to hear the guitar. You should see and hear the audio coming in to the right of the track.
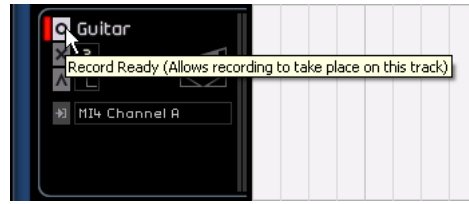
Do the best you can to send the maximum amount of volume to the audio inputs of your audio card before you hear any distortion. Most audio cards show some kind of level or volume indication. If yours doesn't, don't worry we can change the amount using the track volume slider.

Tuning your instrument

Sequel features a built in tuner for tuning instruments like guitar or bass.

1. Make sure that the guitar track is selected and that the Record Ready button is activated so that we can hear the input.

2. Activate the Tuner in the "Pilot Zone".

Indicator moves left and right   Note and octave
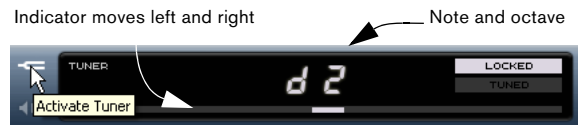
3. Pluck a string on your guitar.

The Tuner automatically detects which string you are hitting as long as it is in fairly close proximity to the right tuning. The tuning indicator will move left or right. If it moves to the left, the string is flat. If it moves to the right, the string is sharp.

The Tuner also displays the current note and octave that your string is tuned to. In our case, the D string is a little flat, so the tuner is displaying "d 2".

4. Tune up each string until all your strings are in tune.

5. Deactivate the tuner.

You are now ready to record!

Recording the guitar

1. Click the "Jump to Previous Marker" button a few times in the Pilot Zone to make sure that we start recording at bar 1.

2. Make sure that cycle is deactivated (not highlighted).

3. Click the "Record" button to record the guitar – you will automatically get two bars of precount.

4. Press the space bar when you are finished, to stop recording.

Congratulations! You have just recorded your first piece of audio into Sequel. Move ahead to the next section to learn how to play it back.

Playback

To listen to what you have just recorded, you have to play it back. Playback in Sequel is easy, but there are a few tricks to learn so that you'll be playing back with precision!

⚠ Load the project "Playback" found in the "Sequel Tutorial 1" folder.

To start playback

There are a few ways to start playback in Sequel.

- Click on the play button.
- Press the space bar on your computer keyboard – this toggles between start and stop.
- Press the [Enter] key on the numerical computer keypad.
- Double-click in the lower half of the ruler zone.

To stop playback

- Click on the play button during playback.
- Press the space bar on your computer keyboard – this toggles between start and stop.
- Press the [0] key on the numerical computer keypad.

Cycle playback

Sequel has the ability to loop (or "cycle") a section of your project. To set the cycle location, you need to use the left and right locators.

1. Let's draw in a cycle region from bar 2 to 3. This tells Sequel that we want to loop or cycle between bars 2 and 3. Turn snap on to help you create a precise region.

2. Move the mouse pointer up to the top of the ruler zone. It will turn into a pencil. Click and drag from bar 2 to bar 3.
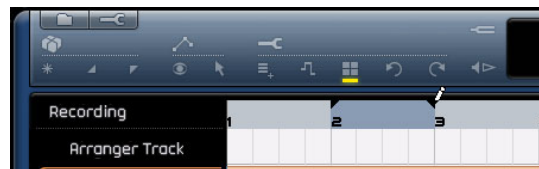
3. Make sure the Cycle button is activated.

Cycle On/Off

4. Click the "Jump to previous marker" and "Jump to next marker" buttons until the song position cursor is sitting directly on bar 2.

5. Press the space bar to start playback and Sequel will play looping over and over again until you press the space bar again.

Recording Instrument parts

In this section we are going to take a look at recording Instrument parts into a project using instrument tracks.

⚠ Load the project called "Recording MIDI" found in the "Sequel Tutorial 1" folder.

Creating an instrument track

Let's start by adding an instrument track to our project.

1. Click the "Add New Track" button in the Pilot Zone.

2. In the dialog that appears, select the "Instruments" button.

3. Use the "Category" filter and choose a sound that fits in with your song. We are going to select a Synth Pad sound.

4. Rename the track "Synth". Feel free to give this track a different name if you chose a different type of sound.

Recording

Now that we have a track and we have our sound, let's record something. Recording Instrument parts is very similar to recording audio events. Make sure you read the beginning of this chapter where we discuss recording audio.

⇨ Sequel automatically finds and uses any MIDI devices that we have on our computer.

⇨ The MIDI input to an instrument track is always set to "All Inputs".

1. Activate the "Record Ready" button for the track and press a few keys on your MIDI keyboard. You should see and hear the MIDI signals coming in to the right of the track.

2. Make sure the Cycle button is turned off.

3. Press the [.] key on your numerical keypad to set the song position to bar 1. This will ensure that we start recording at the start of the song.

4. Press the [*] key on your numerical keypad to start recording. Record 4 bars.

5. Press the space bar when you are finished.

6. Turn off "Record Ready" so that we don't hear the input any more.
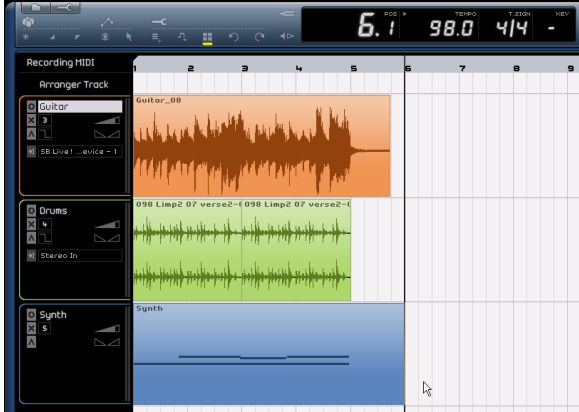
Congratulations! You just recorded your first Instrument part in Sequel.

⚠ Load the project "MIDI Playback" found in the "Sequel Tutorial 1" folder.

Press the [.] key on your numerical keypad to set the song position to bar 1 and press the space bar to listen back.

Move ahead to the next chapter to learn how to edit the audio events and Instrument parts we've recorded.

4

Tutorial 2: Editing

Introduction

In this chapter, we are going to show you how the Pilot Zone, Arrange Zone, and Multi Zone work together when editing audio events and Instrument parts. Refer to the chapters "The Pilot Zone" on page 37, "The Arrange Zone" on page 48 and "The Multi Zone" on page 55 if you aren't sure about a specific function.

⇨ The following sections make references to tutorial projects, located in the default Sequel project folder.

Editing audio events

In this section we are going to look at some of the audio editing functions that are available in Sequel.

Let's take a look at how to edit events. This includes rename, resize, move, copy, repeat, and erase.

⚠ Load the project "Event Operations" found in the "Sequel Tutorial 2" folder.

Renaming

Renaming events is easy in Sequel. It's important to rename your audio files to keep your project clean and organized. Let's rename the audio event on the drum track to "Drums":

1. Double-click the name field on the event.

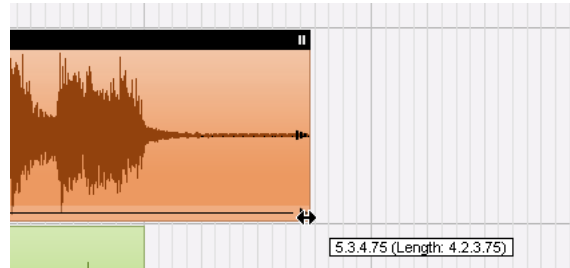**2.** Type in "Drums" and when you are done, press [Enter]/[Return].
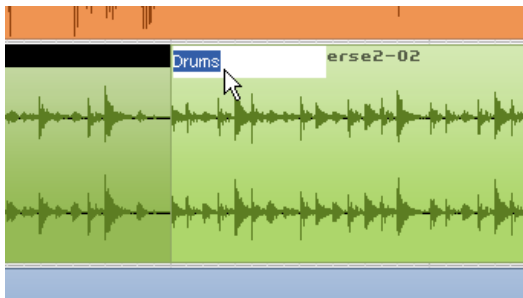
The name has now changed to "Drums".

Resizing

You can resize an event by adjusting start and/or end of the event. Used in combination with splitting and repeating, this is usually all the editing you'll need.

1. Click on the event you would like to resize. In our case let's resize the "Guitar" and "Synth" events.
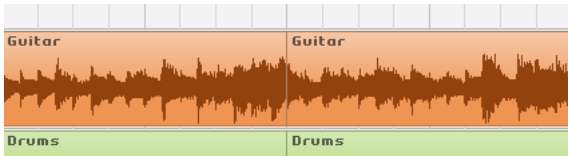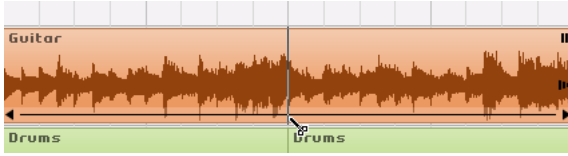

2. Position the cursor over one of the triangles at the bottom left or right of the event. Click and adjust the "Guitar" and "Synth" events so that there isn't as much empty space on the left and right of the event.
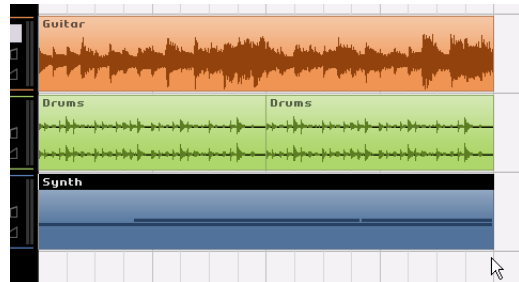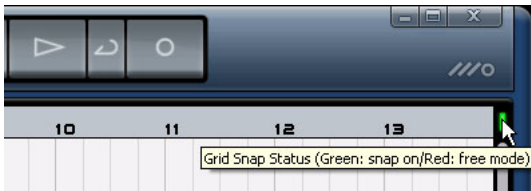
Splitting

Splitting is used to cut events.

You can split or cut an event wherever you want to or you can split them evenly at positions defined by the bars and beats position grid displayed in the Arrange Zone.

Splitting with Snap off

Splitting with Snap off allows you to cut the event anywhere you like, without locking to the grid.

1. Make sure that Snap is deactivated. You can now split the event anywhere you like.

2. Select the "Synth" event.

3. Hover the cursor along the bottom of the event. The cursor turns into the Split tool.

4. Click anywhere along the bottom of the event to split it. Create as many splits as you like.

5. Undo your actions by using the "Undo Last Action" button in the Pilot Zone. Make sure there are no splits in the "Synth" event any more.


Splitting with Snap on

Having the Snap button activated allows you to split or cut with precision, directly on bars or beats.

1. Make sure that the Snap button is activated.

2. Let's split the "Drums" event on the third beat of every bar.

3. If you can't see beats in the grid, zoom in using the [H] key on your keyboard until you can see them.

4. Cut on bar 1 beat 3, bar 2 beat 3, bar 3 beat 3, and bar 4 beat 3.

5. Undo you actions by using the "Undo Last Action" button in the Pilot Zone. Make sure there are no splits in the "Drums" event any more.

Moving

Let's move all of the events in the project so that all the events on all tracks lines up with bar 2.

1. Make sure that Snap is activated.

2. Click and hold the mouse in an empty area of the project window. Drag to create a selection of all the events. When you release the mouse button, all of the events will be selected.
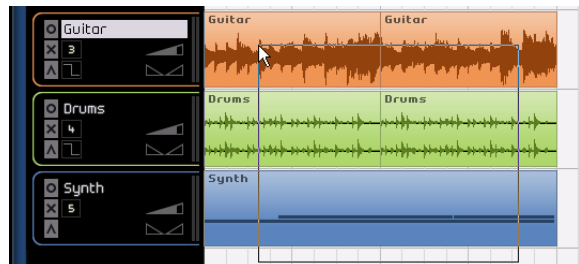
3. With all of the events selected, click and drag them so that the events line up with bar 2.

4. Click on an empty area of the project window so that no events are selected.

All of the events have moved together, and have stayed in the same relative position.

5. Select all of the events again, and drag them back to bar 1.

Muting

Muting an event stops you from hearing just that event. You may want to mute events on a track so that the track continues to play except for the events you mute.

⇨ Note that this is different from muting a track.

1. Hover the cursor over the event you wish to mute. The mute button will appear in the top right hand corner of the event.

2. Click on the Mute button. The event will turn gray. This means that the event in muted.

3. To unmute the event click on the "Mute" button again.

Repeating

The Repeat function is great for repeating something over and over directly after the event you want to repeat. This function is built right onto events in Sequel.

Let's repeat the "Drums" event:

1. Click on the "Repeat handle" on the middle right side of the event and drag until the "Repeat Count" is three.

2. We now have five "Drums" events. Two original and three repeats.

Copying

Copying can be used to copy an event to another area in the project window.

Using copy and paste

1. To copy an event, click on the desired event and choose "Copy" from the Edit menu. In our case, let's choose the "Guitar" event.

2. Position the cursor at the point in the project where you would like the copy to be made. We'll place the cursor at bar 5 beat 2.

3. Make sure you click on the track that you want the copied event to be copied to.

4. Choose "Paste" from the Edit menu.

⇨ It is possible that you may have another track selected. If so the "Paste" command would paste it to a different track. Always note the track you have selected before choosing "Paste".

5. Now we have two "Guitar" events.

Using the [Ctrl]/[Command] key

1. Place the cursor in the center of the Synth event and hold down [Ctrl]/[Command].

2. We are going to copy the "Synth" event. Click and hold the selected event and drag to the position you wish the copy to be made. In this case, drag until the copy is lined up with bar 5.

3. Then release the mouse button.

4. Now we have two "Synth" events.

Erasing

1. Select an event to erase.

2. Press [Delete] or [Backspace] to delete the event.
You may also select the Delete option on the Edit menu.

About the Sample Editor

The Sample Editor is used for detailed editing. It can be used for the following functions:

- Quantization
- Time Warp
- Adding Silence

These features will be explained in the chapter "Advanced features" on page 73.

1. To open the Sample Editor, select an audio event and then select the Editor page in the Multi Zone.
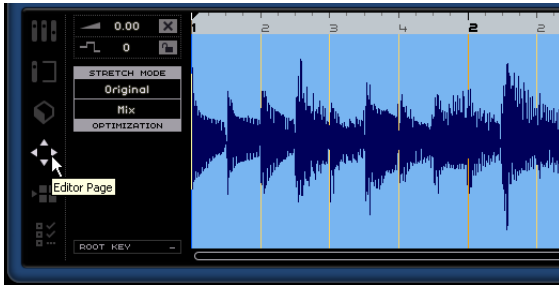
2. The selected audio event is displayed in the center of the Editor page. Here you can see a detailed waveform render of the audio file.

The functions along the left side of the window such as volume, mute, transpose and transpose lock are described in the section "The Editor page" on page 65.

Editing Instrument parts

In this section, we are going to look at some of the editing functions for Instrument parts that are available in Sequel.

Key Editor

The Key Editor is where we can make changes to the Instrument data on our instrument tracks.

⚠ Load the project "Key Editor" found in the "Sequel Tutorial 2" folder.

Deleting notes

Select the "Synth" event and go to the Editor page in the Multi Zone to view the Key Editor. Here you can see the synth notes lined up with a keyboard or piano roll on the left. At the bottom is the velocity of each of the notes and at the top we can see the time ruler.

Let's delete all the notes in bar 1.

1. Click once and hold the mouse while dragging a selection over the first Bar.
A common term for this is to "lasso" the notes.
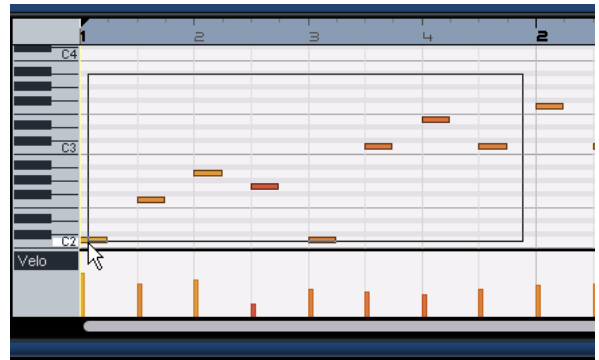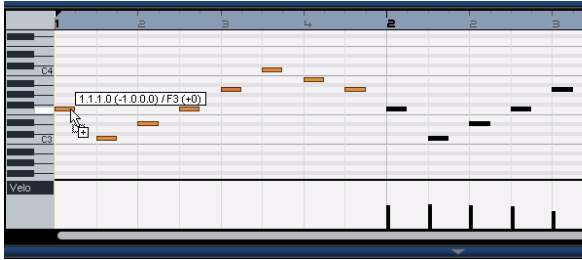

2. Press [Delete] or [Backspace] on your computer keyboard to delete all the notes in the first bar.

Copying notes

Let's copy the all of the notes in the second bar into the first bar.

1. Lasso all the notes in bar 2.

**2.** Hold down [Ctrl]/[Command] and drag the notes from bar 2 to bar 1. This copies them.

Resizing notes

We can shorten or lengthen notes using the Key Editor. Let's make all the eighth notes in the first two bars into quarter notes.

1. Lasso all the notes in the first two bars.

2. Put your cursor at the end of any of the lassoed notes. The cursor changes to look like two arrows pointing away from each other.
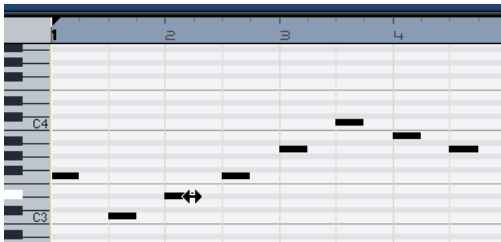

3. Click and drag right to resize the notes.
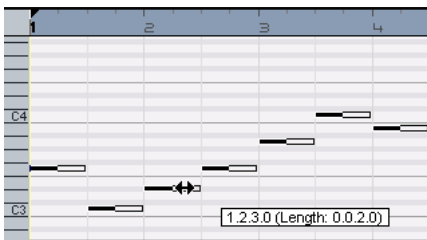
Creating or drawing in notes

We can use the Key Editor to draw in notes. This is great for creating Instrument arrangements that you are having trouble playing in yourself.

Let's add some notes to the first two bars of the song:

1. Make the Key Editor larger by clicking on the bar along the top of the Multi Zone and dragging upwards.

2. Make the notes in the Key Editor larger by adjusting the zoom slider along the right hand side of the Key Editor.

3. Let's draw in a G overtop of the first C in bar 1 so that two notes will be played instead of one.

4. Hold down [Alt]/[Option] and the cursor becomes a pencil.

5. Click and drag to draw in an eighth note G.

**6.** Next, draw in notes over top of the rest of the notes in bar 1 and 2.
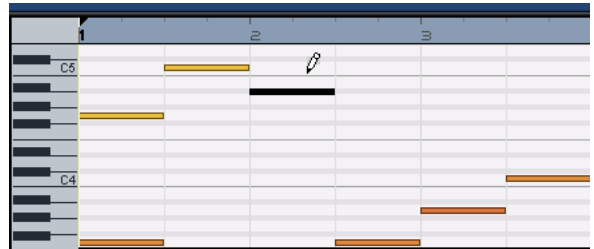
Have fun and experiment with different note placements.

⚠ Pressing [Alt]/[Option] is the magic way to get the Pencil tool, for drawing instrument parts in the Arrange Zone or events in the Key Editor!

The Controller lane

The Controller Lane allows us to add in or modify Instrument data such as velocity and controller information. The most common use for this is to edit velocity or pitch bend. If you find that the velocity is too loud or quiet on certain notes, you can view and edit them at the bottom of the Key Editor.

Pop-up menu   The controller lane
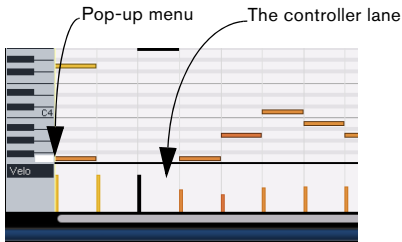
1. On the pop-up menu, select the information you wish view or change, in this example, choose "Velocity".
Along the bottom, you can see the velocity setting for each note contained in the Instrument part.

2. Hold down [Alt]/[Option] and the cursor becomes a pencil.

3. Click and drag to move the velocity information for a note up or down.

4. You can also click and move the cursor across the controller lane in a wave-type motion to draw in curves or ramps in the information.

Move ahead to the next chapter where we will discuss mixing, EQs, automation, effects, and exporting.

5

Tutorial 3: Mixing

Introduction

In this chapter, we'll show you how to get to a mix ready with proper levels, EQs and effects. Automation will be added and then we'll export the audio.

⇨ The following sections make references to tutorial projects, located in the default Sequel project folder.

Setting levels

The first thing that we need to do is set the levels for our project. This helps us get a great starting point for the mix so we can add EQ and effects later.

⚠ Load the project "Mixing 1" found in the "Sequel Tutorial 3" folder.

1. Select the Mixer page in the Multi Zone.

2. Press the space bar on your computer keyboard to start playing back the project and listen to your mix.

3. Move the faders on each track so that you can hear everything the way you like it.

⇨ If for any reason you need to reset a fader back to its default position of 100, [Ctrl]/[Command]-click directly in the fader area.

⇨ Be careful how high you raise the faders. Make sure that everything is at a good volume without clipping or distortion or any other unpleasant sounds. You will know if your tracks are too loud if the Master fader area turns red. If this happens, lower the levels and click the red Audio Overload indicator to reset it.

That's it for setting levels. Let's check out pan next.

Setting Pan

⚠ Load the project "Mixing 2" found in the "Sequel Tutorial 3" folder.

Setting the pan for each track moves its position in the stereo mix. You can either keep the signal balanced in the middle of the left and right speaker, slightly to the left or slightly to the right or be completely in the left or right speaker.

Keep the "Drums" track in the middle. Move the "Bass" track slightly to the left and move the "Guitar" track almost all the way left and the "Synth" track almost all the way to the right. This will give the mix a little bit more of a feeling of space.

⇨ In case you need to get the panner back to the middle, you can [Ctrl]/[Command]-click directly in the panner area.

That's it for pan, let's move on to Mute and Solo.

Mute and Solo

⚠ Load the project "Mixing 3" found in the "Sequel Tutorial 3" folder.

For each track, there is a button for Mute and Solo. Mute will prevent you from hearing the track, and Solo will only play that track or tracks that have Solo enabled.

⇨ You can have several tracks muted or soloed at a time.

⇨ When you Solo a track, the other tracks become muted.

To disable a Solo or Mute simply click the button again.

To simultaneously mute a track that is soloed and solo another track, [Ctrl]/[Command]-click on the solo button of the track that you wish to solo.

That's it for Solo and Mute. Let's move on to adding EQ.

Adding EQ

⚠ Load the project "Mixing 4" found in the "Sequel Tutorial 3" folder.

EQ or equalization adds or subtracts frequencies, so that you can place each instrument correctly in the mix. EQ is subjective and can be influenced by the kind of music you are mixing or the kind of music that you like to listen to.

We are going to run through the EQ features that Sequel has to offer, but feel free to experiment and try our different presets on your mix.

1. Select the "Drums" track in the Arrange Zone.

2. Solo the Drums track and select the Track Inspector page in the Multi Zone.
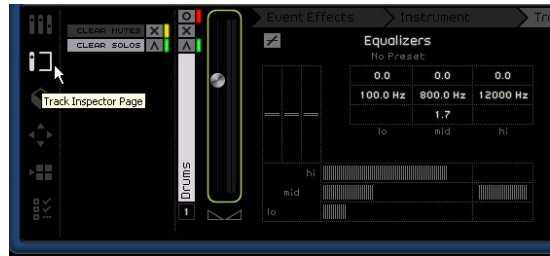
3. Click on the "Equalizers" tab.

⇨ Make sure that you have a section of your project playing that features the "Drums" track so that you can hear the EQ changes that you are making.

Each track in Sequel has a 3-band EQ. The low shelf or bass frequency sets the frequency at which the low tones will be affected. The parametric mid or middle frequency sets the frequency at which the middle tones will be affected. The high shelf or treble frequency sets the frequency at which the high tones will be affected.

Lo, Mid and Hi EQ
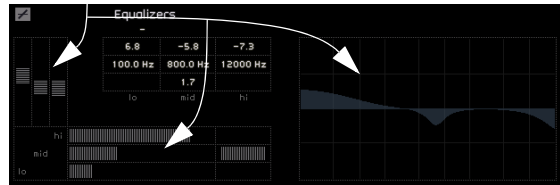
You can adjust the frequency of each EQ by clicking on the frequency slider and dragging left or right.

The exact frequency that is being affected is displayed in the EQ settings display.
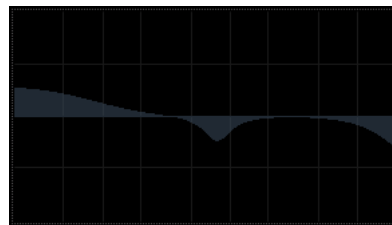
⇨ You can also see a visual representation of the EQ settings you are changing.

⇨ You can adjust the EQs level by raising or lowering the bass, middle, or treble gain slider. To do this, click and drag up or down on the desired slider.

The middle EQ is a parametric EQ. That means that the frequency range of this EQ can be widened or shortened. To do this, click on the middle width or "Q" slider and drag right to widen the range and left to shorten it.
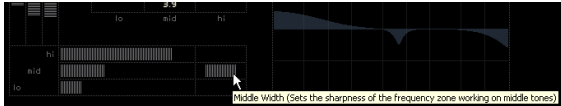
To bypass the EQ, click the Bypass button.
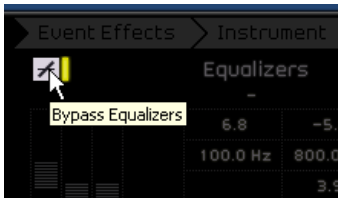
You can reset any slider by [Ctrl]/[Command]-clicking on it. You can also reset the EQ from the EQ Presets pop-up. Simply click in the EQ Presets field and select "Reset".

Experiment with the EQs on all your tracks.

⇨ A good tip when using EQ is that it's usually better to take away EQ (lower the gain) than to add it.

⚠ Listen to, and see the changes we made to the EQ by loading the project "Mixing 5" found in the "Sequel Tutorial 3" folder.

Now let's move on to effects.

Audio Effects

⚠ Load the project "Mixing 6" found in the "Sequel Tutorial 3" folder.

Let's add some effects to our project. In Sequel, there are three types of effects that we can manipulate:

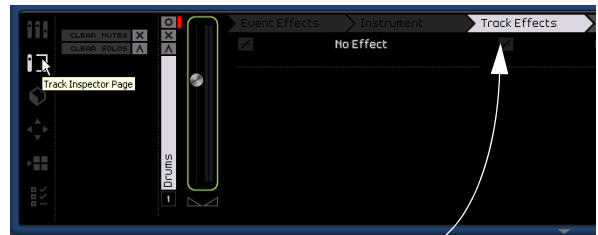▪ Track Effects
▪ Global Effects
▪ Output Effects.

For details on each effect and its parameters, see the chapter "Effects reference" on .

▪ You can also add effects to instrument parts. This is described in detail in the section "The Event Effects tab (instrument tracks only)" on .

Track Effects

Track Effects are commonly referred to as Insert Effects. This is because they are inserted into the signal flow.

1. Select the "Bass" track.

2. Make sure you have the Track Inspector page selected and click on the "Track Effects" tab.

Track Effects Tab

3. Begin playback and loop (or "cycle") a section of music so that you can hear everything.
The tutorial project has its locators and cycle already set for this. Feel free to change this if you like.

4. Let's use the Compression fixed insert on the "Bass" track to smooth it out a little bit.

5. Adjust the Threshold slider until the bass sounds smoother and there isn't such a big difference between the notes that were played quieter versus the notes that were played a little louder.
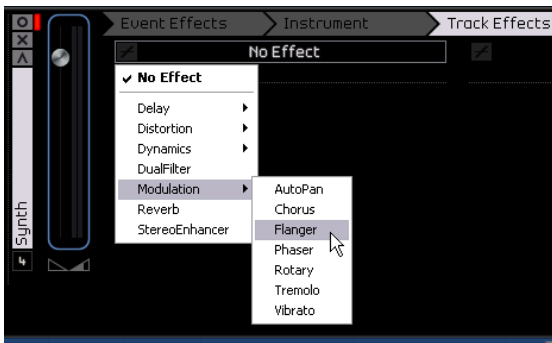

6. Raise the "Channel Level" to compensate for the re-duction in Gain that the compression has caused on the "Bass" track.
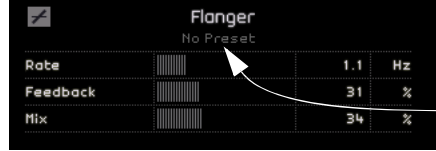

7. Next let's add some flange to the "Synth" track to make it stand out a little bit more. Select the "Synth" track in the Arrange Zone.

8. Click on the first insert slot and choose "Flanger" from the Modulation submenu.

9. Make changes to the effect manually, or select a pre-set from the "Effect Preset" menu.

Effect Preset

For details on each effect and its parameters, see the chapter "Effects reference" on page 91.

At the end of this section, you can load the next tutorial that will contain all of the changes we have made.

Global Effects

⚠ Load the project "Mixing 7" found in the "Sequel Tutorial 3" folder.

Each project can have two send effects. These are referred to as Global Effects.

1. Make sure you have the Track Inspector page selected and click on the "Global Effects" tab.

Reverb and StereoDelay are set as the default send ef-fects. You can change them if you like, but remember you only have two slots that will be used for all tracks.

Let's add some reverb to the drums:

2. Select the "Drums" track and make sure "Amount 1" is enabled. This will send the "Drums" to the "Reverb" effect which is in the Send 1 spot.
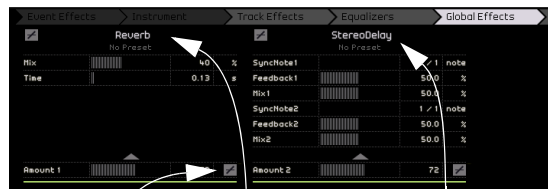
Amount 1 enabled   Send Effect 1   Send Effect 2

3. Move the "Amount 1" slider until you hear the desired amount of the "Reverb" effect.

For details on each effect and its parameters, see the chapter "Effects reference" on page 91.

Output Effects

Output Effects, like Track Effects, are inserts, but in this case, they are applied to the Master channel. The "Output Effects" tab features two changeable effects and two fixed effects.

The two fixed effects are a maximizer and stereo enhancer. Both are controllable via sliders and a bypass button.

Let's use the "Maximizer" to raise the overall volume of the project and the "Stereo Enhancer" to create a more spread effect of the mix.
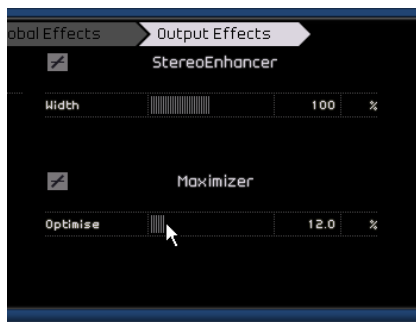
1. Move the "Maximizer" slider until the effect is at a suitable level.

2. You can bypass the effect by clicking on the button above the effect slider.

3. Crank up the "Stereo Enhancer" a little bit to add some spread to your project.

For details on each effect and its parameters, see the chapter "Effects reference" on page 91.

That's it for effects. Let's move on to automation.

Adding Automation

Automation allows us to make things like faders, pan, knobs, and effects be adjusted automatically. This is very handy, especially when you have a lot of tracks in your project. Any changes you make will be remembered and will occur again automatically without you having to worry about them.

⚠ Load the project "Mixing 8" found in the "Sequel Tutorial 3" folder.

Let's make the whole song fade out by changing the volume automation on the Master track.

1. Activate the "Edit/Write Automation" button in Pilot Zone.
The Master track will appear in the Arrange Zone.
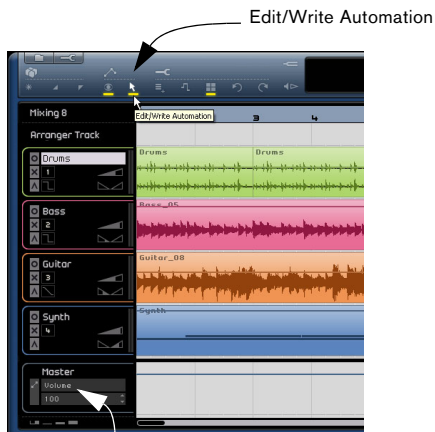
Make sure Volume is selected here

**2.** Make sure that "Volume" is selected on the automation pop-up menu.

Let's create a fade-out in the last bar of the project.

3. Create two anchor points by clicking on the volume automation line. One at the beginning of the last bar and one at the end of the last bar.
To delete an anchor point that you may have created by mistake, select it and press [Delete] or [Backspace] on your computer keyboard.
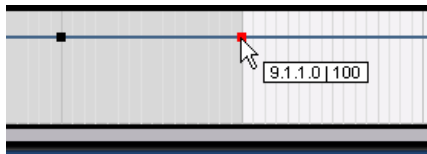
4. Drag the anchor point at the end of the song down until you can't drag it any further.
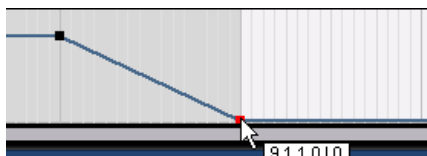
Listen to the fade out automation you have created.

⇨ You can also create automation during playback or recording, simply by wiggling a fader or knob.

Let's select a parameter to automate. In this case, let's use the "Panner" on the "Synth" track.

1. Make sure that the "Edit/Write Automation" button is activated.

2. Select "Panner - Left - Right" from the automation pop-up menu on the Synth track so that you can see the automation writing itself to the track.
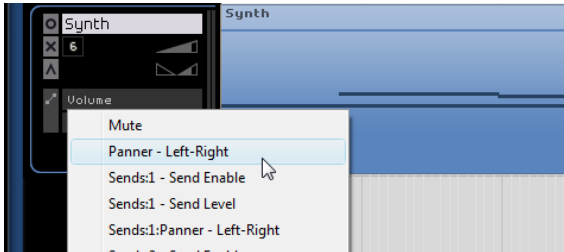
3. Start playback using the space bar and move the panner back and forth.
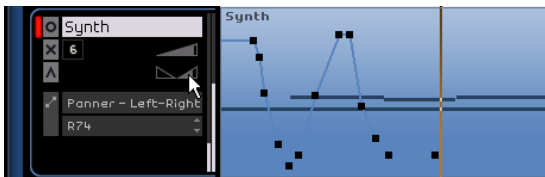
4. Stop playback when you are done.

⇨ Sequel automatically smoothes out the automation for you.

If you don't like the automation you created, press [Ctrl]/[Command]+[Z] on your computer keyboard to undo it.

Experiment more with this exciting tool! It is so helpful in making your project sound great. Remember that pretty much any knob, slider or fader can be automated in Sequel.
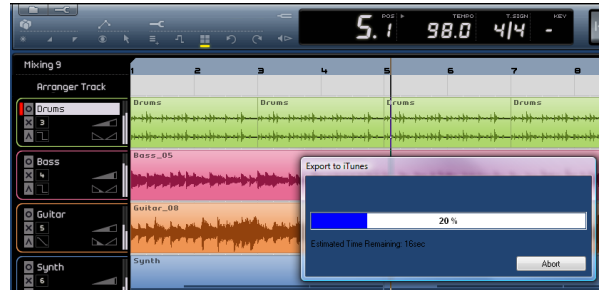
Exporting

Now that we have our project mixed, we'll want to export it so that we can send it to others, burn it to a CD, or listen to it on our iPod.

⚠ Load the project "Mixing 9" found in the "Sequel Tutorial 3" folder.

Exporting to iTunes

To export your project directly to iTunes, open the File menu and select "Export Project to iTunes".

Your project will be exported from start to finish as an AAC file which is the iTunes default. This will launch iTunes and you will find your exported project is already part of your library for easy transfer to your iPod.

⇨ Note that iTunes must be installed on your computer for this function to be available.

Exporting audio files

1. To export your project in a different format, open the File menu and select "Export Project as Audio file".

2. A dialog opens where you can choose a file name. Let's name ours "First Mixdown".

⇨ The Export Location is where you wish to save the exported file on your computer. Click in the field to the right to select a destination. Make sure you choose a destination that is easy to remember. Choosing the Project folder is recommended so that your file won't become erased or lost.

⇨ Normally you'll want to save your exported file as a "Wave File" under "File Format". This is the most universally compatible file type for audio. If the application you need the file for demands a different format, you can choose one from the pop-up menu.

3. A bit depth of 16 bit is common for CD burning. Let's use 16 bit.

24 bit will give a higher (better than CD) audio quality, but the file will also use up more hard disk space.

4. When you are finished choosing all of your settings, select "Export" to begin exporting the file.

The progress bar along the bottom will let you see your progress.

⚠ Load the project "Mixing 10" found in the "Sequel Tutorial 3" folder to hear the results of our export.

6

Tutorial 4: Live Pads and Chain Play mode

Introduction

In this chapter, we'll show you how to use Sequel to make performing live fun and easy. We'll take you through creating Arranger parts and using the Arranger page.
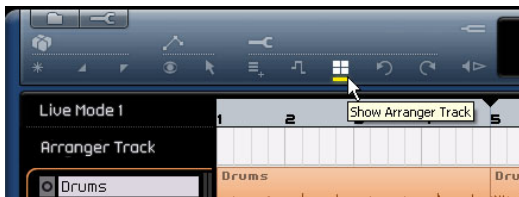
Arranger parts

⇨ The following sections make references to tutorial projects, located in the default Sequel project folder.

⚠ Load the project "Live Mode 1" found in the "Sequel Tutorial 4" folder.

Let's use Arranger parts to separate the intro, verse, chorus, and extro into different sections.

1. Activate the Arranger track button in the Pilot Zone.

2. Place the cursor within the Arranger track and press and hold [Alt]/[Option] on your computer keyboard. The cursor will turn into a pencil.

3. Click and drag to create an Arranger part from bar 1 to bar 5.

4. Create three more parts from bar 5 to 13, 13 to 17, and 17 to 25. They will be labeled alphabetically from A to Z.
You can create up to 26 parts. One for each letter of the alphabet. If you want to use a different project, feel free to create as many Arranger parts as you like.
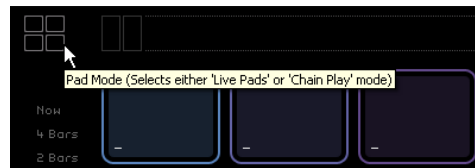

Live Mode

⚠ Load the project "Live Mode 2" found in the "Sequel Tutorial 4" folder.

Now that we have Arranger parts set up, let's use them to play back our project.

1. Select the Arranger page in the Multi Zone.

2. Make sure that the Pad Mode is set to "Live Pads" mode. This is represented by four small pads in the shape of a box.


3. Below the Pad Mode button you can select the Jump mode. Make sure it is set to "End".

4. Click on "Pad A" and it will begin looping the intro.
You can also press the [A] key on your computer keyboard.
Notice that the pad is highlighted. This signifies that the pad is currently playing back or active.

5. Click on "Pad B".
Notice that pad "B" starts flashing. This signifies that this pad is next in line to be played.

The order in which the pads will be played and the exact time at which a pad is played depend on the settings to the left of the pads.

Option	Description
Now	Jumps to the next section immediately.
4 bars, 2 bars	When one of these modes is selected, a grid of 4 or 2 bars (depending on the setting) will be placed on the active Arranger part. Whenever the respective grid line is reached, playback will jump to the next Arranger part. An example: Let's say you have an Arranger part which is 8 bars long and Jump mode is set to 4 bars. When the cursor is anywhere within the first 4 bars of the Arranger part when you hit the next pad, playback will jump to the next part when the end of the fourth bar of the Arranger part is reached. When the cursor is anywhere within the last 4 bars of the Arranger part, playback will jump to the next part at the end of the part. When a part is shorter than 4 (or 2) bars when this mode is selected, playback will jump to the next section at the part end.
1 bar	Jumps to the next section at the next bar line.
1 beat	Jumps to the next section at the next beat.
End	Plays the current section to the end, then jumps to the next section.

Tutorial 4: Live Pads and Chain Play mode

6. [Alt]-click along the bottom of pad A and name it "Intro".

7. Let's also name pad B "Verse", pad C "Chorus", and pad D "Extro".
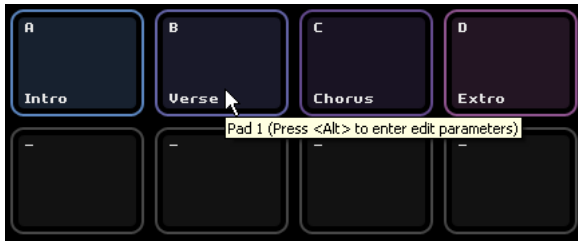
8. Click on the "Stop" pad to stop playback.

9. Now you can use the Pads to play live. Just click on a pad to play it and click on the pad you want to play next to queue it up.

Experiment with the Jump modes and have fun creating different arrangements with your project.

Chain Play Mode

⚠ Load the project "Live Mode 3" found in the "Sequel Tutorial 4" folder.

When using the "Live Pads" mode, you have to physically click each pad as you would like it to be played. This is great for a more spontaneous performance, but what if you want things planned out a little more? That's where "Chain Play" mode really comes in handy.

1. Change the pad mode to "Chain Play" mode. This is represented by three small pads with an arrow underneath.

2. Click on "Pad A". Notice that an "A" appears in the "Current Chain".
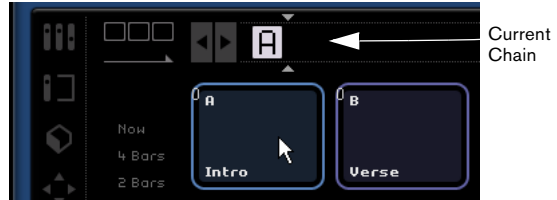
Current Chain

3. Add B, C, and D to the Current Chain.
You can also drag parts from the Arranger track into the current track.

4. Press the space bar on your computer keyboard to start playback. Each Arranger part will play in the sequence found in the "Current Chain".

Right now the "Current Chain" is playing back our project in its original arrangement, so let's change things up a bit.

5. Click on the "Play" button to stop playback.

6. Click the "Reset" button to clear the "Current Chain".
You can also move the insert cursor in the "Current Chain" and then press [Delete] or [Backspace] until the chain is empty.

7. Use the pads to enter in a pattern. We'll use A, B, C, C, B, C, C, D.
Feel free to enter any pattern you like!

8. Click "Play" in the Pilot Zone to start playback.

9. Activate the Cycle button.
If the Cycle is activated, the Current Chain will loop when it gets to the end. If the Cycles is off, playback will stop when it reaches the end.

▪ Click and drag to change the order of the parts in the current chain.

▪ To delete a part, you can use [Backspace] or [Delete] on your computer keyboard. Note that the cursor must be placed at the position where you want the part deleted.

7

The Pilot Zone

Introduction

The Sequel window is divided into three main sections: the "Pilot Zone" (explained below), the "Arrange Zone" (see the chapter "The Arrange Zone" on page 48), and the "Multi Zone" (see the chapter "The Multi Zone" on page 55).

The Pilot Zone in Sequel puts you in the pilot seat so that you can control all of Sequel's main functions.

In this chapter, we are going to take you through the layout and functions of the Pilot Zone.

Pilot Zone   Arrange Zone

Multi Zone
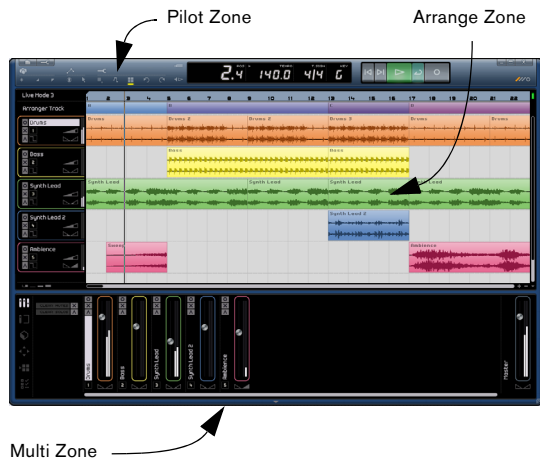
This chapter is great to use as a reference if you aren't sure what a button is or does in the Pilot Zone.

The Sequel menu (Mac only)

The Sequel menu is only found in the Mac version of Sequel and contains a few options related to the Mac OS.

About Sequel

This option allows you to view the exact version of Sequel you have installed and also take a look at some of the people involved in putting it together.

Preferences

Not used. You will find the main preference of Sequel in the Program Settings page, see "The Program Settings page" on page 71.

The rest of the functions in this menu are related to the Mac OS and are the same as the functions you would find in any program you run on a Mac.

The File and Edit menus

On the Mac, the File and Edit menus appear along the top left of the screen.
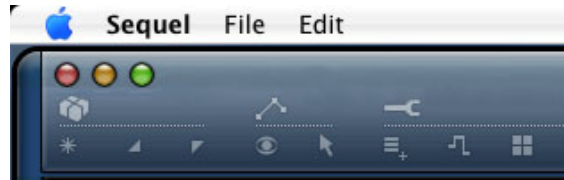
On the PC, these menus are opened via the two buttons in the top left corner of the screen.
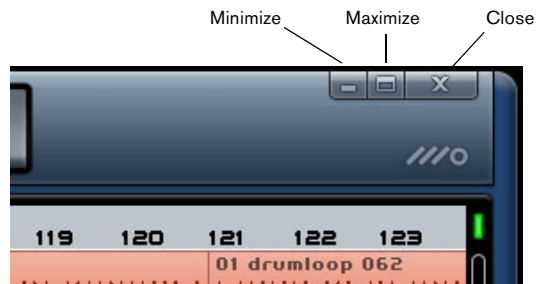
File menu   Edit menu

Minimizing, maximizing and closing

This works slightly differently for Windows and Macintosh:

Windows

In the top right hand corner the program window, there are buttons for minimizing, maximizing and closing Sequel.

Minimize   Maximize   Close

▪ Selecting the minimize button will hide the window in the system tray.

▪ Selecting the maximize button will stretch out the program window to fill your screen.

Selecting the maximize again will shrink the window down and allow you to manually resize the window by clicking and holding the bottom right corner of the program window and dragging until you find a window size that is comfortable.

Macintosh

In the top left hand corner the program window, there are buttons for minimizing, maximizing and closing Sequel.

Close   Minimize   Maximize

▪ Selecting the minimize button will hide the window in the dock.

▪ Selecting the maximize button will stretch out the program window to fill your screen.

Selecting the maximize again will shrink the window down and allow you to manually resize the window by clicking and holding the bottom right corner of the program window and dragging until you find a window size that is comfortable.

The File button/menu

The File menu (opened by clicking the File button in the top left corner of the Sequel window under Windows) contains the following options:
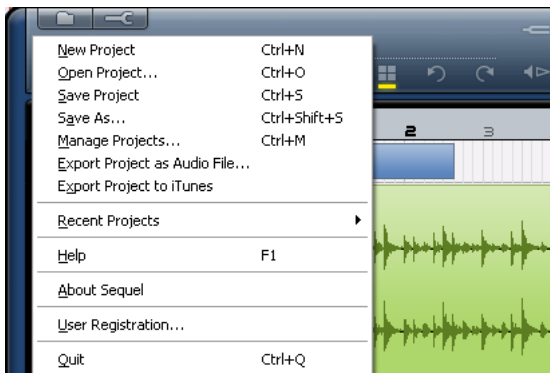
New Project

Selecting this option creates a new blank project.

▪ You can also use the key command [Ctrl]/[Command]+[N].

Open Project...

Selecting this option allows you to open an existing project.

▪ You can also use the key command [Ctrl]/[Command]+[O].

Save Project

Selecting this option allows you to save your project.

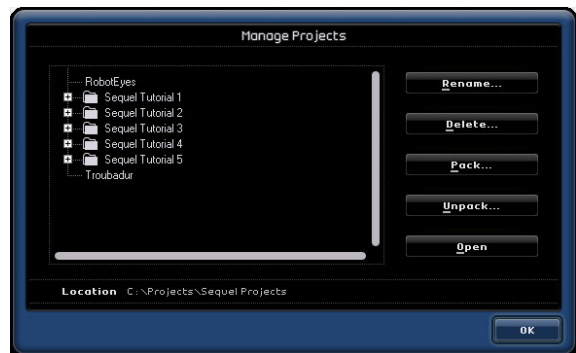▪ You can also use the key command [Ctrl]/[Command]+[S].

Save As...

Selecting this option allows you to save your project under a different name.

▪ You can also use the key command [Ctrl]/[Command]+[Shift]+[S].

Manage Projects...

Selecting this option opens a dialog which allows you manage all of your Sequel projects.

Along the bottom of the dialog is a pop-up menu where you can select the location of your projects. Any projects located within that location will appear in the list on the left side of the dialog. You can then click on a project to select it and perform the following functions.

Option	Description
Rename…	This allows you to change the name of a project.
Delete…	Click this button to permanently remove a project from the specified location.
Pack…	This packs (or compresses) all of the components of your project into one file for transfer or backup.
Unpack…	This will open packed files and restore file and directory structure for editing.
Open	Opens the selected project.

▪ You can also use the key command [Ctrl]/[Command]+[Shift]+[M] to access the Manage Projects dialog.

Export Project as Audio File…

Selecting this option opens up a dialog which allows you to export your project to be used for burning to CD or various other uses. To burn a CD you will need the appropriate software on your computer. You can specify the file name, the path to save the file to, the file format and the bit depth. See also "Exporting" on page 32.

Export Project to iTunes

Selecting this option allows you to export your project to an iTunes compatible format for easy uploading to your iPod, see "Exporting" on page 32.

Recent Projects

This allows you to quickly access recently worked on projects.

Help

Selecting this option will open the manual which you are viewing now.

▪ You can also use [F1] on the keyboard to access it any time you need assistance.

About Sequel (Windows only)

This option allows you to view the exact version of Sequel you have installed and also take a look at some of the people involved in putting it together.

User Registration…

Selecting this option opens your computer's web browser and takes you to Steinberg's on-line registration service. We encourage you to register your software! By doing so, you are entitled to technical support and being kept aware of updates and other news regarding Sequel.

Quit

Selecting this option will exit the program. A dialog will open asking you to save your project if you haven't done so already.

▪ Click "Save" to save your project before you quit.
▪ Click "Don't Save" to quit without saving.
▪ Click "Cancel" if you aren't sure.

▪ The key command to quit is [Ctrl]/[Command]+[Q].

The Edit button/menu

The Edit menu (opened by clicking the Edit (tool) button in the top left corner of the Sequel window under Windows) contains the following editing functions:
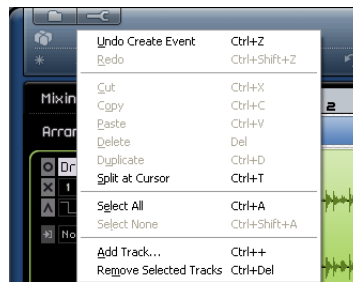
Undo

Selecting this option will undo the last action that you performed. You can undo any action you performed from the point that you opened the project.

▪ You can also use the key command [Ctrl]/[Command]+[Z].

Redo

Selecting this option will redo the any action that you deleted using undo. When there is nothing left to redo the option will become grayed out.

▪ You can also use the key command [Ctrl]/[Command]+[Shift]+[Z].

Cut

Cut can be used to move an event or group of events to another area in the "Arrange Zone".

▪ The key command for this is [Ctrl]/[Command]+[X].

Copy

Copy can be used to copy an event or group of events to another area in the "Arrange Zone".

▪ The key command for this is [Ctrl]/[Command]+[C].

Paste

Paste is used to move cut or copied material to its new location.

▪ The key command for this is [Ctrl]/[Command]+[V].

Delete

Delete is used to remove an event or group of events from your project.

▪ The key command for this is [Delete] or [Backspace].

Duplicate

Duplicate is used to create quick copies of an event. The copy will be pasted in the project directly after the selected event.

▪ The key command for this is [Ctrl]/[Command]+[D].

Split at Cursor

Split at cursor allows you to split the selected event at the cursor location.

If no event is selected, all events (on all tracks) that are intersected by the project cursor will be split.

▪ The key command for this is [Ctrl]/[Command]+[T].

Select All

Selecting this option will select all events in the "Arrange Zone". This is useful for performing large scale editing.

▪ The key command for this is [Ctrl]/[Command]+[A].

Select None

Select none will take clear any selection you have made is the Arrange Zone.

▪ The key command for this is [Ctrl]/[Command]+[Shift]+[A].

Add Track…

Selecting this option will bring up a dialog which allows you to add tracks to your project. You can create audio tracks or instrument tracks.

▪ The key command for this is [Ctrl]/[Command]+[+].

Remove selected tracks

Selecting this option will remove any tracks that you have selected in the Arrange Zone.

▪ To select multiple tracks, hold down [Ctrl]/[Command] and click on them.

▪ The key command for this is [Ctrl]/[Command]+[Delete] or [Ctrl]/[Command]+[Backspace].

About the Project, Automation and Edit buttons

Project buttons
(File management)

Automation
buttons
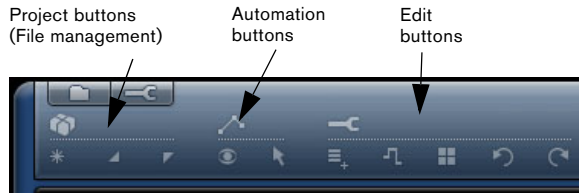
Edit
buttons

The Project, Automation and Edit buttons allow you quick and easy access to some of the most frequently used functions in Sequel.

The Project buttons

New Project

Open Project Save Project
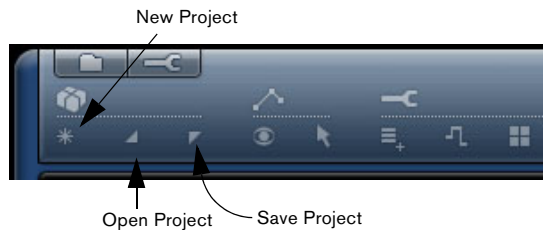
New Project

Clicking this button will close the current project and create a new one.

Open Project

Clicking this button will allow you to open an existing project.

Save Project

Clicking this button will allow you to save your project. Make it a habit to save in regular intervals.

The Automation buttons

Show Automation Edit/Write Automation
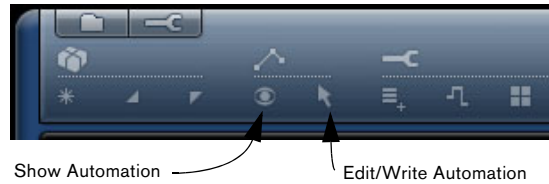
Show Automation

Activating this button will reveal your projects track automation. Deactivate it to hide all automation.

▪ The key command for showing/hiding the automation is [A].

Edit/Write Automation

Activating this button will allow you to edit and write track automation. Deactivating it will lock the automation and you won't be able to perform any editing.

⚠ Note that any automation you have created will always be reproduced during playback, even if both automation buttons are tuned off. If you do not want the automation to be reproduced, you have to delete all automation data you recorded/wrote into your track(s).

The Edit buttons

Add New Track Undo Last Action Redo Last Action

Show Transpose Track Show Arranger Track
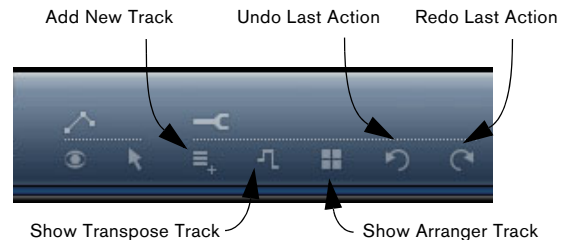
Add New Track

Activating this button will open up the Add Track dialog, see "Add Track…" on page 41.

Show Transpose Track

The Transpose track allows you to set global key changes. Activating the "Show Transpose Track" button reveals the Transpose Track just below the Ruler Zone.

Click here to show the Transpose track.

The Transpose track with transpose values.

▪ [Alt]/[Option]-click to add a global transpose change. You can add as many as you like.

▪ To change a transpose value, click in the Transpose value field and drag up or down.

▪ To hide the transpose track, deactivate the "Show Transpose Track" button.

⇨ Even when hidden, the transpose track will still affect your project.
If you do not want the transpose settings to affect your project, you have to delete all transpose parts on the transpose track.

Show Arranger Track

Activating the "Show Arranger Track" button will reveal the Arranger track just below the Ruler Zone.

▪ To add an Arrange part, hold down [Alt]/[Option] and click.

⇨ Even when hidden, the Arranger track will still affect your project.
If you do not want the Arranger track to affect your project, you have to manually delete all parts from the Arranger track.

For more information, see the chapter .

Undo Last Action

Clicking this button will undo the last action that you performed.

Redo Last Action

Clicking this button will redo the any action that you deleted using undo.

The Ruler Zone

The Ruler Zone is located just above the Arrange Zone. It displays the project's timeline as numbers corresponding to the bars and beats of your song.
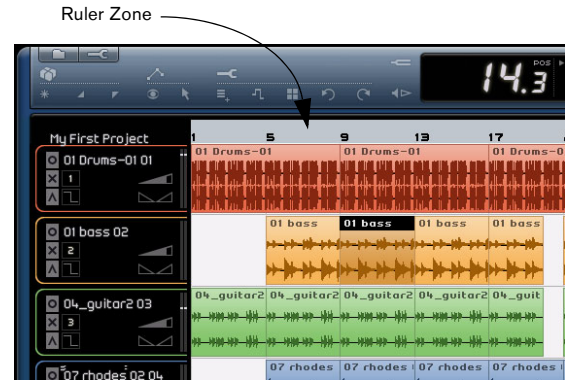
Ruler Zone

The Ruler Zone isn't only useful as a display though. It is also a great tool for editing.

▪ You can use the Ruler Zone to move the cursor around by clicking in the lower portion of the ruler bar at the place you would like to move the cursor to.

▪ You can zoom in and out to see your project in more detail by clicking and holding in the lower portion of the ruler bar and dragging up or down.
Dragging up zooms out and dragging down zooms in.

▪ You can also create a loop region for cycle mode by moving your mouse to the top edge of the ruler zone.
You'll notice that the pointer turns into a pencil. You can then click and drag to create a loop region.
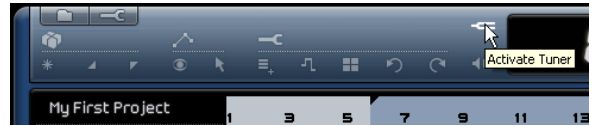
The project name

To the left of the Ruler Zone, the project name is shown.

Project name

Grid Snap Status

The Grid Snap Status is displayed on the right hand side of the Ruler Zone.
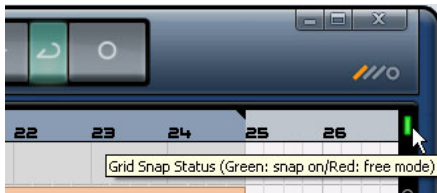
When the Grid Snap Status icon is green, grid snap is activated. This is will cause all editing you do to snap to the grid. The grid resolution is determined by how far in or out you are zoomed. See "Zooming in the Arrange Zone" on page 52 for more information.

Click on the "Grid Snap Status" icon to deactivate grid snap. The icon will turn red meaning that the grid status is in free mode. In free mode, events and event edits will no longer snap to the grid.

The Tuner

Sequel features a built-in tuner used for tuning instruments like a guitar or bass before recording.

When the Tuner is activated for the selected track, that track will become soloed. All track effects are bypassed and sends are disabled and the Pilot Zone display is replaced by the Tuner display.

When deactivated, solo is cancelled and all instruments, EQ, and effects are returned to normal.

⇨ See "Tuning your instrument" on page 15 to see how the Tuner works.

The Transport controls

The Transport Controls in Sequel.

The transport controls are similar to those that you would find on a VCR or DVD player.

The Play button

The Play button

The Play button allows you to listen back to your project.

To start playback

▪ Click on the Play button.

▪ Press the space bar on your computer keyboard – this toggles between start and stop.

▪ Press the [Enter] key on the numerical computer keypad.

▪ Double-click in the lower half of the Ruler Zone.

To stop playback

▪ Click on the Play button during playback.

▪ Press the space bar on your computer keyboard – this toggles between start and stop.

▪ Press the [0] key on the numerical computer keypad.

The Record button

The Record button

The Record button allows you to record audio events or Instrument parts into your project.

To start recording

▪ Click on the Record button at any time during playback.

▪ Press the [*] key on the numerical computer keypad during playback or while stopped.

To stop recording

▪ Click on the Record button during recording.

▪ Press the [*] key on the numerical computer keypad.

The Locate buttons

The Locate buttons

The locate buttons are used to jump between marker positions or to go to the beginning or end of your project.

To locate the previous marker or go to the beginning of the project

▪ Click on the "Locate Previous Marker" button.

▪ Press [Shift]+[B] on your computer keyboard.

To locate the next marker or go to the end of the project

▪ Click on the "Locate Next Marker" button.

▪ Press [Shift]+[N] on your computer keyboard.

About Cycle mode

The Cycle button

The Cycle button activates/deactivates cycle mode. Cycle mode allows you to loop a section of your song so that you can hear it again and again.

▪ To create a cycle region, move your mouse to the top edge of the ruler zone (the pointer turns into a pencil) and click and drag.

To activate/deactivate cycle mode

▪ Click on the Cycle button.

▪ Press the [/] key on the numerical computer keypad.

▪ Press the [-] key on you computer keyboard.

The Metronome

To add a click sound to playback and/or recording (as specified on the Program Settings page, see "The Program Settings page" on page 71), activate the Metronome button. The metronome will follow the project tempo and time signature.

Deactivating this button will turn off the metronome click.

Computer Usage

On the right side of the Pilot Zone, there is a Computer Usage indicator. If your computer is trying to do too many things at once, it may overload. If this happens, the Computer Usage indicator will light up. Click on it to reset it.
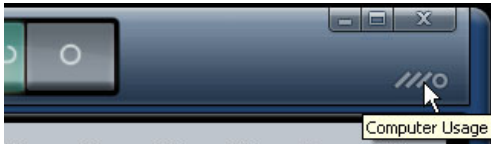
The Pilot Zone display

The Pilot Zone Display contains important information about your project. Displayed in the Pilot Zone Display from left to right is the Song Position, the Tempo, the Time Signature and the Project Root Key.

The Pilot Zone Display.

The Song Position (POS)

The Song position tells you the current position of the cursor in your project.

The Song position can be displayed in the time formats "bars and beats" or "seconds". To set the time format, click in the top right corner of the Song Position field.

To change the song position, you have the following possibilities:

▪ Double-click the song position field and type in the desired position.

▪ Click and hold the song position field and drag up or down with your mouse.

▪ Click in the lower half of the Ruler Zone at the desired position.

The Tempo (TEMPO)

The tempo display shows the current project tempo at the cursor position.

To change the tempo, you have the following possibilities:

▪ Double-click the tempo field and type in the desired tempo.

▪ Click in the tempo field, keep the mouse button pressed and drag up or down.

▪ Select a loop within your project that has the desired tempo and drag it onto the Tempo field.
This will change the tempo to the tempo set in the loop file.

Using the Rehearsal tempo

If you are recording an instrument into Sequel and you find that at some moments, it is impossible for you to keep up with the project tempo, try activating Rehearsal mode. This reduces the project tempo, making it easier for you to record even tricky parts into Sequel.

▪ To activate Rehearsal tempo, click in the top right corner of the tempo field.

Rehearsal tempo is activated.

▪ To use the normal project tempo again, click again in the top right corner of the tempo field.

The Time Signature (T.SIGN)

Your project time signature is displayed here.

To change the time signature, you have the following possibilities:

▪ Double-click the time signature field and type in the desired time signature.

▪ Click in the time signature field, keep the mouse button pressed and drag up or down.

The Project Root Key (KEY)

The root key of your project is displayed here. You can change this in the following ways:

▪ To change the project root key, click on the value and select a key from the pop-up menu.

▪ Select a loop in your project that has the desired key and drag it onto the key field.
This will only work if the key information was saved with the original audio loop file.

⇨ When you create a new project, the first audio event that you drag into your project will define the key, provided that the audio event's data contains key information.

8

The Arrange Zone

Introduction

Tracks
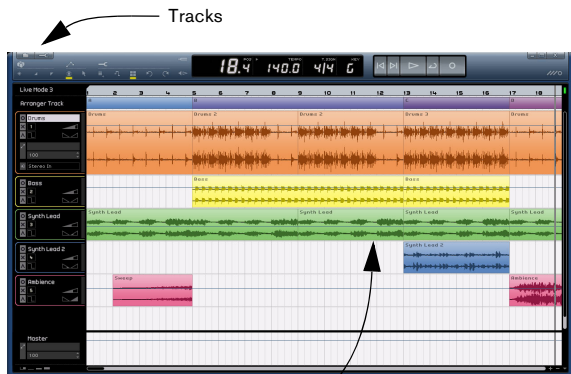
Audio events and Instrument parts

The Arrange Zone is where all of the main elements of your project will reside. This is also where all of your re-cording, editing, and arranging will take place.

To the left of the program window you will find the track list. The Arrange Zone in the center displays the instrument parts and audio events of the project along the timeline.

Resizing the Arrange Zone

The Arrange Zone can be resized by clicking on the bar at the bottom of the Arrange Zone and dragging up or down.

The cursor will change letting you know when you can re-size.

Click here to resize the Arrange Zone.
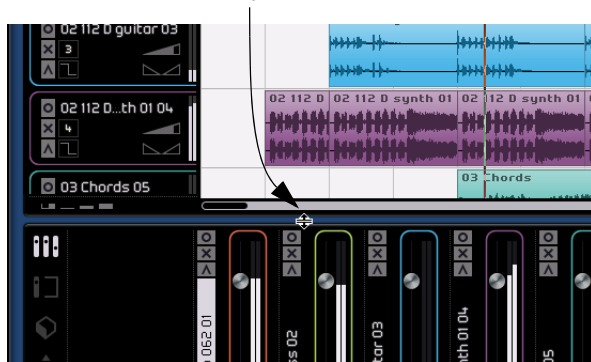
About tracks and track controls

There are two types of tracks in Sequel: audio tracks and instrument tracks. All of the tracks reside along the left hand side of the Arrange Zone. In the retail version of Sequel, there is no limit to the amount of tracks you can create.
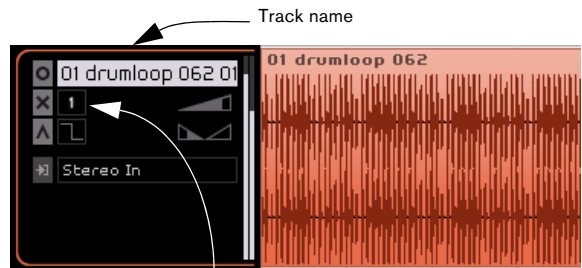
Track name

Track number

Selecting tracks

You can select tracks by clicking on the track name. You can select multiple tracks at once by [Shift]-clicking on each track you wish to select.

Renaming tracks

You can rename tracks by double-clicking in the track name field and typing in the desired name.

Track numbering

Tracks are automatically numbered based on the order they are arranged in. You can rearrange tracks by clicking and holding on the track name field and dragging up or down.

When you move the track, the track number will change according to its order.

Track height

In the bottom left corner of the Arrange Zone track list are four buttons for controlling track height.

Track height buttons

- The first button "Medium Size for Selected Tracks" sets all tracks to small except for the selected track which is set to a size between large and medium. To disable this, select one of the other buttons.
- The second button "Small Tracks" sets all tracks to a small size.
- The third button "Medium Tracks" sets all tracks to a medium size.
- The forth button "Large Tracks" sets all tracks to a large size.

Track controls

⚠ Click on the button "Large Tracks" to display all available track controls.

Each track includes a set of track controls. These are described next.

Record Ready

Solo   Mute
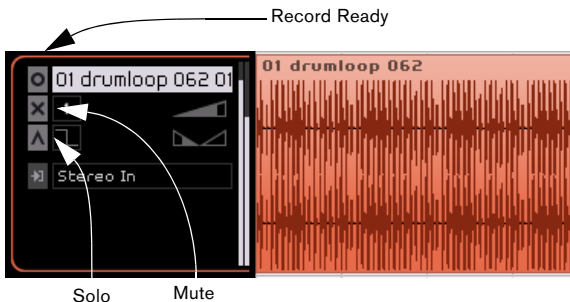
Record Ready

Record Ready will enable recording on the respective track. You can record on up to 8 tracks at once.

To enable recording, you have the following possibilities:

- Activate the Record Ready button.

- Select the track you wish to record on and press [R] on your computer keyboard – this toggles Record Ready on and off.

Mute

Mute will stop all output from any track that it is activated on.

To mute a track, you have the following possibilities:

- Activate the "Mute" button.

- Select the track you wish to mute and press [M] on your computer keyboard.

Solo

Solo will stop all output from any track other than the one with Solo activated on it.

To solo a track, you have the following possibilities:

- Activate the "Solo" button.

- Select the track you wish to solo and press [S] on your computer keyboard.

Automatic Fades (audio tracks only)

Found just below the track number, the "Automatic Fades" button applies a short fade to the edges of all the events in the track.

This is useful for eliminating pops or clicks that can occur when transitioning between events or parts.

Track Input   Automatic Fades
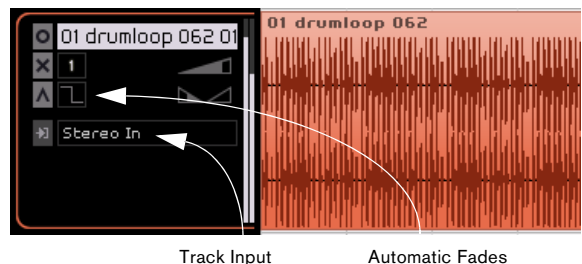
⇨ Fades created with the automatic fades function will not be displayed in the events. Instead, when this function is applied, the button symbol changes.

Input selection (audio tracks only)

The Input Selection pop-up menu allows you to switch between the inputs on your audio interface. Click in the Track Input field to reveal the pop-up menu. You should see all of the available inputs on your audio interface here.

For more information on setting up your interface, see the chapter "Setting up your system" on page 80.

Instrument tracks do not have an input selection pop-up.

Track volume and pan
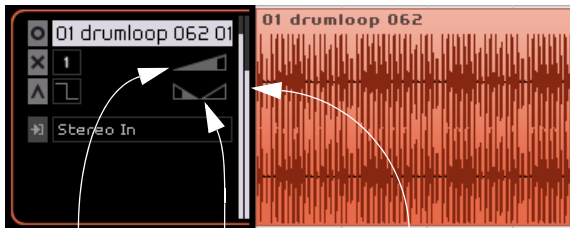
Track volume   Track pan   Track meter

The track output volume and pan can be controlled directly on the track itself. The volume control looks like one long triangle. The track pan looks like two triangles facing each other. When your mouse is positioned over either the volume or pan, the respective values will be shown to the left.

To adjust volume or pan

• Click and hold and drag left or right to adjust the volume or pan.

• Click on the volume or pan values and enter a value – for volume the range is anywhere from 0 to 120, for pan the range is from -100 to 100. Negative values represent left values and positive values represent right values. You can also enter L for hard left, C for center, or R for hard right.

• [Ctrl]/[Command]-click to set the volume to 100 or the pan to 0, which is C.

Track meter

On the right hand side of the track controls is a meter. This is a visual representation of the audio output level.

Track automation

Track automation allows you to make things such as volume, panning, and various other settings be adjusted automatically while the project is playing.

An example would be if you wanted the drums to be quieter at the start of the song and then get louder at the end. You can make Sequel do this automatically.
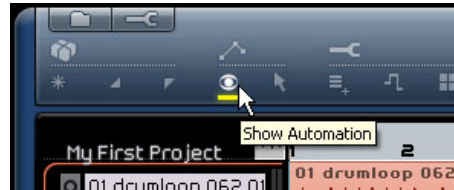
When the "Show Automation" button is activated in the "Pilot Zone", you'll notice new track controls appear. These are the track automation controls.

Track automation controls
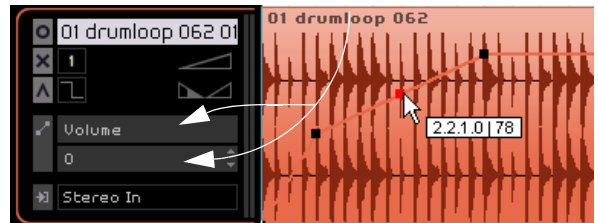
Clicking on the control on the top will open a pop-up menu. This menu allows you to choose which setting you would like to automate. You can automate multiple track settings, but you can only view one set of automation parameters at a time.

Automation pop-up menu
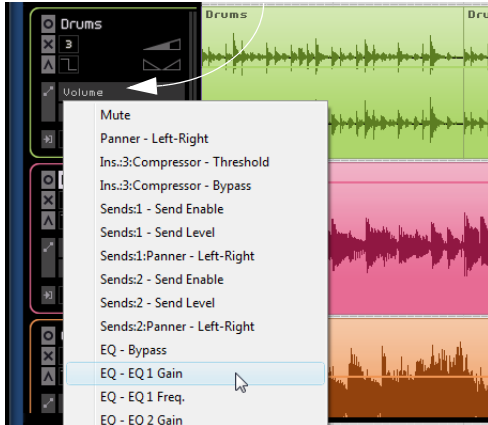
Also notice that the Master track is now visible at the bottom of the Arrange Zone and you can automate parameters there, too. One of the most popular parameters to automate is volume such as a fade out at the end of a song.

Master automation
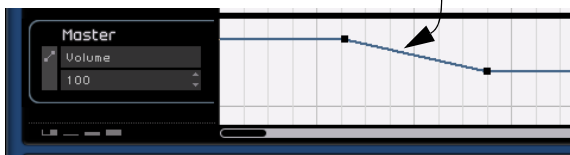
⇨ You've been introduced to the automation features of Sequel. For more detailed information on creating and editing automation, see "Adding Automation" on page 31.

Timeline and grid

The timeline and grid serve as tools to help editing be more precise and to help lock events to time.

The resolution of the grid depends on how far zoomed in or out you are.

Timeline   At this zoom level, we can split on   Grid
quarter notes. If we zoom in, we can
split on eights and sixteenths.

Zooming in the Arrange Zone

There are a couple of ways to zoom in and out in Sequel.

▪ Click and hold in the bottom Ruler Zone and drag up to zoom out or down to zoom in.

▪ Click the "+" or "-" buttons in the bottom right corner of the Arrange Zone. "+" zooms in and "-" zooms out.

Zoom In   Zoom Out   Zoom Commands
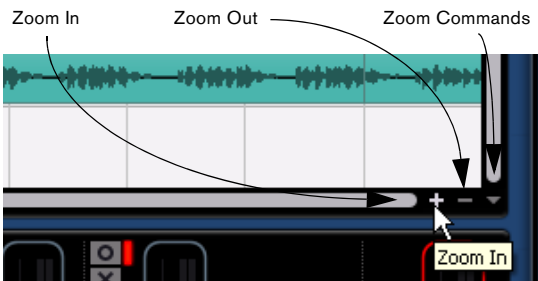
▪ Press the [H] key on your computer keyboard to zoom in and the [G] key to zoom out.

The Zoom Commands

To the right of the "+" and "-" buttons is the "Zoom Commands" pop-up menu with three quick zoom settings:

Option	Description
Zoom Full	Zoom full will zoom out so that all of the events on the Arrange Zone are visible.
Zoom Part	Zoom part will zoom in and center the event that you have selected in the Arrange Zone.
Zoom Last	Zoom last will return you to the last zoom setting you used.

Scrolling

After you have zoomed in you will most likely want to use the scroll bars to get around.

Horizontal scroll bar   Vertical scroll bar
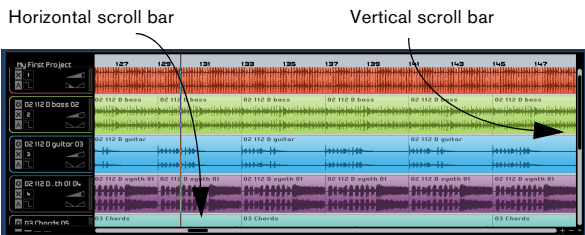
▪ The vertical scroll bar is located along the right side of the Arrange Zone. This will scroll your project up and down.

▪ The horizontal scroll bar is located along the bottom of the Arrange Zone. This will scroll your project left and right.

▪ You can also use your mouse wheel to scroll up and down or use [Shift]+Mouse wheel to scroll left and right.

Working with the Smart Tool

The events in Sequel have a bunch of functions built right on to them. When you hover your mouse over an event the functions appear. We refer to these functions as the Smart Tool.

Changing the event name

Along the top is the event name. To change the name, double-click on it and type in the new name.
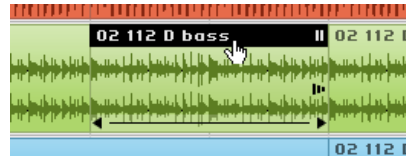
Muting events

In the top right corner there are two lines that look like a pause button. Clicking this will mute the event. The event will turn gray. Click again to unmute.

Click here to mute the event.

Repeating events

Just below the mute button is the repeat handle. Click and hold, and drag out to the right to create multiple copies of the selected event.

Repeat button

Click and hold the Repeat handle on the event.
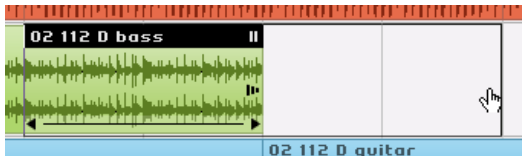
While clicking and holding drag to repeat the event.
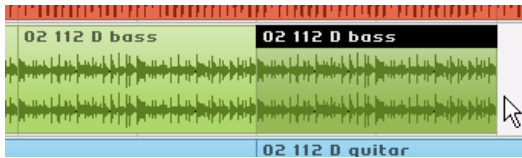
When you let go of the left mouse button the event will be repeated.

Resizing events

In the bottom left and right corners are handles for lengthening or shortening the event. Click and hold either one of them and drag left or right to lengthen or shorten the event.

Resize event handles
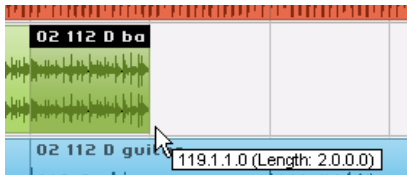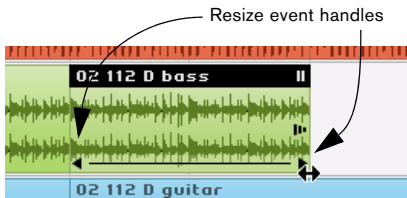
When you are resizing an event the tool tip beside the cursor displays the bar position and length of the event.

You can't make an event any longer than it was when it was first created.

Splitting events

Also notice the line going across the bottom of the event. When you hover the mouse over it, it changes to the Split tool. Just click to split the event.

Hover mouse over line turns cursor to the Split tool
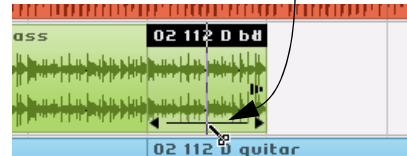
Two events after using the Split tool

9

The Multi Zone

Introduction

The Multi Zone is where all of your project's mixing, effects processing and advanced editing will take place. The Multi Zone also includes a media browser for finding all of the audio and MIDI loops and an Arranger page for taking your project out to the world to play live. This is also where you will find all of the project preferences.

Mixer Page

Track Inspector Page

Media Bay Page

Editor Page

Arranger Page

Program Settings Page
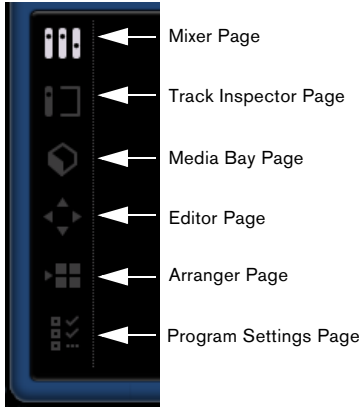
There are six buttons along the left hand side of the Multi Zone. Only one button can be activated at a time. The Multi Zone changes depending on which button is activated. To activate a button, simply click on it.

Resizing the Multi Zone

The Multi Zone can be resized by clicking on the bar at the top of the Multi Zone and dragging up or down.
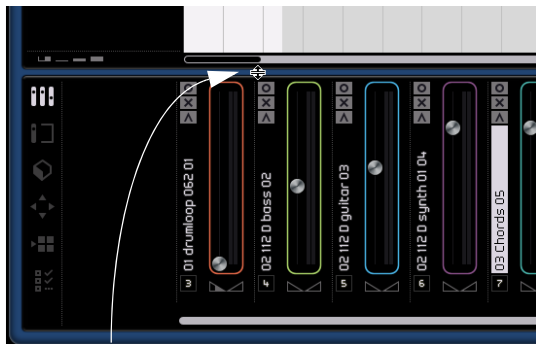
Click here to resize the Multi Zone.

▪ Note that you can also completely hide the Multi Zone by clicking the button in the middle of the lower edge of the Sequel program window. Click the button a second time to show the Multi Zone again.
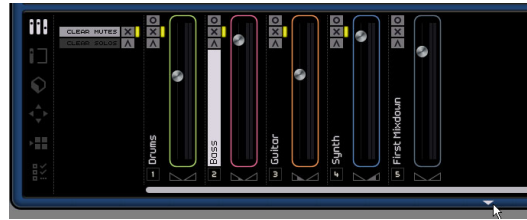
The Mixer page

The Mixer page is where most of the mixing in Sequel will take place. The Multi Zone becomes a horizontal track mixer when the Mixer Page is activated. Any track that you have created in the project will be represented here.
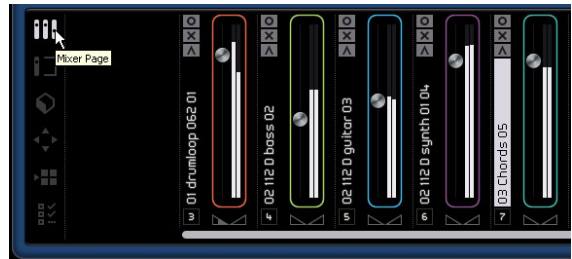
Channels

Each track has its own channel which includes a Record Ready button, a Mute button and a Solo button. These buttons have the same functionality as the respective buttons in the track controls area in the Arrange Zone.

- Record Ready
- Mute
- Solo
- Channel Level (Volume)
- Track Name
- Track Number
- Panner
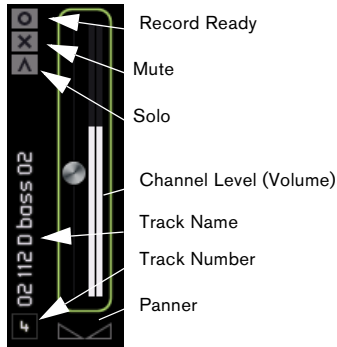
Each channel is labelled and numbered. These labels and numbers correspond to the ones found on the tracks in the Arrange Zone.

Channel Level (volume) and Pan

Each channel has a fader for controlling track volume and a panner. The controls work in parallel with the ones found in the track controls. If you lower the volume here, the volume is also lowered on the track control and vice-versa. Remember that you can reset these controls to their default settings by [Ctrl]/[Command]-clicking on them.

Setting the color

When you set up a track by dragging a loop or instrument preset into the Arrange Zone, Sequel will automatically assign a track color. Which color is assigned depends on the type of instrument, i.e. drum sounds will be assigned one color, guitar sounds another and so on.

Each channel in the Mixer page also features the option to change the track color. To change the color hover the mouse over the right hand side on the channel.
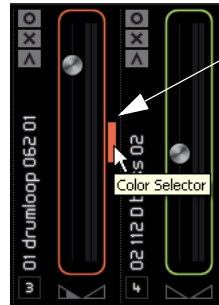

Hover mouse here to display the color selector.
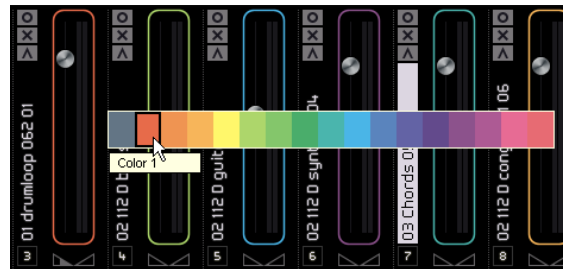
A small box will appear. Click on the box to select from a range of colors. All events on the track will also change color.

Scrolling

When you have multiple tracks in your project, you may not be able to see them all at once in the Mixer page. Use the scroll bar along the bottom to scroll left or right to find a specific track.

The Master channel

The Master channel is the output of all of the tracks combined. It is found on the right hand side of the Mixer page. This channel features a volume fader and a panner.

Master channel with normal levels

Master channel with clipping (overload)

Audio Overload
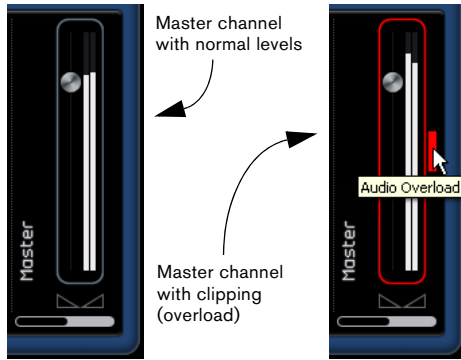
If you are clipping the Master channel, the channel will become red. Lower the fader to return the channel to normal, or alternatively lower all track faders by the same amount to reduce the level going into the Master channel. Click the Audio Overload button to reset the clipping indicator.

The Track Inspector page

The Track Inspector page is where all of the effects processing in Sequel takes place. The Track Inspector page has a few similarities to the Mixer page in that the Master channel is still present on the right hand side. This time however, there is only one channel strip present, which represents the selected track in the Arrange Zone.
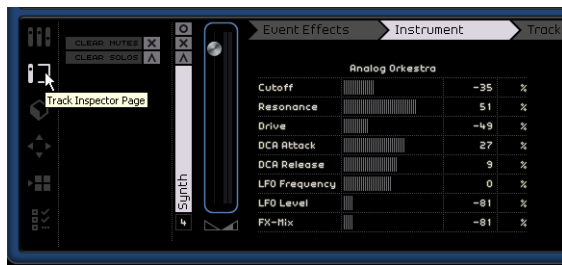
You can only edit one tracks effect and a couple of global effects at a time. To edit the effect settings for a certain track, select it in the Arrange Zone to make its settings appear in the Track Inspector page.

The Track Inspector page features six tabs. You can click on a tab to access its controls or just hover the mouse over it to see what settings you have already applied to it.

The Event Effects tab (instrument tracks only)

The Event Effects tab only works with instrument tracks. It includes two effects: a chorder and an arpeggiator.

You can activate the chorder or arpeggiator by activating the button to the right of the effect. You can then adjust the effect to get the desired result.

Chorder

The Chorder automatically plays chords when you press a single note on your MIDI keyboard. This is great if you have trouble playing in keyboard parts.
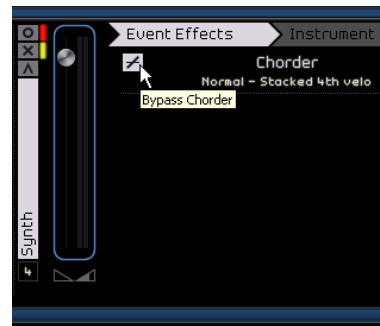
Use the "Bypass Chorder" button to activate or bypass the effect. You can select the type of chords you would like to be generated from the pop-up menu.

Arpeggiator

The Arpeggiator automatically creates patterns based on the notes you play, creating great rhythm and a really cool effect. It creates this pattern as long as a note is held. Once the note is released, the pattern stops.

Use the "Bypass Arpeggiator" button to activate or deactivate the effect.

The Quantize value allows you to set the resolution of the patterns the Arpeggiator creates.

The Octave Range value allows you to determine how many octaves the pattern will go above or below the note you are playing.

"Transpose Step" determines how many steps the pattern will change each time it starts again.

"Transpose Play Direction" determines whether the pattern's key will go up, down, or a combination of the two.

"Arpeggiator Play Mode" determines what type of patterns will be played back. When it is in Phrase Mode, pressing a single note will play a scale and the Arpeggiator will not recognize chords.

The Instrument tab (instrument tracks only)

The Instrument tab only works with instrument tracks. It contains eight controls that are fixed for each preset.
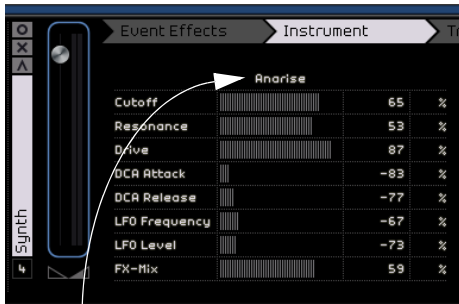
Click here to access the presets

▪ You can change the value of a control by clicking and dragging left or right.
For details on what each a parameter does, see the chapter "Effects reference" on page 91.

▪ You can apply an instrument preset by clicking on the preset button to open the preset pop-up menu.
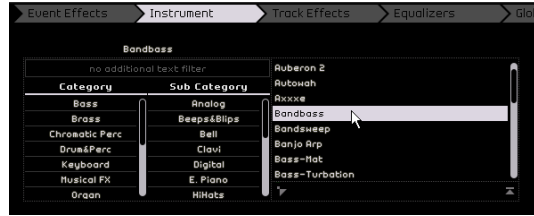
▪ You can then use the Category and Sub Category filters to find a suitable preset. You can select a preset along the right hand side and click "Close" to close the menu.
For more details on category filters see the section "The Media Bay page" on page 62.

The Reset button will switch the instrument back to the original preset and settings made prior to opening the pop-up menu.

The Track Effects tab

Each track can have two insert effects, which are pre-fader. That means that raising or lowering the track fader doesn't affect how much audio signal is sent to the effect.

Bypass Effect   Effects parameters

Effect Presets   Effects list   Select Effect Type
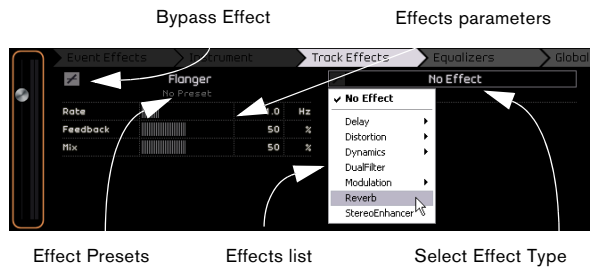
Use the "Select Effect Type" pop-up menu to select an effect and apply it to the track. Every effect also features presets which can be accessed by clicking in the effect preset field. Here you can select a preset from the menu and select close to close the preset window.

The Track Effects can be bypassed by activating the "Bypass Effect" button.

Each track also features a built-in one-knob compressor which is also pre-fader, but is post EQ, meaning that the audio is routed through the two insert effects, then the EQ, and then the compressor.

Bypass Compressor
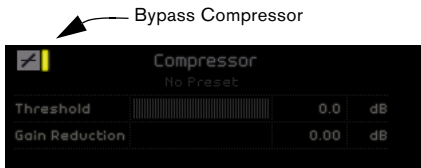
The Compression slider determines how much compression will be added to the signal. This sets a threshold level. When the signal goes above the threshold level, the Compressor reduces the signal. Or in other words: the further to the right you drag, the more compression you get. Gain Reduction reflects how much gain or volume is being attenuated.

⇨ You can also select a preset from the Compressor presets pop-up menu.

The Compressor can be bypassed by activating the "Bypass Compressor" button.

The Equalizers tab

The Equalizers tab features a three band EQ. It features a low shelf or bass frequency, a parametric mid or middle frequency, and a high shelf or treble frequency.

The low shelf or bass frequency sets the frequency at which the low tones will be affected. The parametric mid or middle frequency sets the frequency at which the middle tones will be affected. The high shelf or treble frequency sets the frequency at which the high tones will be affected.

Treble (Hi EQ)
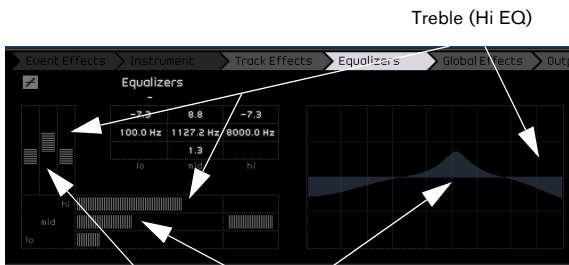
Middle (Parametric Mid EQ)

Bass (Low EQ)
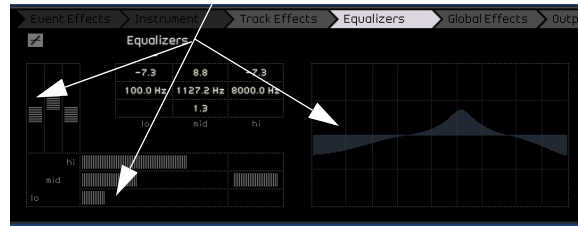
Adjusting frequency

You can adjust the frequency of each EQ by clicking on the frequency slider and dragging left or right.


Adjusting level (gain)

You can adjust the EQs level by raising or lowering the bass, middle, or treble gain slider.

To do this, click and drag up or down on the desired slider.


Adjusting width

The middle EQ is a parametric EQ. That means that the frequency range of this EQ can be widened or shortened. To do this click on the Middle Width slider and drag right to widen the range and left to shorten it.
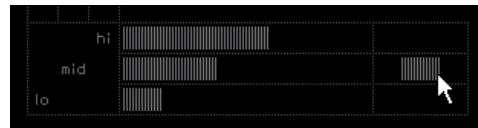
EQ Presets and Bypass Equalizers

Sequel has built-in EQ presets which you can access by clicking in the presets field and selecting a preset from the pop-up menu. Select Reset to clear all EQ settings.

To bypass the EQ, click the "Bypass Equalizers" button.

Bypass Equalizers
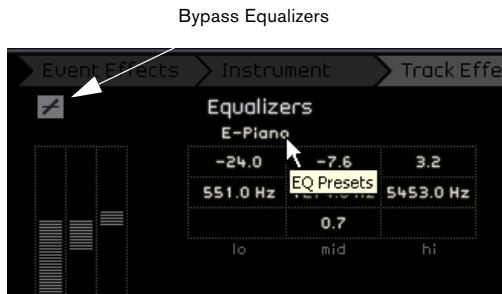
The Global Effects tab

Each project can have two send effects. These are referred to as "Global Effects". You can change these effects to whatever you would like.

Using global effects can help reduce CPU load on your computer. If e.g. you find you are using the same reverb on every track, you can create a "Global Effects" reverb and use the Amount fader (see below) to send signals to that reverb.
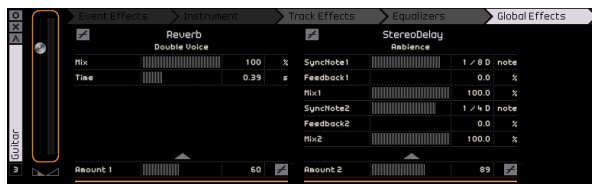
Every global effect also features presets which can be accessed by clicking in the "Effect Preset" field.

Here you can select a preset from the menu. Select close to remove the preset window.

⇨ Note that the global effects exist only once for your project, i.e. the effects in this page will not change when changing to another track.

For details on each effect and its parameters, see "Effects reference" on page 91.

The Amount fader

To adjust the amount of signal to apply to the send, use the Amount fader. You can deactivate a send for a particular track, by clicking on the respective Bypass button.
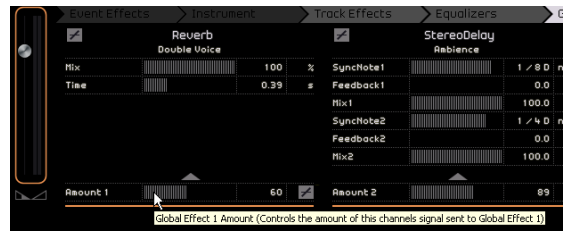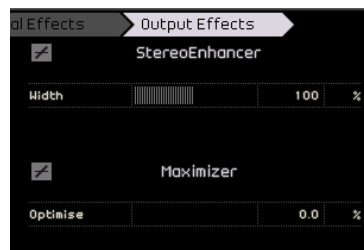

The Output Effects tab

You can apply two custom and two fixed output effects to the Master channel. These effects are similar to the track effects in that they are pre-fader.
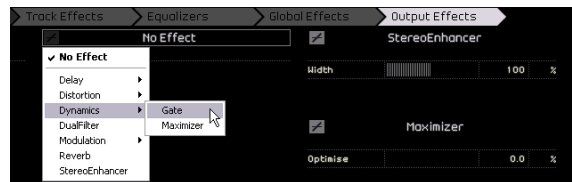
The two fixed effects are a maximizer and stereo enhancer. Both are controllable via one knob and a bypass switch.

The "Maximizer" raises the overall volume level without clipping the output.

The "Stereo Enhancer" spreads the stereo image out to give a project a larger sense of space.

For details on each effect and its parameters, see the chapter "Effects reference" on page 91.

The Media Bay page

The Media Bay page is a browser for audio and instrument loops, instrument presets, and track presets. This page is extremely useful because not only can you manually enter a name to search along the top of the page, you can also define so called tags, i.e. attributes for each of your media files to narrow the search.


Searching for media files

The tags predefined for the included media files include items like category/sub category, style/sub style, character, rating, tempo, time signature and many others.

The Media Bay page is made up of five columns (or "filters") for narrowing the search. To narrow the search even further, click on one of the items in the column list. the results will appear on the far right hand side of the Media Bay page.
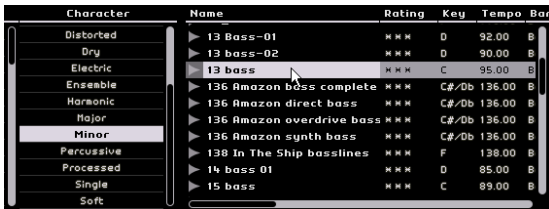
At the top left of the Media Bay page is the content selection pop-up menu. Here you can decide what content you would like to use the Media Bay page to search through.
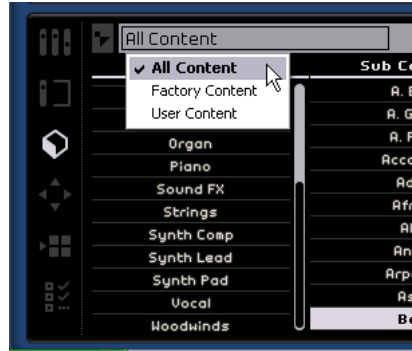
Selecting "User Content" will only show files that you have added to the content folder on your hard drive. In order to access your own loops via the "Media Bay Page", they need to be placed in the content folder on your hard drive. You can specify the Content Location on the Program Settings page, see "The Program Settings page" on page 71.

To make use of the tagging feature, click in the tag columns for a file displayed to the right in the Media Bay page and select a tag value from the pop-ups displayed.

To the right of the content selection pop-up menu is the search field. Here you can type in a name to search for. Pressing [Return] will show the results to the right.


Search field   Search results

Beside that is the rating filter setting. You can use this to automatically get rid of loops and patches that you have given a low rating to. Any files with a lower rating than the one you specify here will be filtered out.
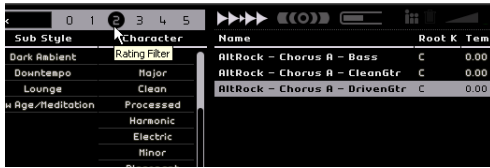

Showing Loops, Sounds and Tracks

Using the Show Loops, Sounds, and Tracks buttons you can decide what kind of files you want to search for.
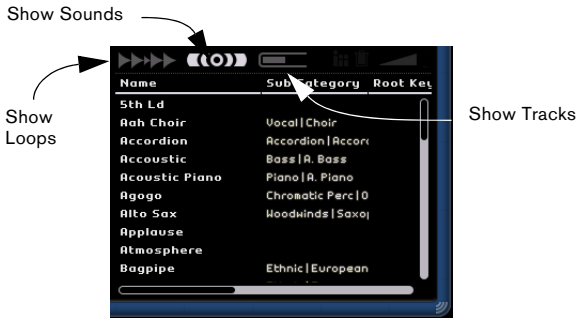

The "Show Loops" button will only search for audio and instrument loops. The "Show Sounds" button will only search for instrument presets and instrument track presets, and the "Show Tracks" button will only search for audio track presets.

Show Family

When you select a loop, the "Show Family" button appears. Activating this button filters the results to only show loops that are part of the same family.
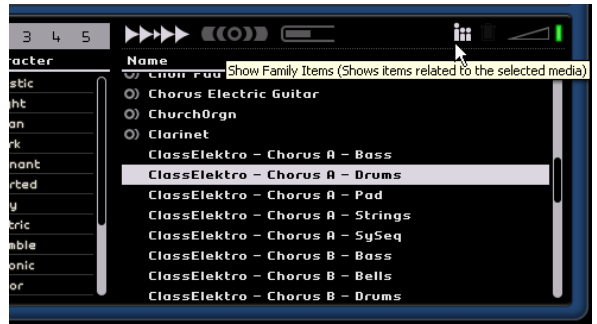

The Family Name menu also appears, allowing you to browse all of Sequel's loop families.
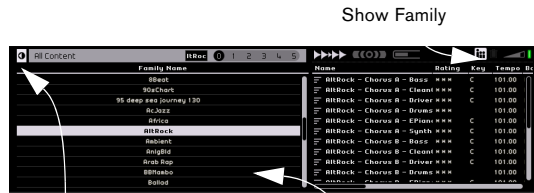
Use the Go Back button in the top left hand corner to return to the previous menu.

Delete Selected Media

Next to the "Show Family" button is the "Delete Selected Media" button. To delete a media file, simply select a loop, track preset, or effect preset and press this button. A dialog will appear where you can confirm that you want to delete this media. Select "Delete" to continue or "Cancel" to close the dialog without deleting.
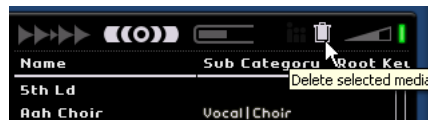
Reset Filters

To reset all of the filters, click the "Reset Filters" button in the top left hand corner of the page.
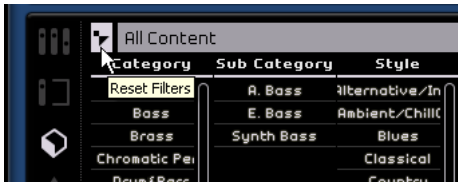

Adding Media to the project

Once you have found the media you are looking for you can click on one of the results and either drag and drop it directly into the Arrange Zone or preview it to hear it first (see below).

Previewing media

In the top right hand corner of the Media Bay page is the "Preview Mode" button and the "Preview Volume" slider. If Preview Mode is active (the button is green) and you click on a loop or sound, you will hear it play. When you preview while playing back your project, the project's tempo and key will be used for preview. If you wish to hear preview the media file in its original tempo and key, make sure that playback is stopped. The "Preview Volume" slider controls the preview volume. Click and drag it left or right to lower or raise the volume.

Preview Volume slider   Preview Mode button
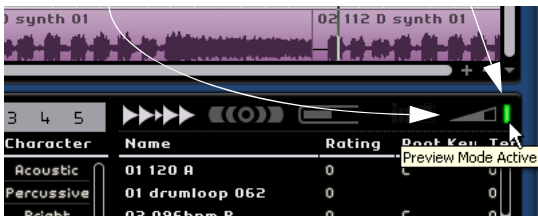
Changing media file attributes

You can also change the attributes that are associated with a file such as the category, style, or even give it a rating. To do this, click on the meta data that you would like to change and select something else from the pop-up menu, or set the rating slider to another value. Note that you can select several files simultaneously and change their tags all in one go.
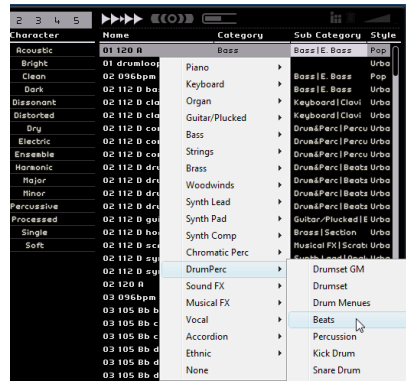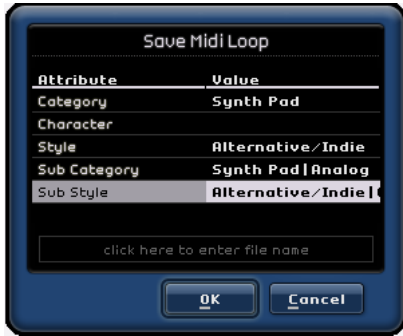

Adding Content

You can drag and drop events and parts of your own onto the Media Bay page to add them to the content folder.

Select an event and drag it onto the Media Bay page and a pop-up will appear. If you are dragging an audio event, the "Save Audio Loop" pop-up appears. If you are dragging an Instrument part, the "Save MIDI Loop" pop-up appears.

Here you can apply meta data to the loop based on the attributes listed along the left hand side of the pop-up window. Click beside the attribute and select a value from the pop-up menu that appears. Setting these attributes will make it easier for you to organize and find the files later.

You can name the loop at the bottom of the window.

Click "OK" to add it to your user content.

The Editor page

The Editor page allows you to do advanced editing of your audio events and instrument parts, including audio warp and quantize. The Editor page will be blank unless an event is selected in the Arrange Zone. If you have an audio event selected, the Editor page will become an Audio (Sample) Editor. If an Instrument part is selected, the Key Editor will be shown.


The Sample Editor

The sample editor allows you to fix or manipulate the timing information of audio files, or to insert silence. The selected audio event is displayed in the center of the Editor page. Here you can see a detailed waveform rendering of the audio file.

Zoom in and out

You can zoom in and out using the plus and minus buttons in the bottom right corner. You can also click in the ruler along the top of the editor page and drag up to zoom out and down to zoom in. Once you are zoomed in, you can use the scroll bar along the bottom to scroll left or right.

Adding silence

You can add silence to an event by selecting a section of the event (by clicking and dragging to create a selection) and then pressing [Delete] or [Backspace] on your computer keyboard. This is non-destructive and will not affect the event in anyway.

Volume

Mute

Transpose Lock

Transpose
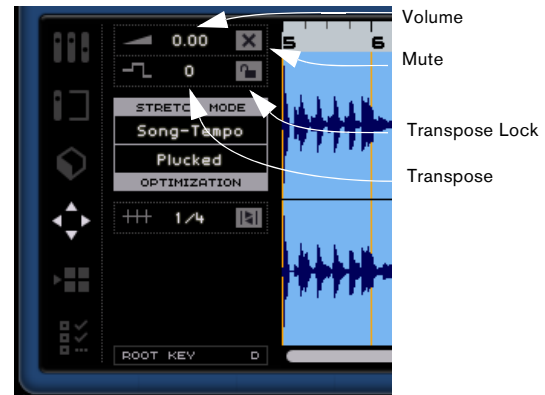
Volume

You can adjust the event volume. This is not connected to the track volume in anyway.

▪ To adjust the volume, click and drag up or down.

▪ You can also double-click and enter a value from -64 to 24. Zero is the default.

Mute

You can mute the event by activating the "Mute" button. Deactivate it to unmute the event.

Transpose

You can change the key of the event by adjusting the transpose value.

▪ To change the key click and drag up or down.

▪ You can also double-click and enter a value from -24 to 24. Zero is the default.

Transpose Lock

Activating transpose lock will lock the original transpose value of the event. The event will no longer follow any global transpose changes throughout the project.

Stretch Mode

Here you can switch between either the "Song Tempo" or "Original" stretch modes. Simply click to switch between them.

Activating "Song Tempo" will lock the events tempo to the project tempo. This function does not quantize the audio, but adjusts the size of the event so that it is playing back at the project tempo.

"Original" allows the event to stay in its original tempo. Any changes you make to the file in "Song Tempo" mode will be reverted when you switch to "Original". When you go back to "Song Tempo" mode the changes you made there will return.


Stretch Mode
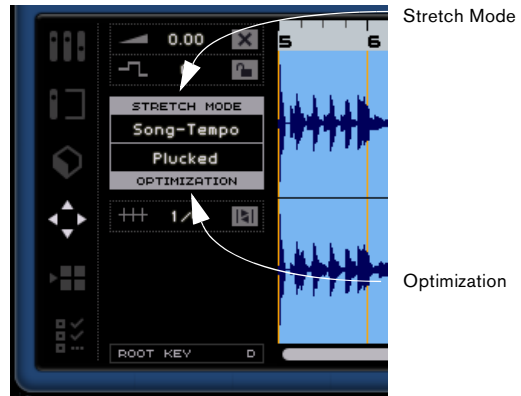
Optimization

Optimization

Depending on the type of instrument recorded in your audio file, you can set a different option to achieve the best possible stretch result. For example, select the "Drums" option for percussive sounds or try "Solo" for solo wind instruments. "Mix" is the default, but it might be worth to try any of the other options if you are not happy with the result of a tempo adjustment.

Quantize ("Song Tempo" mode)

Select a quantize value from the pop-up, used for all quantize related functions such as swing and triplets. It also determines the grid resolution for the audio editor.

Quantize

Warp Beats

Root Key
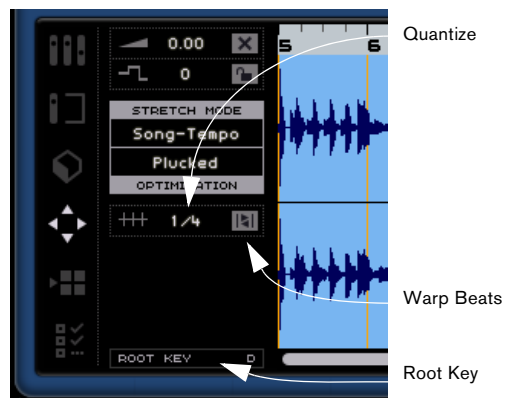
Warp Beats ("Song Tempo" mode)

Warp Beats will auto quantize the audio event to the project tempo based on the "Quantize" value. See the chapter "Advanced features" on page 73 for more information.

Swing ("Song Tempo" mode)

Warp Beats activated
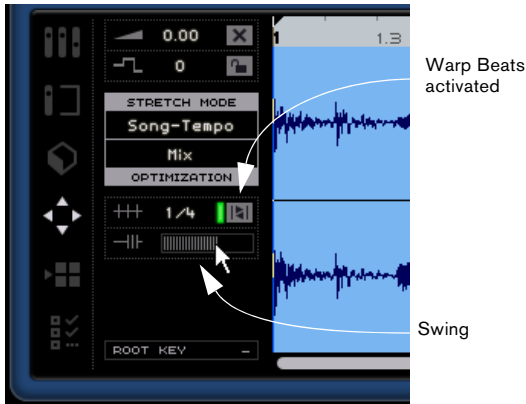
Swing

Swing appears when "Warp Beats" has been activated. Swing allows you to add a more human feel to an audio event. Click and drag the slider left or right to add or remove swing. The effect of using swing is dependent on the "Quantize" value. If the "Quantize" value is set to eighth notes for example, only eighth notes will be affected by changing the swing amount.

Manual Adjust Beats ("Song Tempo" mode)

Number of Bars

Reset Beats
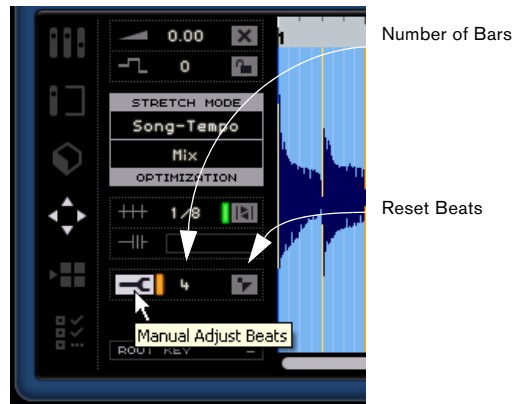
⚠ This function only works with audio that you have recorded or "dragged and dropped" into Sequel.

"Manually Adjust Beats" will only be available if the Warp Beats button is activated. This allows you to manually adjust how the audio lines up to bars and beats and essentially "warp" the audio. Warp points are activated throughout the event that you can move left or right to change the timing. The amount of warp points is dependent on the "Quantize" Value. See the chapter on "Advanced features" on page 73 for more information.

Number of Bars

This allows you to manually enter the length of the audio event in bars. This is helpful if the length of the audio event has not been detected, but you know its length in bars.

Reset Beats

"Reset Beats" will reset any changes that you have made when "Manual Adjust Beats" is activated. It will restore bars and beats to their original tempo based on the project tempo.

Root Key

This indicates the key (A, Bb, C#, etc.) that the event is in. If this information is not contained in the meta data, nothing will show up here.

The Key Editor

The Key Editor allows you make various changes to the Instrument part. The Instrument part selected in the Arrange Zone is displayed in the center of the Key editor. Here you can move, edit, and even draw in data.
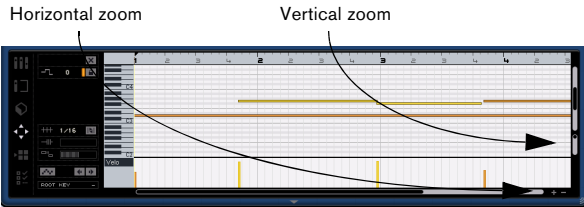
Horizontal zoom   Vertical zoom

You can zoom in and out using the plus and minus buttons in the bottom right corner. You can also click in the ruler along the top of the Editor page and drag up to zoom out and down to zoom in. Once you are zoomed in, you can use the scroll bar along the bottom to scroll left or right and the little scroll bar on the right hand side to scroll up and down. You can also use the mouse wheel to scroll up and down and [Shift]+mousewheel to scroll left and right.

The slider along the right hand side zooms the Key Editor in and out. This makes the notes and the piano roll on the left hand side larger and smaller.

You can click on the piano roll to hear a specific pitch.

The most important editing functions in the Key Editor are described in the section "Key Editor" on page 23.

Mute

You can mute the Instrument part by activating the "Mute" button. Deactivate it to unmute the part.
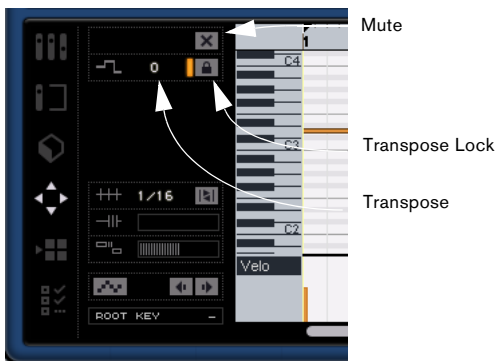
Mute

Transpose Lock

Transpose

Transpose

You can change the key of the event by adjusting the transpose value.

To change the key click and drag up or down.

You can also double click and enter a value from -24 to 24. Zero is the default.

Transpose Lock

Activating transpose lock will lock the original transpose value of the event. The event will no longer follow any global transpose changes throughout the project.

Quantize value

Select a quantize value from the pop-up, used for all quantize related functions such as swing and triplets. It also determines the grid resolution for the Key Editor.

Quantize

Triplets On

Perform Quantize

Swing

Legato Slider
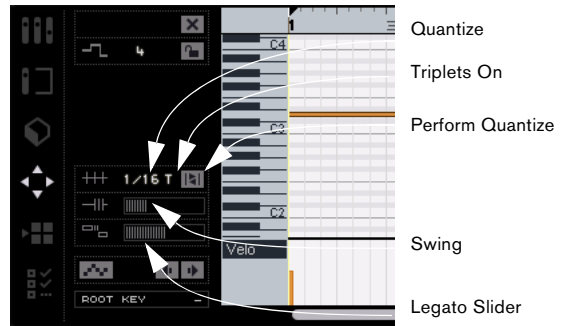
Triplets On

When activated, Triplets On allows you to enter triplets in an Instrument part. The resolution of the Triplets that can be entered is determined by the Quantization Value.

Perform Quantize

Activating "Perform Quantize" will move all the notes to the nearest bar or beat, depending on the set "Quantize" value. If the "Quantize" value is set to quarter notes, that all notes will move to the nearest quarter note.

Swing

Swing allows you to add a more human feel to Instrument data. Click and drag the slider left or right to move the notes. The notes that are effected is dependant on the "Quantize" value. If the "Quantize" value is set to eighth notes, then only eighth notes will be effected by changing the swing amount.

Legato Slider

This slider increases or decreases the amount of legato in the selected Instrument part. Legato is defined as a smooth, even style without any noticeable break between notes. Therefore, when increasing Legato, you are stretching out the notes such that there is no noticeable attack between two notes. Decreasing this value will create shorter notes, sounding more "staccato".

Activated Step Input

"Activated Step Input" allows you to enter Instrument data note by note and beat by beat, using a MIDI keyboard or controller. It's great for quick entry of instrument parts.

When activated, this button puts Sequel into step input mode. A blue vertical position line appears. Each time you press a key, a note will be entered at the vertical position line. The length of the note is determined by the Quantization value.

You can use the left/right cursor keys on your keyboard to move the position of the vertical position line.

Nudge Left

This moves the selected note left based on the "Quantize" value.

Nudge left

Nudge right

Activated Step Input
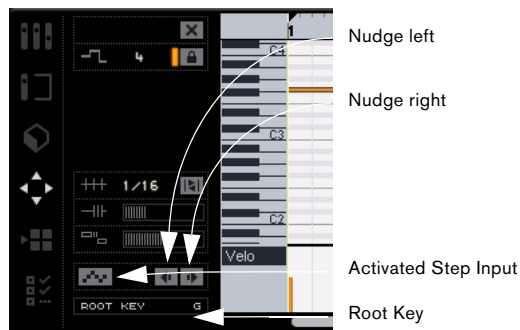
Root Key

Nudge Right

This moves the selected note right based on the "Quantize" value.

Root Key

This indicates the key (A, Bb, C# etc.) that the part is in. If this information is not available (i.e. if there is no "key" attribute), nothing will show up here. Newly recorded parts should show the key defined for the project.

Controller Lane (Velocity, Pitch Bend, etc.)

The Controller Lane allows us to add in or modify Instrument data such as velocity and controller information. The most common use for this is to edit velocity, pitch bend and controller numbers for things like sustain etc.

Clicking on the Controller Lane pop-up menu allows you to decide what specific controller data you would like to view or modify.

Controller Lane pop up   Controller Lane
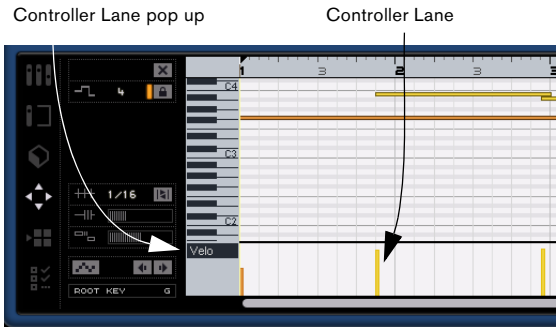
For more information about editing controller data, see "The Controller lane" on .

The Arranger page

The Arranger page allows you to change up the project by creating different arrangements. This allows you to play back the project in a non-linear way and is great for live performance.


In order to do this you first need to create arrangement parts. Make sure that the "Show Arranger Track" button in the Arrange Zone is activated, see "Show Arranger Track" on page 43.

Show Arranger Track   Arranger part "A"

Pad "A"
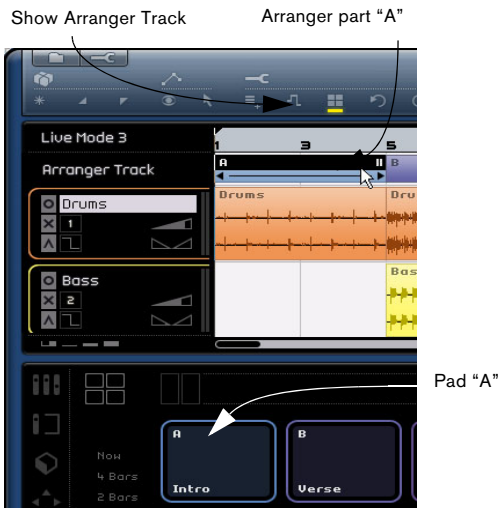
Press and hold [Alt]/[Option] while the mouse is hovered in the Arranger track. The mouse will turn into a pencil. You can then click and drag to create an arrangement part.

Pads

The 16 rounded squares in the center of the Arranger page are known as pads. Every arrangement part that you create in the Arranger track can be represented by one of these pads. There are only 16 pads though, so you can only access 16 arrangement parts at a time.
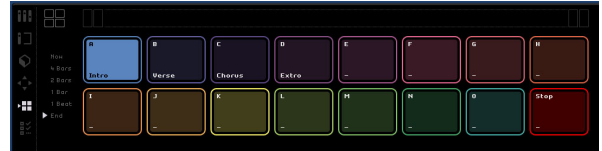
Pad assignment

[Alt]-click along the top of a pad to open a pop-up menu allowing you to choose which arrangement part will be linked to that pad. You can also set this to "None" or to "Stop".

Pad name

[Alt]-click along the bottom of the pad to name the pad.

Arrangement modes

There are actually two arrangement modes in Sequel. Note that you can switch modes during playback. You can choose between "Live Pads" or "Chain Play" mode (for a detailed description of these modes, see "Tutorial 4: Live Pads and Chain Play mode" on page 34).

Live Pads

In this playback mode you can click on a pad at any time to play it. The arrangement part will loop until you click on another pad or hit stop. You can also press the corresponding key on your computer keyboard to activate the pad.

Chain Play

Scroll left and right
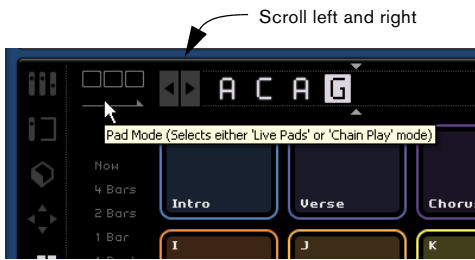
In Chain Play mode, you can create a preset order for the arrangement parts to play in.

Just select each pad in the order that you want it played. You can also press the corresponding key on your computer keyboard to add the pad to "The Current Chain". As you select them "The Current Chain" will begin filling up. "The Current Chain" resides along the top of the Arranger page and is only active in "Chain Play" mode.

Scroll left/right

You can scroll left and right through the current chain using the buttons on the left hand side.

Insert Cursor

The insert cursor allows you to decide where to insert an arrangement part into the "Current Chain". Click and drag to move the cursor left or right to the desired position and then click on a pad to enter it into the current chain at the cursor location.

History menu

The History menu will save various chain configurations you have made for future use. Click to reveal a pop-up menu. You can then select a number, enter a chain. Then select another number. The previous chain will be saved.
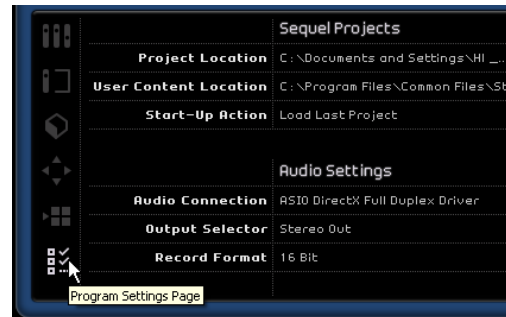
History menu   Reset
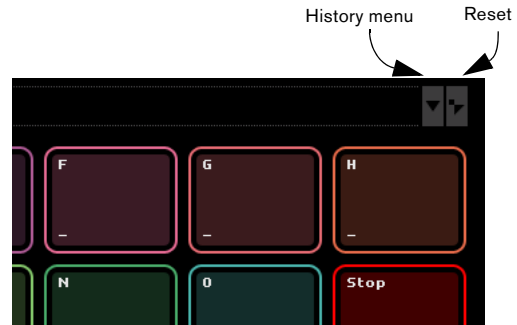
Reset

Select "Reset" to clear the current chain.

See the chapter "Tutorial 4: Live Pads and Chain Play mode" on page 34 for more details on the Arranger page and arrangement parts.

The Program Settings page

The Program Settings page is where you define all of the main settings in Sequel.

Sequel Projects

Sequel Projects	
Project Location	C:\Documents and Settings\HI _...r\My Documents\Sequel Projects
User Content Location	C:\Program Files\Common Files\Steinberg\SoundFrame
Start-Up Action	Load Last Project

Project Location

Click in this field to select the directory to store projects in on the hard drive. A dialog pops up allowing you to browse the hard drives and find a suitable location or select create to make a new folder.

User Content Location

Click in this field to set where you would like user created content to be stored. A dialog pops up allowing you to browse the hard drives and find a suitable location or select create to make a new folder.

Once set, this is where any content that you create will be stored. If you own media files that you wish to use in Sequel, copy the files to this location, and it will be displayed on the Media Bay page.

Start-up Action

This pop-up menu allows you to decide whether Sequel will create a new project when you load up or load the last project you were working on.

Audio Settings

Audio Settings			
Audio Connection	ASIO DirectX Full Duplex Driver	Setup...	Reset
Output Selector	Stereo Out		
Record Format	16 Bit		

Audio Connection

Clicking here brings up a pop-up menu where you can select which ASIO driver you would like to use for audio playback.

▪ Click the "Setup…" button to bring up the control panel for you audio interface.

▪ Click "Reset" to reset the ASIO driver settings.

Output Selector

Clicking here brings up a pop-up menu where you can select the output on the interface that you would like to use as the output for the project.

Record Format

Here you can select the bit rate you would like to use for recording. There are two options:

▪ 16 Bit is the format used for CDs.

▪ 24 Bit provides noticeably better quality than 16 Bit, however, it also requires more storage space on your hard disk.

User Interface

User Interface	
Panel Color	
Show Tips	☑
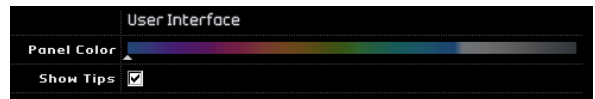
Panel Color

Use the slider to apply different colors to the main Sequel program window.

Show Tips

Show tips, when activated, will display tips when you hover over a button or object.

Options

Options	
Auto Quantize	☐
Metronome in Record	☑
Metronome in Play	☑

Auto Quantize

If this option is activated, anything recorded to a track will automatically be quantized.

Metronome Settings

You can activate or deactivate the Metronome buttons so that the click will only play back during Record, Play, or Play and Record.

10

Advanced features

Introduction

In this chapter, we are going to go over some of the advanced features found in Sequel. Make sure you have gone through all of the previous chapters before proceeding.

⇨ The following sections make references to tutorial projects, located in the default Sequel project folder.

Adding silence

Adding silence allows you to strip out or mute sections of an audio event to erase unwanted clicks or glitches. This is great for removing headphone bleed from vocal tracks or any other extraneous noise when there should be silence.

⇨ The process is non-destructive. It only mutes the selected section of audio.

⚠ Load the project "Adding Silence 1" found in the "Sequel Tutorial 5" folder.

Here we have a simple project with drums, bass, guitar and an organ track.

The guitar track was recorded in by placing a mic in front of the amp. Therefore, there is a lot of noise present when the guitarist wasn't playing anything. Let's clean it up.

1. Select the "Guitar" event.

2. In the Multi Zone, select the Editor page.

**3.** Notice that when you hover the cursor over the audio editor it changes to a selection tool.
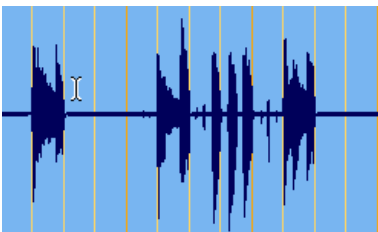
4. Find an area where the guitarist wasn't playing. There is an area right at the beginning and in between the first and second bar. Click and drag to highlight a section of the event. You may want to zoom in.
Notice that the selection area becomes gray.
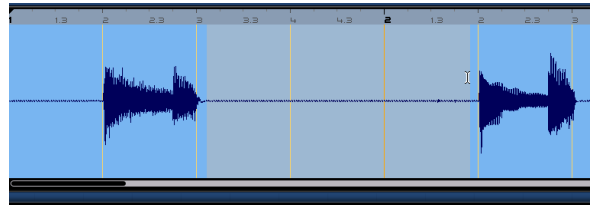
Let's make sure that the selection doesn't contain any audio that we want to keep.

5. Place your cursor at the left and right edge of the selection. The cursor changes allowing us to adjust the size of the selection by clicking and dragging.
Adjust the selection so that it is as tight as possible to the audio that you want to keep.
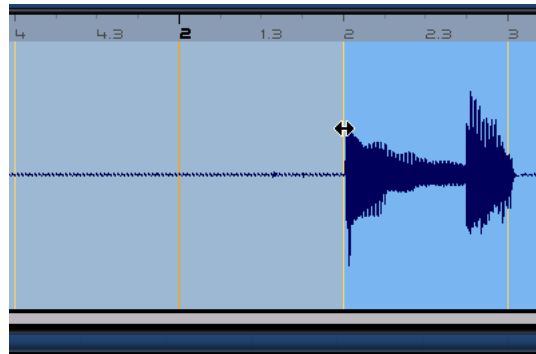
6. When you are done, press [Delete] or [Backspace] on your computer keyboard to remove the selection and create silence.

Add silence to any other areas in the Guitar event that you think might need it.
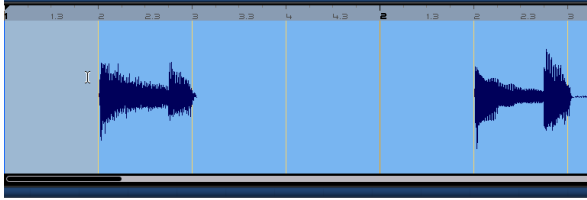
⚠ Load the project "Adding Silence 2" found in the "Sequel Tutorial 5" folder to hear the project now that silence has been added.

Audio quantization and warp

Audio quantization and warp allow you to lock events to the project tempo. This is great for correcting audio that has bad timing.

The quantize function in Sequel is automatic and is great for quickly locking drum tracks to tempo.

⚠ Load the project "Audio Quantize" found in the "Sequel Tutorial 5" folder.

Here we have a "Drums" event that has a few timing issues.
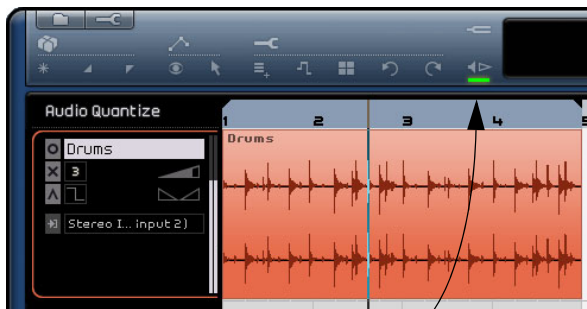
Turn the Metronome on to hear the poor timing.

1. Start playback using the space bar to hear how the drum beat strays off time.

2. Turn on the metronome to hear the mistakes more clearly.

3. Double-click on the "Drums" event to view it in the Audio Editor.

4. Change the Stretch Mode to "Tempo Sync" and change the optimization to "Mix".
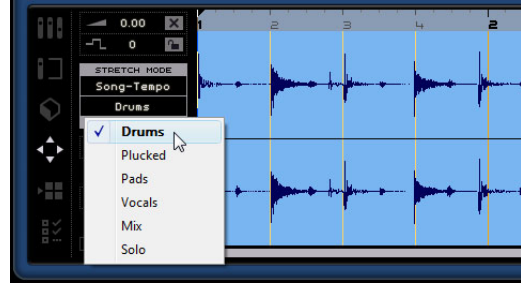

▪ First of all, make sure that the right number of bars is set and that the grid lines are positioned at the visible beats. In our example, these settings should be OK, so leave everything as it is.

5. Make sure that the Quantize value is set to "1/4". You can see the audio file locking to the nearest quarter note.

6. Click on the "Warp Beats" button. This will automatically snap the audio to the selected Quantize value.

Quantize set to 1/4
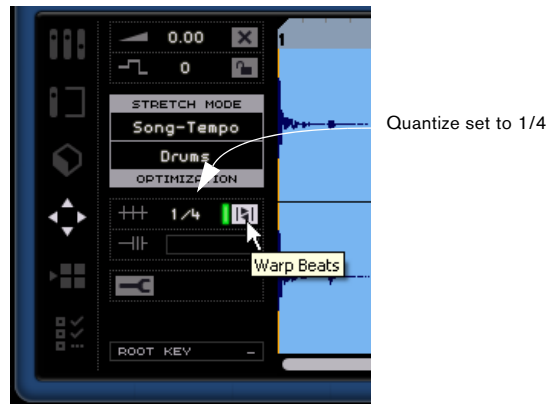
7. Play back the project and you will find that it is now in perfect time.

⚠ Load the project "Audio Quantize 2" found in the "Sequel Tutorial 5" folder to hear our changes.

Manual Adjust Beats

Sometimes, an event might need a bit of manual adjustment as well. That's where "Manual Adjust Beats" comes in handy. "Manual Adjust Beats" allows you to effortlessly stretch and warp audio as you please.

⇨ Note that this function is only applicable to your own loop files. The factory content files cannot be adjusted manually this way.

⇨ Make sure to read the entire section "Audio quantization and warp" above before moving on.

⚠ Load the project "Manual Adjust Beats 1" found in the "Sequel Tutorial 5".

1. Double-click on the "Drums" event to view it in the Audio Editor.

2. Activate the "Manual Adjust Beats" button.

3. If necessary, click on "Reset Beats" to remove the results of a previous auto-quantization that might be there.

4. If you want to perform a new auto-quantization with a new quantize value, change the quantize value, deactivate the Warp Beats button and then activate it again.
An auto quantization will not be performed, if the grid lines were changed before (manually or automatically). This is indicated by the red color.
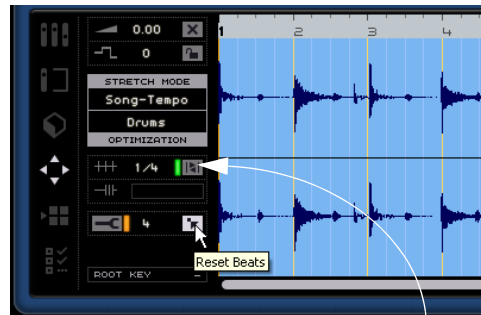

Quantize

In this mode, we can adjust the timing of the audio file by actually dragging grid points to match up properly with the audio file.

5. The amount of adjustable grid points is determined by the "Quantize" value. Make sure that it is set to 1/4.
Grid lines are shown in different colors. Selected grid lines are shown in blue, while grid lines that can be edited are shown in yellow (or orange if they are located at quarter note positions). Edited grid lines are red.

⚠ Before editing, make sure that the Multi Zone is zoomed in so that all grid lines are shown. Depending on the zoom factor, grid lines can be shown in a different (lighter) color, or you may find additional help lines that cannot be edited. If you change one beat, the nearest grid lines will be marked edited (i.e. appear in red).

6. Our goal now is to drag the grid to line up with the drum beats. Click on a grid point and drag it to the nearest drum beat.
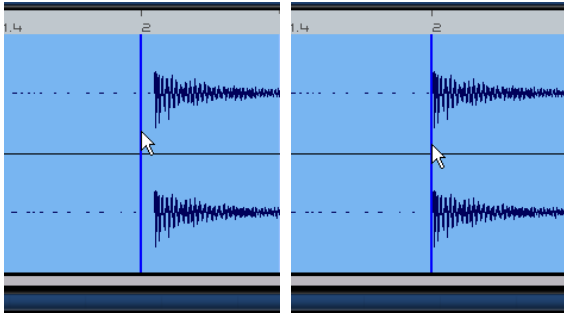
7. Repeat this procedure for any beats that appear off time. Keep listening back to make sure that you are getting the desired result.

⚠ Load the project "Manual Adjust Beats 2" in the "Sequel Tutorial 5" folder to hear the final results.

Congratulations! You have just successfully warped an audio file to fit the bars and beats of your project. It doesn't matter how off your audio is, because you can always warp it on time.

Smart Transpose

When you set the Project Root Key in the Pilot Zone, it becomes the reference that any audio file or MIDI loop will follow when it is added to a project. What this means is that when you add a file to your project that has a defined key, it will be changed to match the root key of the project.

What Smart Transpose does is make sure that the loop is transposed to the nearest interval or pitch. This way, no loop will be transposed by more than six semitones. This ensures that loops never sound too unnatural because the pitch was raised too high or too low.

Let's see this in action.

⚠ Load the project "Smart Transpose" found in the "Sequel Tutorial 5" folder.
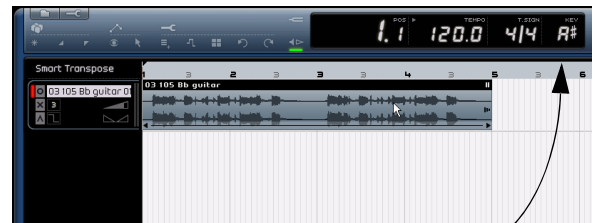
1. Go to the Media Bay page in the Multi Zone.

2. In the search field, type in "Bb guitar". Press [Enter]/[Return] on your computer keyboard. Sequel will filter the results for us.

Enter "Bb guitar" in the search field   Search Results

3. Drag the "03 105 Bb Guitar" loop to bar 1.

4. Notice that the project's "Tempo" and the "Project Root Key" changed to match the loop. The Project Root Key is now "A#" which is the same thing (enharmonic equivalent) as "Bb".
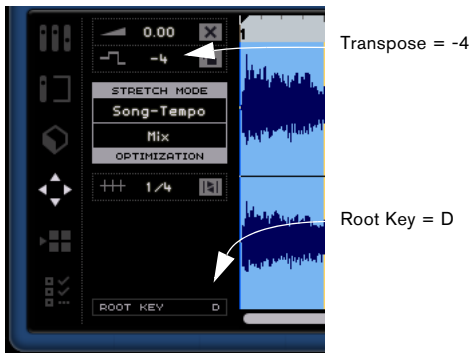

Project Root Key

5. Go back to the "Media Bay Page". This time enter "D horns" in the search field.

6. Drag the "02 112 D horns" loop to bar 1 underneath the guitar.

7. Click on the "03 105 Bb Guitar" event and go to the Editor page. Notice that the Root Key is "A#" and Transpose is set to "0".
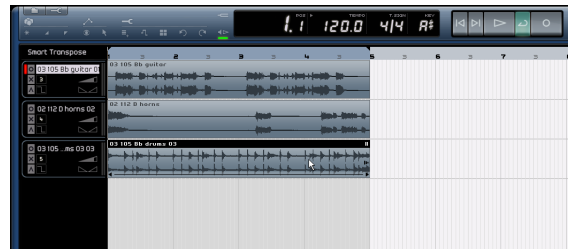

Transpose = 0
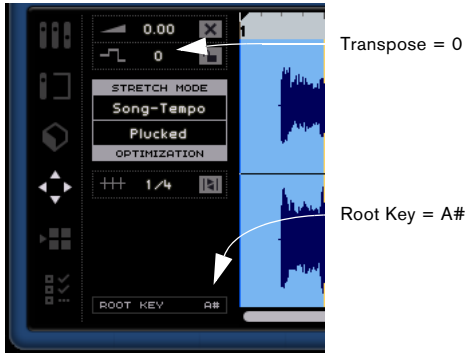
Root Key = A#

8. Now click on the "02 112 D horns" event. Notice that the Root Key is "D" and Transpose is set to "-4". Smart Transpose has automatically transposed the "02 112 D horns" loop to the closest interval.

Transpose = -4

Root Key = D

9. Play what we have so far and hear that the guitar and horns are in the same key without any extraneous transposition.

Let's add a drum loop to the project. Drum loops aren't affected by the "Project Root Key" or Smart Transpose. They can only be transposed using the "Transpose" feature in the Audio Editor.

1. Go back to the Media Bay page and enter "Bb drums" in the search field. Drag "03 105 Bb drums 03" into the project at bar 1 underneath the "02 112 D horns" event.

2. Select the "03 105 Bb drums 03" event and press the [P] key on your computer keyboard to create a cycle region that is the exact length of the event.

3. Activate the Cycle button and press "Play" to listen to the project. Notice that the "03 105 Bb drums 03" event was not transposed – that's Smart Transpose!
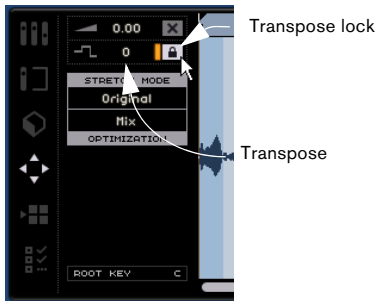
⇨ Another great thing about Smart Transpose is that when you use the Transpose track for global transpose (see "Show Transpose Track" on page 43) or change the "Project Root Key", the loops won't all transpose in parallel, which usually results in a more natural sounding transposition.

4. Keep the project looping and try changing the Project Root Key around to test this out.

⇨ Remember, if you want to transpose a loop manually, you can do so using the Transpose feature in the Audio Editor, which is not "smart" but absolute.

Locking transpose

You can also lock the key of the loop using the "Transpose Lock" feature.

Transpose lock

Transpose

▪ Drum, percussion and FX loops are transpose locked by default.

One button record

Normally, when you want to record something you need to record enable a track and click the Record button in the Pilot Zone. Recording will start after a two-bar count-in, and will end when you deactivate the Record button or stop playback.

Sequel provides a second recording mode that allows you to record only in the area defined by the cycle markers. This is very handy, e.g. if you have just one little inaccuracy in an otherwise perfect recording: you can simply re-record that little section, and don't have to record everything all over again.

1. Set up a track to record on, and make sure that it is record enabled.

2. Set up a cycle that exactly encompasses the area in which you wish to record.

3. Press [Ctrl]/[Command]+[R].
The project cursor jumps to a position exactly two bars before the left locator, and playback starts.

4. After the normal two bar count-in, recording will start automatically as soon as the project cursor reaches the left locator, and will stop when the cursor reaches the right locator.
Playback will continue until you stop it.

▪ You have three options to start this recording mode:

▪ By pressing [Ctrl]/[Command]+[R]

▪ By pressing [Ctrl]/[Command]+[*] ("multiply" on the numeric keypad)

▪ By [Ctrl]/[Command]-clicking the Record button.

11

Setting up your system

About this chapter

In this chapter, you will find information on the basic computer setup (audio card and drivers, etc.) and on more advanced audio and MIDI system setups.

General notes on how to set up your system

⚠ On the Steinberg web site, under "Support-DAW Components", you can find detailed information on what to consider when setting up a computer system dedicated to audio work.

▪ RAM – There is a direct relation between the amount of available RAM and the number of audio channels that you can have running.
The amount of RAM specified above is the minimum requirement, but as a general rule "the more the better" applies.

▪ Hard disk size – The size of the hard disk determines how many minutes of audio you will be able to record.
Recording one minute of stereo CD quality audio requires 10 MB of hard disk space. That is, eight stereo tracks in Sequel use up at least 80 MB of disk space per recording minute.

▪ Hard disk speed – The speed of the hard drive also determines the number of audio tracks you can run.
That is the quantity of information that the disk can read, usually expressed as "sustained transfer rate". Again, "the more the better" applies.

▪ Wheel mouse – We recommend that you use a wheel mouse.
This will speed up value editing and scrolling considerably.

Defragmenting the hard disk (Windows only)

If you plan to record audio on a hard disk where you have already stored other files, now is the time to defragment it. Use the Windows Defragmentation tool to optimize your system's performance.

MIDI requirements

If you intend to use the MIDI features of Sequel, you need the following:

▪ A MIDI interface to connect external MIDI equipment to your computer.
▪ A MIDI instrument.
▪ Any audio equipment required to listen to the sound from your MIDI devices.

Installing a MIDI interface/synthesizer card

Installation instructions for a MIDI interface should be included with the product. However, here's an outline of the necessary steps:

1. Install the interface (or MIDI synthesizer card) inside your computer or connect it to a "port" (connector) on the computer.
Which is right for you depends on which type of interface you have.

2. If the interface has a power supply and/or a power switch, turn it on.

3. Install the driver for the interface, as described in the documentation that comes with the interface.
You should also make sure to check the manufacturer's web site for the latest driver updates.

Audio hardware

Sequel will run with audio hardware that meets the following specifications:

▪ Stereo.
▪ 16 bit.
▪ Sampling rate: 44.1kHz.
▪ Windows – The audio hardware must be supplied with a special ASIO driver, or a DirectX compatible driver, see below.
▪ Mac – The audio hardware must be supplied with Mac OS X compatible drivers (CoreAudio or ASIO).

Using the built-in audio hardware of the Macintosh

As of this writing, all current Macintosh models provide at least built-in 16 bit stereo audio hardware. For detailed information, refer to the documentation describing your computer.

Depending on your preferences and requirements, using the built-in audio hardware may be sufficient for use with Sequel. It is always available for selection in Sequel – you don't need to install any additional drivers.

⚠ Some Macintosh models have audio outputs but no inputs. This means that you can only play back audio – recording is not possible without additional audio hardware.

About drivers

A driver is a piece of software that allows a program to communicate with a certain piece of hardware. In this case, the driver allows Sequel to use the audio hardware. For audio hardware, there are different cases, requiring different driver configurations:

If the audio hardware has a specific ASIO driver

Professional audio cards often come with an ASIO driver written especially for the card. This allows for communication directly between Sequel and the audio card. As a result, audio cards with specific ASIO drivers can provide lower latency (input-output delay), which is crucial when monitoring audio via Sequel, for example. The ASIO driver may also provide special support for multiple inputs and outputs, routing, synchronization, etc.

Audio card-specific ASIO drivers are provided by the card manufacturers. Make sure to check the manufacturer's web site for the latest driver versions.

⚠ If your audio hardware comes with a specific ASIO driver we strongly recommend that you use this.

If the audio card communicates via DirectX (Windows only)

DirectX is a Microsoft "package" for handling various types of multimedia data under Windows. Sequel supports DirectX, or to be more precise, DirectSound, which is a part of DirectX used for playing back and recording audio. This requires two types of drivers:

- A DirectX driver for the audio card, allowing it to communicate with DirectX. If the audio card supports DirectX, this driver should be supplied by the audio card manufacturer. If it isn't installed with the audio card, please check the manufacturer's web site for more information.
- The ASIO DirectX Full Duplex driver, allowing Sequel to communicate with DirectX. This driver is included with Sequel, and does not require any special installation.

Installing the audio hardware and its driver

1. Install the audio card and related equipment in the computer, as described in the card's documentation.

2. Install the driver for the card.

Depending on the operating system of your computer, there are different types of drivers that could apply: card-specific ASIO drivers, DirectX drivers (Windows) or Mac OS X (Mac) drivers:

Specific ASIO driver

If your audio card has a specific ASIO driver, it may be included with the audio card, but you should always make sure to check the audio card manufacturer's web site for the most recent drivers. For details on how to install the driver, refer to the manufacturer's instructions.

DirectX driver (Windows only)

If your audio card is DirectX compatible, its DirectX drivers will most likely be installed when you install the card. If you have downloaded special DirectX drivers for the audio card, you should follow the manufacturer's installation instructions.

Mac OS X drivers (Mac)

If you are using a Macintosh computer, make sure you are using the latest Mac OS X drivers for your audio hardware. Follow the manufacturer's instructions to install the driver.

Testing the card

To make sure the audio card will work as expected, perform the following two tests:

- Use any software included with the audio card to make sure you can record and play back audio without problems.

- If the card is accessed via a standard operating system driver, try playing back audio using the computer's standard audio application (e.g. Windows Media Player or Apple iTunes).

Setting up audio

⚠ Always make all connections with all equipment turned off!

Connecting audio

Exactly how to set up your system depends on many different factors, e.g. the kind of project you wish to create, the external equipment you want to use, the computer hardware available to you, etc. Therefore, the following sections can only serve as examples.

How you connect your equipment, i.e. whether you use digital or analog connections, also depends on your individual setup.

Stereo input and output – the simplest connection

If you only use a stereo input and output from Sequel, you can connect your audio hardware, e.g. the inputs of your audio card or your audio interface, directly to the input source and the outputs to a power amplifier and speaker.
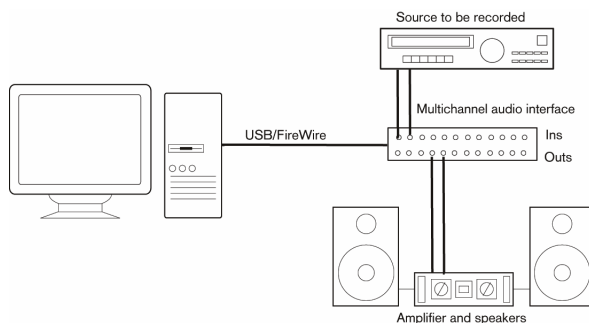
A simple stereo audio setup.

This is probably the simplest of all setups – once you have set up the internal input and output busses, you can connect your audio source, e.g. a microphone, to your audio interface and start recording.

Multi-channel input and output

You may have other audio equipment that you want to integrate with Sequel, using several input and output channels. Depending on the equipment available to you, there are two ways to go: either mixing using an external mixing desk, or mixing using the mixer inside Sequel.

• External mixing means having a hardware mixing device with a group or bus system that can be used for feeding inputs on your audio hardware.

In the example below, four busses are used for feeding signals to the audio hardware's inputs. The four outputs are connected back to the mixer for monitoring and playback. Remaining mixer inputs can be used for connecting audio sources like microphones, instruments, etc.
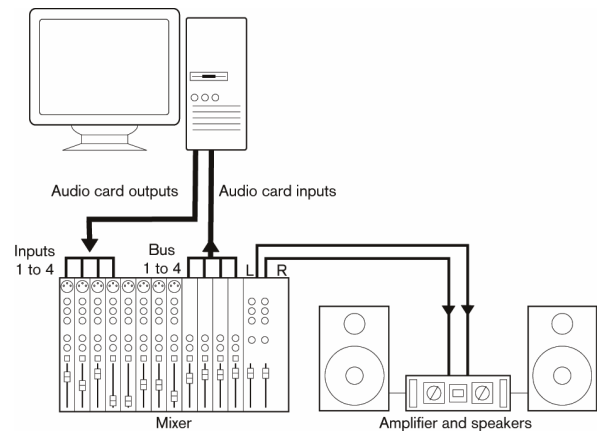
A multi-channel audio setup using an external mixer.

⇨ When connecting an input source (like a mixer) to the audio hardware, you should use output busses, sends or similar that are separate from the mixer's master output to avoid recording what you are playing back. You may also have mixing hardware that can be connected via FireWire.

When using the Mixer inside Sequel, you can use the inputs on your audio hardware to connect microphones and/or external devices. Use the outputs to connect your monitoring equipment.
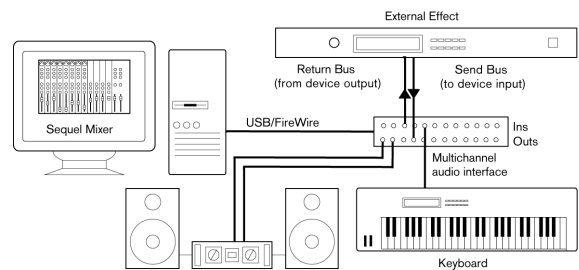
Mixing inside Sequel

Recording from a CD player

Most computers come with a CD-ROM drive that can also be used as a regular CD player. In some cases the CD player is internally connected to the audio hardware so that you can record the output of the CD player directly into Sequel (consult the audio hardware documentation if you are uncertain).

▪ All routing and level adjustments for recording from a CD (if available) are done in the audio hardware setup application, see below.

About recording levels and inputs

When you connect your equipment, you should make sure that the impedance and levels of the audio sources and inputs are matched. Typically, different inputs may be designed for use with microphones, consumer line level (-10 dBV) or professional line level (+4 dBV), or you may be able to adjust input characteristics on the audio interface or in its control panel. Please check the audio hardware documentation for details.

⇨ Using the correct types of input is important to avoid distortion or noisy recordings.

⚠ Sequel does not provide any input level adjustments for the signals coming in to your audio hardware, since these are handled differently for each card. Adjusting input levels is either done in a special application included with the hardware or from its control panel (see below).

Making settings for the audio hardware

Most audio cards come with one or more small applications that allow you to configure the inputs of the hardware to your liking. This includes:

▪ Selecting which inputs/outputs are active.
▪ Setting up word clock synchronization (if available).
▪ Setting levels for each input. This is very important!
▪ Setting levels for the outputs, so that they match the equipment you use for monitoring.
▪ Selecting digital input and output formats.
▪ Making settings for the audio buffers.

In many cases all available settings for the audio hardware are gathered in a control panel, which can be opened from within Sequel as described below (or opened separately, when Sequel isn't running). In some cases, there may be several different applications and panels – please refer to the audio hardware documentation for details.

Selecting a driver and making audio settings in Sequel

The first thing you need to do is select the correct driver in Sequel to make sure that the program can communicate with the audio hardware:

1. Launch Sequel.

2. Select the Program Settings page from the Multi Zone.
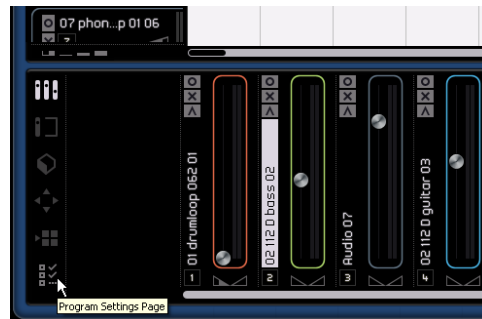
The Audio Settings section of the Program Settings page.

3. Click in the Audio Connection field to open the driver pop-up menu and select your audio hardware driver.

⚠ Under Windows, we strongly recommend that you access your hardware via an ASIO driver written specifically for the hardware, if available. If no ASIO driver is installed, we recommend that you check with your audio hardware manufacturer if they have an ASIO driver available, for example for download via the Internet.

Bring up the control panel for the audio hardware and adjust the settings as recommended by the audio hardware manufacturer.

▪ Under Windows, you open the control panel by clicking the "Setup…" button.

The control panel that appears when you click this button is provided by the audio hardware manufacturer and not Sequel (unless you use DirectX, see below). Hence it will be different for each audio card brand and model.

The Control panel for the ASIO DirectX driver is an exception, as it is provided by Steinberg, and is described in the dialog help, opened by clicking the Help button in the dialog. See also the notes below.

▪ Under Mac OS X, you will find the control panel for your audio hardware in the System Preferences ("Other" section), opened from the Apple menu or from the Dock.

If you are using the built-in audio hardware of the Macintosh, you use the "Sound" control panel in the System Preferences to set levels, balance, etc. If you are using ASIO audio hardware, you can click the Control Panel button to bring up its panel.

4. Click Apply and OK to close the dialog.

If you are using audio hardware with a DirectX driver (Windows only)

⚠ If your Windows audio hardware doesn't have a specific ASIO driver, a DirectX driver is the next best option.

Sequel comes with a driver called "ASIO DirectX Full Duplex Driver" available for selection on the Audio Connection pop-up menu in the Program Settings page.

⇨ To be able to take full advantage of DirectX Full Duplex, the audio hardware must support WDM (Windows Driver Model) in combination with DirectX version 8.1 or higher.

In all other cases, the audio inputs will be emulated by DirectX (see the dialog help for the ASIO DirectX Full Duplex Setup dialog for details about how this is reported).

⇨ During the installation of Sequel, the latest DirectX driver will be installed on your computer.

When ASIO DirectX Full Duplex Driver is selected on the Audio Connections pop-up menu, you can click "Setup…" to open the ASIO Direct Sound Full Duplex Setup control panel and adjust the following settings:

▪ Direct Sound Output and Input Ports

In the list to the left in the window, all available Direct Sound output and input ports are listed. In many cases, there will be only one port in each list. To activate or deactivate a port in the list, click the checkbox in the left column. If the checkbox is ticked, the port is activated.

▪ You can edit the Buffer Size and Offset settings in this list if necessary, by double-clicking on the value and typing in a new value.

In most cases, the default settings will work fine. Audio buffers are used when audio data is transferred between Sequel and the audio card. While larger buffers ensure that playback will occur without glitches, the latency (the time between the moment Sequel sends out the data and when it actually reaches the output) will be higher.

▪ Offset

If a constant offset is audible during playback of Audio and MIDI recordings, you can adjust the output or input latency time using this value.

Setting up the input and output ports

Setting the inputs and outputs primarily depends on the configuration settings of your audio card. You can check the configuration by clicking on "Setup…" on the Program Settings page.

If you have a stereo in/out audio card this will most likely be set up automatically.

Inputs

Setting the recording input for Sequel is discussed in "Adding an audio track" on page 13.

Outputs

Audio outputs can be selected in the Program Settings page from the Output Selector pop-up.

About monitoring

In Sequel, monitoring means listening to the input signal while preparing to record or while recording. Sequel always monitors the signal in real-time.

The audio passes from the input into Sequel, possibly through Sequel effects and EQ and then back to the output. You control monitoring via settings in Sequel. This allows you to control the monitoring level from Sequel and add effects to the monitored signal only.
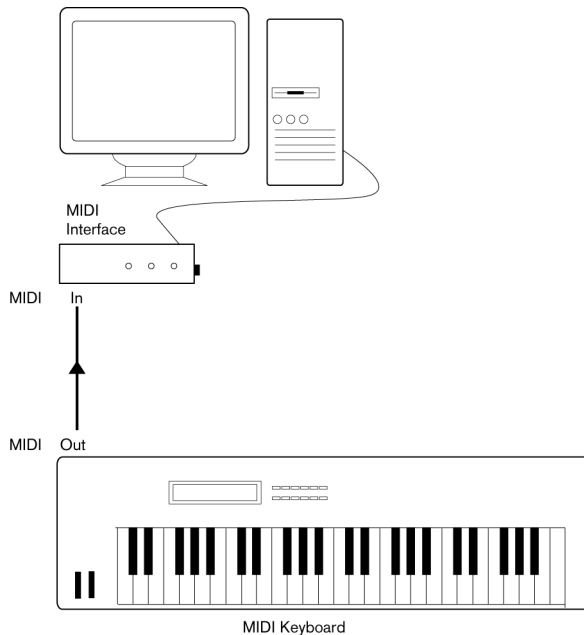
Setting up MIDI

⚠ Always make all connections with all equipment turned off!

This section describes how to connect and set up MIDI equipment. If you have no MIDI equipment you can skip this section. Note that this is only an example – you might need or want to hook things up differently!

Connecting the MIDI equipment

In this example we assume that you have a MIDI keyboard. The keyboard is used for feeding the computer with MIDI messages for recording. Using Sequel's automatic MIDI Thru feature you will be able to hear the correct sound from the instrument track while playing the keyboard or recording.

A typical MIDI Setup.

Setting up MIDI ports in Sequel

Sequel automatically finds any MIDI devices on your computer and allows them to be active MIDI inputs for recording.

Optimizing audio performance

This section gives you some hints and tips on how to get the most out of your Sequel system, audio performance-wise. Some of this text refers to hardware properties and can be used as a guide when upgrading your system.

Two aspects of performance

There are two distinct aspects of performance in respect to Sequel:

Tracks and effects

Simply put: the faster your computer, the more tracks, effects and EQ you will be able to play. Exactly what constitutes a "fast computer" is almost a science in itself, but some hints are given below.

Short response times (latency)

Another aspect of performance is response time. The term "latency" refers to the "buffering", i.e. the temporary storing, of small chunks of audio data during various steps of the recording and playback process on a computer. The more and larger those chunks, the higher the latency.

High latency is most irritating when playing software instruments and when monitoring through the computer, i.e. when listening to a live audio source via the Sequel mixer and effects. However, very long latency times (several hundred milliseconds) can also affect other processes like mixing, e.g. when the effect of a fader movement is heard only after a noticeable delay.

A system that responds fast will always be more convenient to work with.

▪ Depending on your audio hardware, it may be possible to "trim" your latency times, usually by lowering the size and the number of buffers.
For details, refer to the audio hardware documentation, or, if you are using a DirectX driver under Windows, the dialog help.

System factors that affect performance

CPU and processor cache

It goes without saying that the faster the computer processor, the better. But there are a number of factors that affect the apparent speed of a computer: the bus speed and type (PCI is strongly recommended), the processor cache size and of course, the processor type and brand. Sequel relies heavily on floating point calculations. When shopping for a processor, please make sure you get one that is powerful in calculating floating point arithmetics.

Note also that Sequel features full support for multi-processor systems. So if you own a computer system with more than one processor, Sequel can take advantage of the total capacity and evenly distribute the processing load to all available processors.

Hard disk and controller

The number of hard disk tracks you can record and play back at the same time also depends on the speed of your hard disk and hard disk controller. If you use E-IDE disks and controllers, make sure that the transfer mode is DMA Busmaster. Under Windows, you can check the current mode by launching the Windows Device Manager and looking for properties of the IDE ATA/ATAPI Controller's primary and secondary channel. DMA transfer mode is enabled by default, but may be turned off by the system should hardware problems occur.

Audio hardware and driver

The hardware and its driver can have some effect on regular performance. A badly written driver can reduce the performance of your computer. But where the hardware driver design makes the most difference is with latency.

⚠ Again, we strongly recommend that you use audio hardware for which there is a specific ASIO driver!

This is especially true when using Sequel for Windows:

▪ Under Windows, ASIO drivers written specifically for the hardware are more efficient than a DirectX driver and produce shorter latency times.

▪ Under Mac OS X, audio hardware with properly written Mac OS X (Core Audio) drivers can be very efficient and produce very low latency times.

Making settings that affect performance

Choosing a driver for your audio hardware

As described in the section "Selecting a driver and making audio settings in Sequel" on page 84, it is recommended to install and use a standard ASIO driver if available for your specific hardware. Check the manufacturers web site for the latest drivers etc.

Making audio buffer settings

Audio buffers affect how audio is sent to and from the audio hardware. The size of the audio buffers affects both the latency and the audio performance. Generally, the smaller the buffer size, the lower the latency. On the other hand, working with small buffers can be demanding for the computer. If the audio buffers are too small, you may get clicks, pops or other audio playback problems.

▪ You adjust the buffer size settings in the control panel for the audio hardware (opened by clicking the "Settings…" button on the Program Settings page.

Optimizing processor scheduling (Windows only)

To get the lowest possible latencies when using ASIO under Windows XP (on a single CPU system), the system performance has to be optimized for "Background services":

1. Open the Windows Control Panel from the "Start" menu and select "System".

2. Select the "Advanced" tab and click the "Settings" button in the "Performance" section. The "Performance Options" dialog is opened.

3. Select the "Advanced" tab.

4. In the "Processor Scheduling" section, select "Adjust for best performance of: Background services".

5. Click "OK" to close the dialogs.

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Key commands

Introduction

This chapter contains a list of the available key commands in Sequel, structured according to the different edit categories in the program.

The available key commands

File commands

Option	Key command
New Project	[Ctrl]/[Command] + [N]
Open Project	[Ctrl]/[Command] + [O]
Save Project	[Ctrl]/[Command] + [S]
Save As	[Ctrl]/[Command] + [Shift] + [S]
Manage Projects	[Ctrl]/[Command] + [Shift] + [M]
Help	[F1]
Quit	[Ctrl]/[Command] + [Q]

Edit commands

Option	Key command
Undo	[Ctrl]/[Command] + [Z]
Redo	[Ctrl]/[Command] + [Shift] + [Z]
Cut	[Ctrl]/[Command] + [X]
Copy	[Ctrl]/[Command] + [C]
Paste	[Ctrl]/[Command] + [P]
Delete	[Delete] or [Backspace]
Select All	[Ctrl]/[Command] + [A]
Select None	[Ctrl]/[Command] + [Shift] + [A]
Duplicate	[Ctrl]/[Command] + [D]
Split at Cursor	[Ctrl]/[Command] + [T]
Move to Cursor	[Ctrl]/[Command] + [L]
Solo	[S]
Mute selected track(s)	[M]
Mute objects	[Ctrl]/[Command] + [M]
Quantize	[Q]
Record Ready	[R]

Project commands

Option	Key command
Add Track	[Ctrl]/[Command] + [+]
Remove Track	[Ctrl]/[Command] + [Delete] or [Backspace]
Toggle Automation Mode	[A]
Show Mixer	[1]
Show Inspector	[2]
Show Media	[3]
Show Editor	[4]
Show Arranger Page	[5]
Show Program Setttings	[6]
Set Cycle to Selection	[P]

Navigate commands

Option	Key command
Left	[Left Arrow]
Right	[Right Arrow]
Up	[Up Arrow]
Down	[Down Arrow]
Add Left	[Shift] + [Left Arrow]
Add Right	[Shift] + [Right Arrow]
Add Up	[Shift] + [Up Arrow]
Add Down	[Shift] + [Down Arrow]
Bottom	[End]

Zoom commands

Option	Key command
Zoom In	[H]
Zoom Out	[G]
Zoom Last	[Shift] + [H]
Zoom Full	[Shift] + [G]
Zoom to Parts	[Shift] + [P]

Transport commands

Option	Key command
Locate Selection	[L]
To Left Locator	[Home]/[Command]+ [Home]
Start	[Enter] (numeric keypad)
Stop	[0] (numeric keypad)
Start / Stop	[Space]
Record	[*] ("multiply" on the numeric keypad)
Rewind	[-] ("subtract" on the numeric keypad)
Forward	[+] ("add" on the numeric keypad)
Return to Zero	[.] or [,] on the numeric keypad
Cycle	[/] ("divide" on the numeric keypad)
Metronome on	[C]
Locate next Marker	[Shift] + [N]
Locate Previous Marker	[Shift] + [B]
One Button Record	[Ctrl]/[Command] + [R], [Ctrl]/[Command] + [*] (Num)

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Effects reference

Introduction

This chapter describes the effects and instruments included with Sequel. How to use these is described in the section

Track/Global Effects

Delay Effects

PingPongDelay

As the name implies, PingPongdelay creates a bouncing effect. This will bounce the signal between the left and right.

"SyncNote" allows you to sync the bouncing effect to the tempo. "Feedback" determines how long the delay will last. Using the "Spatial" parameter you can increase the distance between the bounces. This sounds great on solos. The "Mix" parameter decides how much original signal you hear versus the affected signal.

StereoDelay

StereoDelay is great for giving your tracks a sense of space. It includes two delays. One for the left channel and one for the right channel. "SyncNote" allows you to sync the delay effect to the tempo. "Feedback" determines how long the delay will last. The "Mix" parameter decides how much original signal you hear versus the affected signal.

Distortion Effects

AmpSimulator

The AmpSimulator allows you to make it sound like your tracks were recorded through an electric guitar or bass amplifier.

"Drive" gives a boost to the signal and simulates an overdrive pedal. "Bass" adds low end to the signal. "Mid" boosts the middle frequencies of the signal. "Treble" adds high end to the signal. "Volume" allows you to give that extra boost to the signal without adding any distortion.

▪ There are a number of AmpSimulator presets available. Try out the different presets to find the desired amp sound.

Distortion

Distortion is great for adding crunch to your tracks. This effect is easy to use with only two parameters, but it is extremely effective. "Boost" cranks up the distortion amount. "Output" raises or lowers the signal going out of the effect.

Dynamics Effects

Gate

Gate, as the name implies, allows you to create a "gate" which will let only audio through if it meets a volume requirement that you control. "Threshold" sets the volume level that the signal has to reach in order to be heard. "Release" controls how quickly the "gate" will close after it has been opened.

Maximizer

Maximizers are commonly used in the mastering stage to raise the overall level of the mix. The Optimize setting raises the level of your tracks without clipping the output. Turning this up all the way creates a "brick wall" type effect that is often used on drum tracks in electronic music.

DualFilter

This effect filters out certain frequencies while allowing others to pass through. Moving the Position slider changes the focus frequency of the filter. If the position is higher, only high frequencies are heard. If the position is lower, only low frequencies are heard. "Resonance" adds a ringing effect to the filtered sound.

Modulation Effects

AutoPan

AutoPan automatically moves the track's signal from left to right and back again. "Rate" determines how quickly the signal moves back and forth. "Width" adjusts how far to the left and right the signal will go.

Chorus

Chorus works by doubling whatever is sent into it with a slightly detuned version. "Rate" changes the speed of the chorus effect. "Width" adjusts how much the signal is detuned. The "Mix" parameter decides how much original signal you hear versus the affected signal.

Flanger

Flanger works like the Chorus effect in that it doubles the input signal. Instead of detuning it, it delays it slightly by a gradually changing amount. The "Rate" parameter adjusts the speed of the effect. "Feedback" determines the intensity of the typical Flanger sweep. The "Mix" parameter decides how much original signal you hear versus the affected signal.

Phaser

The Phaser effect works by applying multiple filters to the signal. "Rate" determines the speed of the effect. "Feedback" determines the intensity of the typical Phaser sweep. The "Mix" parameter decides how much original signal you hear versus the affected signal.

Rotary

Rotary emulates a rotating speaker, which is a popular effect for electronic organ sounds, but also works great for guitar. The "Speed" parameter adjusts the speed of the rotation.

Tremolo

Tremolo works by creating a repetitive variation of gain. It's sort of like an auto-volume knob. "Rate" determines the speed of the gain adjustments. "Depth" determines how wide the variation in gain will be.

Vibrato

Vibrato works by rapidly creating a slight change in pitch. It's the same idea as playing a note on a guitar and wiggling your finger back and forth within the fret. "Rate" changes the speed of the effect. "Depth" determines how wide the variation in pitch will be.

Other Effects

Reverb

Reverb is a reverb effect. Reverb allows you make it sound like your music was recorded in a large hall or cathedral. The "Mix" parameter decides how much original signal you hear versus the affected signal. "Time" determines the length of the reverb, thus creating a sense of space.

Stereo Enhancer

Stereo Enhancer allows you to spread out your project's stereo image. This can create a greater sense of space for crowded mixes. "Width" determines how wide the image will be spread.

Instrument parameters

In the following table, the most common instrument parameters are listed.

Option	Description
Cutoff	This determines the cutoff frequency of the signal.
Resonance	Resonance adds a ringing type effect to the signal
DCF Amount	DCF amount determines how much filtering is applied to each note.
Attack	Attack adjusts how quickly you hear the initial hit of a note.
DCA Decay	DCA decay adjusts how each note will fade out.
DCA Sustain	DCA Sustain determines how long you hear a note while is it being played.
DCA Release	DCA Release determines how long a note is held for once it has been released.
DCA Amount	DCA Amount is the amount of the DCA envelope.
Drive	Drive gives a signal boost making the signal louder.
LFO Frequency	LFO stands for "low frequency oscillation". LFOs are used to modulate and change a signal. This controls the frequency that the LFO will operate on.
LFO Level	This raises or lowers the volume of the LFO.
FX	If the instrument has a certain effect built into it, the FX parameter controls how much this effect is heard.

⇨ Note, however, that some of the preset sounds may show different parameters. The sheer amount of preset sounds makes it impossible to describe all the available parameters.

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