7

Sampling Using Edison

In this chapter, we will cover:

- Finding a sample
- Obtaining a seamless loop
- Embedding your tempo information
- Importing your new saved sample
- Time-stretching your sample in your project
- Fine-tuning your sample

Introduction

Edison is an extraordinary WAV editor within the FL Studio program. It is a scratch pad of sorts where you can record or manipulate audio in different ways. You will also be able to drag audio files directly from your desktop into Edison. As far as sampling goes, the parameters you manipulate in Edison give you the ability to sample any song that inspires you. This can be from any time period. Moreover, it encapsulates acapella, instrumentals, and standard songs with music and lyrics. You can also sample any sound or effect from other WAV or MP3 sources. When you want to use a certain loop or musical measure from a song that inspires you, you must take specific steps within Edison to make sure your settings are optimal for use in FL Studio. The creative possibilities for sampling are boundless. You can create your own spin and develop remixes. There are also legal issues in selling your song after sampling, but we will review entertainment law, publishing, composing rights, and copyrights in the *Appendix*.

Finding a sample

You can find samples and get inspired at any point in your life. This means you may have songs that connected with you during your childhood, bands you saw in concert, orchestras you attended, YouTube videos you enjoy, or the most popular method in electronic, rap, and pop music: digging through vinyl records. Vinyl records and turntables can be recorded in the same manner as a microphone used while recording vocals. The only difference is that you will be using a line-level signal while recording vinyl records into FL Studio. It signifies that audio output for condenser microphones will generally use XLR cables and record players or turntables will use RCA, one quarter inch, and/or SPDIF outputs. You will simply select your vinyl record audio input in the same manner that you choose your input for vocals, guitar, or keyboards.

Getting ready

To get started with sampling in Edison, you will want to open up a new audio editor. The FL Studio hint bar will notify you that your mouse is hovering on **Open (new) audio editor**, which is the symbol with the scissors in the following screenshot:

Fig 7.1

How to do it...

Now let's begin sampling with Edison by carrying out the following steps:

1. Open up Edison by clicking on the scissors symbol, as mentioned earlier.
2. Drag-and-drop an MP3 or WAV file from your desktop into Edison, as shown in the following screenshot:

Fig 7.2

3. In order to arrange and resize your FL Studio main window, you may click on the maximize/restore button, as shown in *Fig 7.3*. In this manner, you can resize the entire FL Studio program in order to drag-and-drop your MP3 or WAV file.

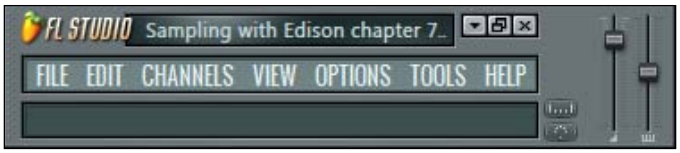

Fig 7.3

4. An alternate method to the drag-and-drop method is to simply click on the disk/file icon on Edison and select **Load sample...**, as shown in *Fig 7.4*. This will enable you to browse anywhere on your computer to select the audio file that you want to listen to and edit in Edison.

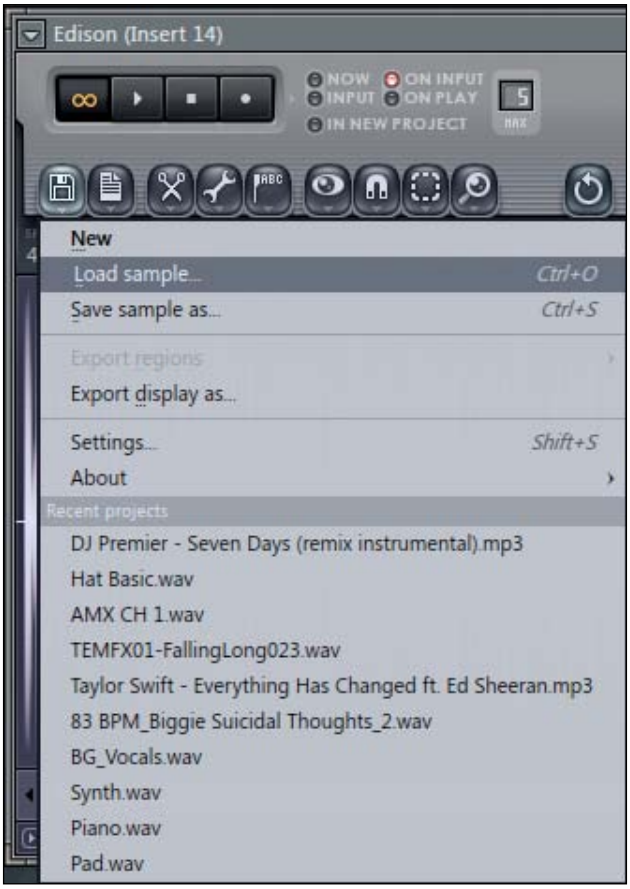

Fig 7.4

5. Once your sample is loaded in either method, you will see the audio waveform of your file in a graphical display, as shown in the following screenshot:

Fig 7.5

6. Click-and-drag inside the waveform in order to highlight an area you want to sample or preview. Your selection will show in red and you can simply click on the left- or right-hand side of your red selection to resize.

Resize Edison by hovering your mouse to the leftmost, rightmost, top, or bottom area until your cursor changes into an arrow. Use the **Detached** mode (upper-left-hand corner triangle drop-down box) to drag Edison to a separate computer monitor / screen.

7. Select an area of your file that you want to capture (sample). Generally, you can highlight a short area that has a quick percussion hit / FX or a measure, beat, bar, or loop of music. When working with a loop, select the infinity symbol on the top-left and your selection will loop back around, allowing you to trim the beginning or end of it. In the following screenshot, we have selected a loop:

Fig 7.6

8. While your Edison window is engaged, press the Space bar to play back your sample and adjust the start and end times with your mouse.

Fig 7.7

9. In order to use a sample that you have selected in Edison in your actual FL Studio project, simply click on the **Drag / copy sample / selection** button and drag your sample into the step sequencer. The **Drag / copy sample / selection** button is the second icon from the far right in *Fig 7.7*. We discussed the various ways to drop audio into the step sequencer in the *Working with rhythm and percussion* recipe in *Chapter 4*, *Building Your Song*. Keep an eye on the FL Studio hint bar when you hover your mouse in order to make sure you are using the proper function.

You may also use the **Save sample as...** feature by clicking on the disk icon inside the Edison window. This allows you to organize and archive your sample outside FL Studio.

How it works...

Basically, we are importing an audio sample into Edison, selecting the part we want to use, and dragging it into the step sequencer. Once you have your audio sample inside the step sequencer, you can utilize it in the same manner you use any channel in the step sequencer.

Make sure you resize the Edison window in order to optimize your workflow and make things easier to see. You can hover your mouse on any part of the Edison window until your cursor changes to a resize arrow. You can do this on any corner of the Edison window in addition to the top or bottom. Another crucial tool when working with Edison is the S key on your QWERTY keyboard. Clicking this will change your audio view into a spectrum instead of a waveform, and it will help you find a loop. We will review getting a seamless loop in the next recipe.

A crucial tool when working with any type of audio file in Edison is the use of the *Page Up* and *Page Down* keys on your QWERTY keyboard. *Page Up* will zoom in on your sample and help you find the exact location you want to start or stop your highlighted selection. *Page Down* will zoom out so you can get an overview of what your entire audio file looks like and where your current selection actually is in relation to the whole sample. The zoom-in function can get extremely close (up to the milliseconds of your sample), and this is sometimes needed to perform audio surgery and get the best possible selection we can. Take care while choosing the proper selection because you will be using the sample in your music project.

Press *Ctrl* + *Shift* and click/drag to the left or right at the bottom of Edison in order to zoom in and out. Press *Crl* + *Alt* and click/drag up and down to zoom in and out. This is similar to using the scroll bar in the playlist, as reviewed in *Chapter 5*, *Using the Playlist*. With Edison, you use the **Zoom/ Scroll** bar near the bottom of the window.

There's more...

You may also use the **Detached** function—the exact function used on the FL Studio Mixer. This will allow you to detach Edison and drag it to another screen or computer monitor. Clicking on the small triangle on the upper-left-hand corner in Edison drops down a menu with the **Detached** functionality. Clicking on that will help you separate and isolate Edison so the entire graphical window is easier to work with. Also, be aware of where Edison actually exists on our FL Studio mixer. Sometimes, it will pop up on one of our FL Studio Mixer chain slots in the FL Studio Mixer. Edison is actually a Fruity effect and can be added to any FX slot (1 to 8 vertically) in the FL Studio Mixer.

You may also right-click on where your audio file is displayed on Edison. This will bring up a variety of parameters used to manipulate and tweak your audio. Additionally, be sure to experiment with all of the icons in the previous screenshot. Edison is a very powerful audio editor and it can definitely enhance the sound of your FL Studio project.

You can also edit any type of sample in your browser within Edison in order to tweak it to your needs. Basically, Edison can be used as an audio editor and audio sampler, as well as an audio recording system.

Send to playlist as audio clip / to channel is a newer function that enables you to send your highlighted selection directly to the FL Studio playlist. It also creates a channel in the step sequencer. This is the last icon to the right in *Fig 7.7*. You may also use **Save icon**, which we saw previously in the *How to do it...* section, in order to use the **Save sample as...** feature and save your highlighted selection wherever you desire on your computer. This can sometimes be an external hard drive or a dedicated folder and may help with organization. If you do not use this method, your dragged sample (once dragged or moved into the step sequencer) will be saved automatically in the `Sliced beats` folder on the FL Studio Browser.

See also

- The *Obtaining a seamless loop* recipe
- The *Sending a channel to a mixer slot* recipe in *Chapter 3*, *Working with Step Sequencer and Channels*
- The *Working with rhythm and percussion* recipe in *Chapter 4*, *Building Your Song*
- The *Recording external audio – keyboards, vocals, guitar, and devices* recipe in *Chapter 6*, *Using the FL Studio Mixer and Recording Audio*

Obtaining a seamless loop

Obtaining a seamless loop in Edison means making your loop sync in time and on beat. This is usually done in 4/4 time, but you can also find loops in 3/4 time or any variation of time you need. We will be adjusting the start and end points of the loop and making sure everything flows in musical beats and bars. If you have too much empty space at the beginning or end of your highlighted loop selection, your sample simply won't be practical to use in your musical project because the timing will be off. Your looped sample must be seamless – you are extracting the musical idea and this must be in perfect sync with respect to time or as close as possible.

Depending on your source genre, it may sometimes be a tad difficult to get a seamless loop because the song in question is not actually played in perfect time. This is usually acoustic or rock genres because some bands don't actually play with a "click track", which is a guiding tempo used during recording. Some bands don't use a click track on purpose, because it can add a more human element to their entire recording. Nevertheless, when working with Edison and trying to find a seamless loop, no matter what the source, you can usually come very close to finding a useable loop because you generally will only be extracting certain sections of your source material.

The source material doesn't always have to be long, as long as it can translate. You can also fine-tune and stretch your sample once it becomes a channel in the step sequencer, and we will review this in the final two recipes of this chapter. It may be a tad easier to find your seamless loop when working with electronic, rap, pop, and hip hop genres because they are inherently created using a strict digital tempo.

Getting ready

In order to find a seamless loop in Edison, you will want to have Edison open and a WAV or MP3 file loaded into the editor. You can load samples by using the disk icon and browsing on your computer or by dragging-and-dropping a sample from your desktop directly into Edison, as discussed in the previous recipe.

How to do it...

Let's have a look at the steps required to obtain a seamless loop.

1. Click on the loop symbol at the upper-left-hand corner of Edison. It will turn yellow when engaged, as shown in the following screenshot:

Fig 7.8

2. Click on the **Disable autoscrolling** button near the upper-right-hand corner of the Edison interface. When disabled, it will have a slash mark through it, as shown in the following screenshot:

Fig 7.9

3. Use your left and right scroll feature located at the bottom of Edison, as shown in *Fig 7.10*. When you hover your mouse over the left- or right-hand corner of the scroll bar at the bottom, notice that you can zoom in and out. You may also scroll left or right by clicking and dragging on the middle of the scroll bar.

Press *Ctrl* + *Shift* and click/drag left and right on the **Zoom/Scroll** bar at the bottom as well as *Ctrl* + *Alt* and click/drag up and down in order to zoom in and out.

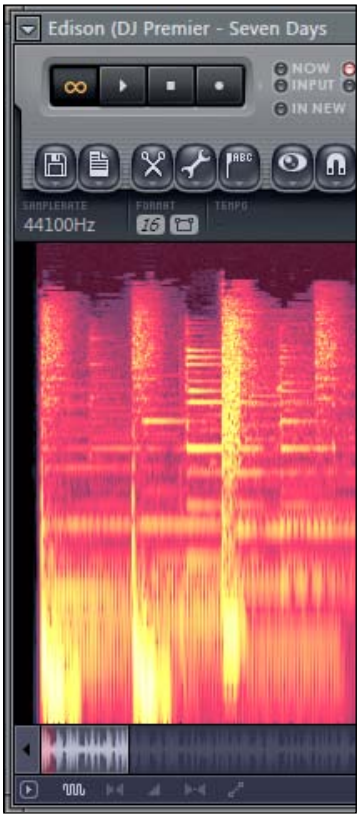

Fig 7.10

The following screenshot shows the exact location of the scroll bar area:

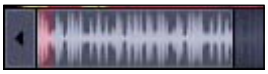

Fig 7.11

4. Hit the S button on your QWERTY keyboard in order to change the view from a waveform to a spectrum and vice versa.

5. Adjust the start and end points of your highlighted sample by clicking on them within Edison.
6. Press the Space bar to start and stop your sample.
7. Zoom in by pressing *Page Up* and zoom out by pressing *Page Down*. You may also need to adjust your scroll bar when doing this in order to see the exact location of your edits.
8. If you notice any pops and clicks at the start or end points of your loop, right-click on your highlighted area, hover your mouse on **Tools**, and select **Declick in** (beginning/start point of your highlighted section) or **Declick out** (end point of your highlighted selection), respectively. This action is shown in the following screenshot:

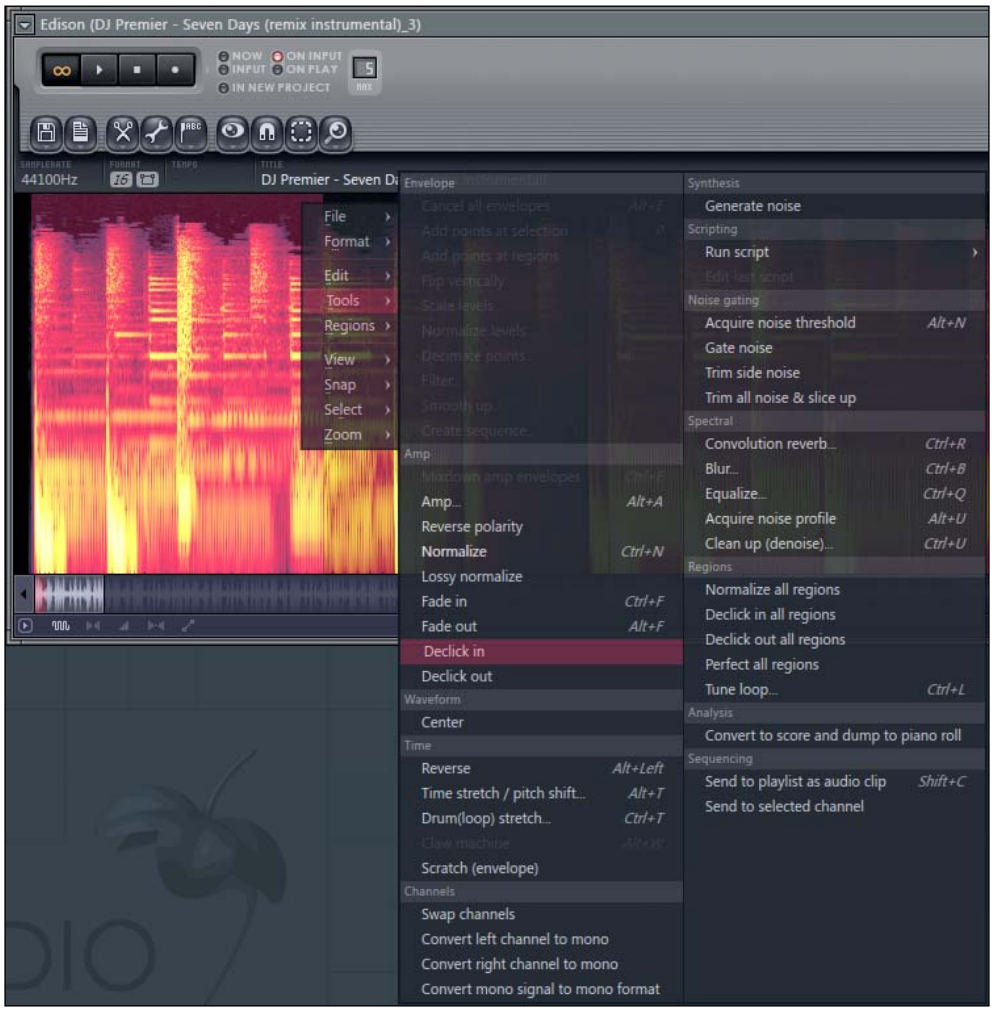

Fig 7.12

9. Once you are satisfied with your loop and highlighted section, hold down *Ctrl* and press the *Delete* key. This is the **Trim** tool and can also be found by right-clicking on your audio in Edison, selecting **Edit**, and then selecting **Trim**.

How it works...

We are basically adjusting the highlighted section of the loop we want to sample and capture/extract, and using the various tools in Edison to assist us in this process. Disabling autoscrolling will turn off automatic autoscrolling, and you can then use the scroll bar at the bottom of Edison to adjust the view of your Edison interface. Please remember that you can adjust the whole graphical interface or main window of Edison by hovering your mouse on the corners, top, or bottom of Edison to make your view as user friendly as possible.

Using the S key while adjusting your sample can greatly help you find where your beats and bars are, because the spectrum view shows straight vertical lines where certain musical phenomenon occurs. For example, there will usually be a vertical line on the down beat of your sample. This is usually where the kick drum or cymbal hits can assist you in finding the start point of your loop.

Once your loop is close to perfect in terms of musical time, you can zoom in on your sample (*Page Up*), use the scroll function to get in very close on the properties of your sample, and adjust your start point or end point accordingly. The closer you are zoomed in, the more audio surgery you can perform. You can also get rid of clicks and pops by zooming in very close and adjusting the highlighted portion carefully. Sometimes, the smallest adjustment when you are zoomed in can greatly help the musical feel of your sample.

An easier way of getting rid of unwanted noise, pops, and clicks at the beginning or ending portion of you sample is to use the **Declick in** or **Declick out** functionality. Trimming your sample at the final stage of your process makes your highlighted section the exclusive audio inside of Edison and removes any part of your audio that is not selected.

Once you are happy with your seamless loop, you can save it anywhere on your computer, drag it into the playlist, or drag it into the step sequencer. You can use it as a step on the step sequencer or within the piano roll. Once you have found your loop, your audio will act the same as any other type of audio used in FL Studio. You will still have your channel settings and the ability to send it to the FL Studio mixer for further processing.

There's more...

You may also slice and chop your loop or any audio loaded into Edison. The button with the **+** sign in *Fig 7.13* enables you to add manual slices, and the button to the right of that automatically slices your sample for you. Once you have your slices, you can drag your sliced sample into the **Fruity Slicer** channel by using the **Drag / copy sample / selection** button. This will enable you to play all of your slices with separate keys on a MIDI controller or with the Piano roll because it further separates your sample into individual pieces and parts. You can create a **Fruity Slicer** channel by going to **Channels | Add one | Fruity Slicer**. You can then use **Drag / copy sample / selection icon**, which has been discussed in the previous recipe, and drag it directly onto the **Fruity Slicer** channel on the step sequencer. Working with sliced audio may help you find more creative ways to utilize your samples. The **Fruity Slicer** channel can be sent to a mixer slot, but all of the samples/slices within it will be governed by one mixer slot.

Fig 7.13

See also

- The *Importing your new saved sample* recipe
- The *Time-stretching your sample to your project* recipe
- The *Fine-tuning your sample* recipe
- The *Exploring Channel settings* recipe in *Chapter 3*, *Working with Step Sequencer and Channels*
- The *Working with rhythm and percussion* recipe in *Chapter 4*, *Building Your Song*

Embedding your tempo information

Embedding the tempo of your seamless loop inside of Edison will enable you to time-stretch your sample to the tempo of your FL Studio project. This can be any type of seamless loop discussed in the previous recipe, or an acapella sample, which means a vocal track without any type of instrumentation. When you embed tempo information into an acapella sample, you can time-stretch it to the tempo of your FL Studio project. We will review time-stretching in the final two recipes of this chapter, but finding your sample tempo is crucial to having creative control of your musical project.

Getting ready

In order to embed your tempo information into your Edison audio, you will want to have completed the previous recipe. Your seamless loop should be selected and trimmed so that the only audio within Edison is the exclusive material you have adjusted.

How to do it...

Let's go through the necessary steps to embed your tempo information.

1. Engage Edison and hit the Space bar to start your sample.
2. While your sample is playing, right-click on your main FL Studio **TEMPO** readout and select **Tap...** as shown in *Fig 7.14*. This will bring up the **Tempo tapper** window.

Fig 7.14

3. Hit the *T* key on your QWERTY keyboard in sync with your sample's beat (T stands for tap). Your tempo will change as you do this, but will remain fixed once you find your beat. The following screenshot shows your tempo as **185**:

Fig 7.15

4. Right-click on the small area beneath the **TITLE** readout on Edison. In the following screenshot, you will see we have right-clicked on the text that says **DJ Premier - Seven Days (remix instrumental)**:

Fig 7.16

5. After right-clicking on the **TITLE** area, the **Sample properties** window will appear as shown in *Fig 7.17*.

6. In the **Tempo** section, enter the information that you previously discovered during the **Tempo tapper** process into the **Tempo (BPM)** field and click on **Accept**, as shown in the following screenshot:

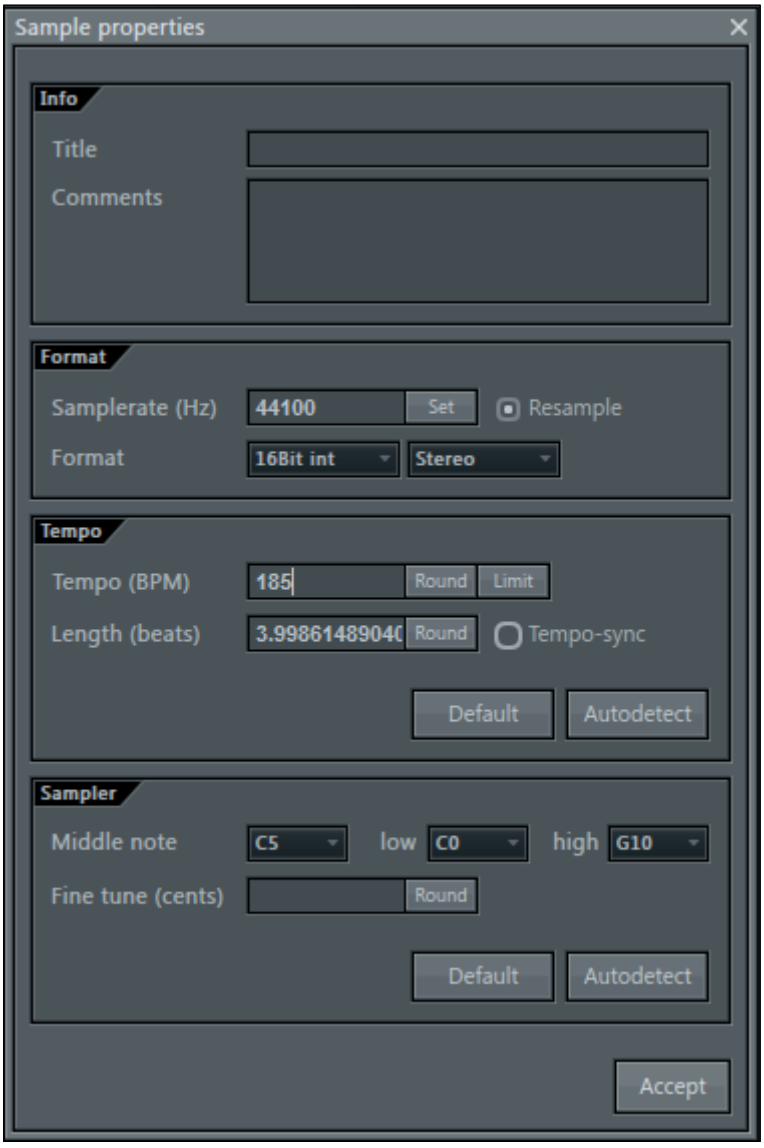

Fig 7.17

7. Once accepted, the values you entered in the **TEMPO** section in the **Sample properties** window will show up inside of Edison beneath the **TEMPO** field. In *Fig 7.18*, our Edison sample now shows **185BPM**. The tempo information is now embedded in your audio sample.

Fig 7.18

8. Click on the disk icon and select **Save sample as...** as shown in *Fig 7.19* if you want to save it anywhere on your computer or external hard drive. You could also use the **Drag / copy sample / selection** button or select **Send to playlist as audio clip / to channel**.

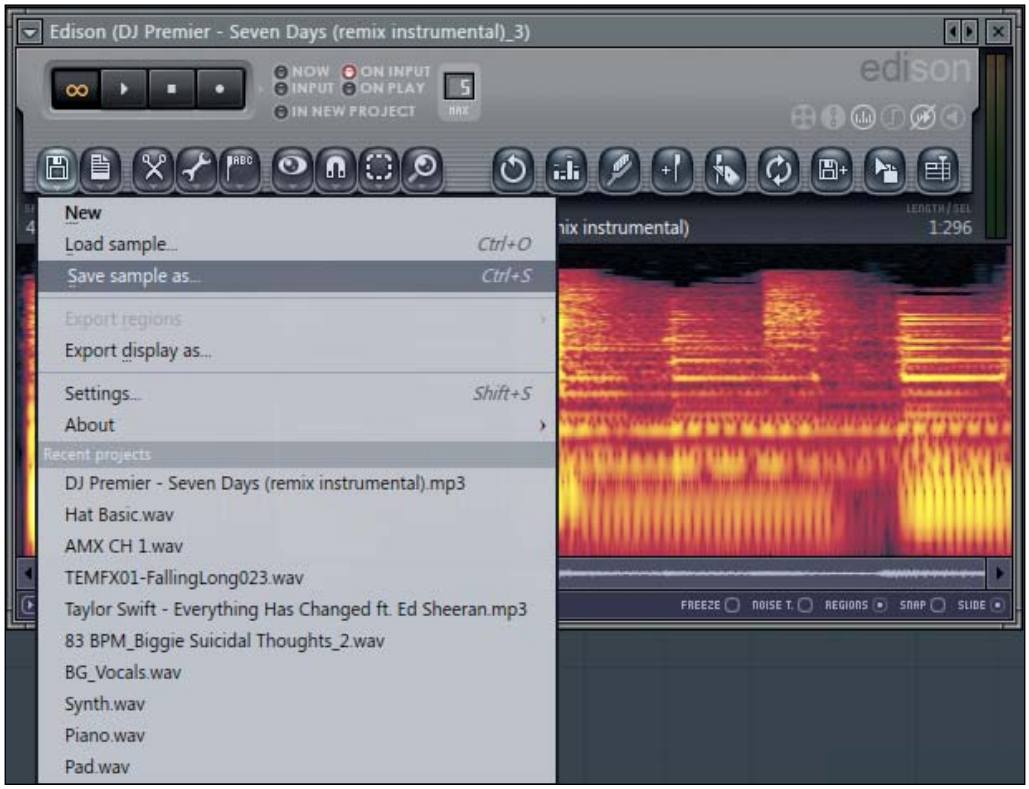

Fig 7.19

How it works...

We are embedding the tempo information of our sample in order to eventually stretch it to your main FL Studio project tempo, which will be reviewed in subsequent recipes. This way, you have more options to work with your sample and the creative possibilities are greater. Once you save your tempo information into the **Sample properties** window, it is embedded. From there, you can either save it or drag it out of Edison into the playlist or step sequencer, respectively. Edison is only a scratch pad / audio editor; you must bring it into the step sequencer or playlist to actually use the audio in your FL Studio project.

There's more...

After opening the **Tempo tapper** window, you can either tap out your tempo by pressing the *T* key on your QWERTY keyboard or use your mouse. To tap with your mouse, simply click in the area that reads **TAP** once the **Tempo tapper** window has opened.

In order to tap out these tempos, you have to get into the groove of your sample. As long as you have rhythm and can keep a beat, you are golden. Sometimes, your sample will already have tempo information embedded within the file. You can double-check the information that is already there by simply performing the **Tempo tapper** method.

As far as file organization is concerned, it may help to save your new samples (with tempo information embedded) in a dedicated folder or external hard drive. This works in the same manner as saving audio recordings, which we discussed in *Chapter 6*, *Using the FL Studio Mixer and Recording Audio*. Saving and organizing files properly is half the battle when composing music in any type of DAW. If you have a good system in place, it will make your life much easier, especially if you are an engineer or producer working with clients.

See also

- The *Finding a sample* recipe
- The *Obtaining a seamless loop* recipe
- The *Importing your new saved sample* recipe
- The *Time-stretching your sample on your* recipe

Importing your new saved sample

Importing your new saved sample can be achieved in various ways, much like there are many ways to skin a cat. It basically depends on your own personal workflow and the ways in which you feel most comfortable with the program. When inspiration strikes, you may want to drag files out of Edison and into your step sequencer as quickly as possible. However, at some point, you should make sure your files are retrievable and saved in the proper manner. You may need them as a reference for clearance purposes or even to use them again a second time around.

Getting ready

In order to import your new, saved sample from Edison into your FL Studio project, you will want to have Edison open and your sample edits and parameters saved. It doesn't matter if you have a loop, embedded tempo, or simply a one-shot small section highlighted. The method of importing is the same.

How to do it...

Let's us review the steps required to import your new saved sample.

1. Click on the disk icon inside of Edison and select **Save sample as...**, as shown in the following screenshot:

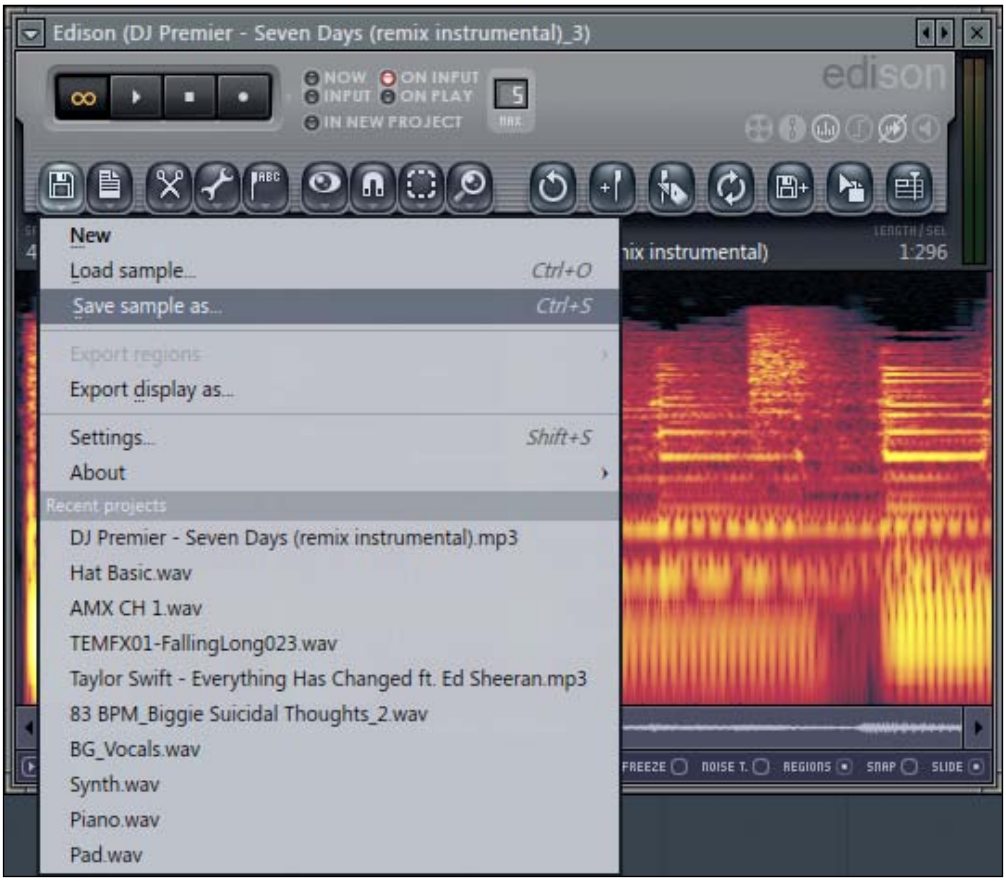

Fig 7.20

2. Browse/save your file to a location or folder that is best for your workflow.
3. Select **CHANNELS** from the top of the main FL Studio window, hover your mouse on **Add one**, and select a **Sampler** channel, as shown in the following screenshot:

Select a channel and press *Alt + C* to clone the channel and create a new one directly beneath it. Be mindful that all of the source channel settings will be duplicated except its notes and events.

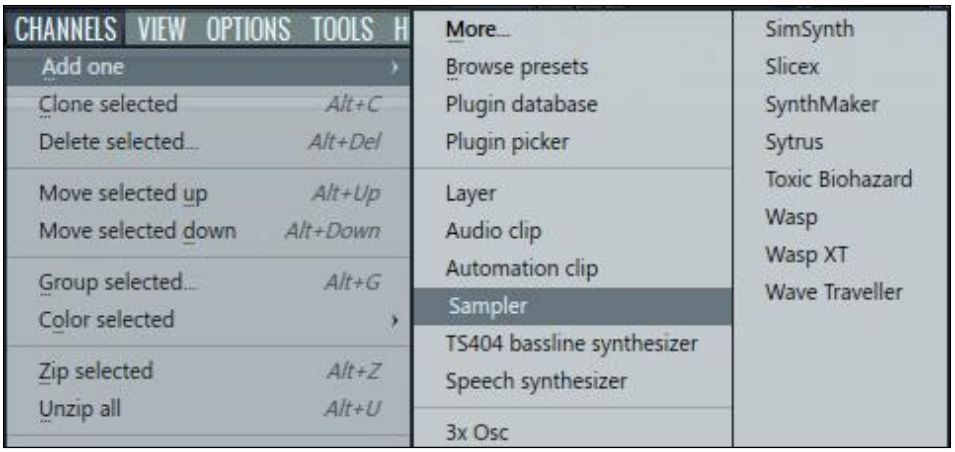

Fig 7.21

4. A new **Sampler** channel will be created in the step sequencer as shown in *Fig 7.22*. This is simply a blank channel that says **Sampler**.

You can also use the FL Studio Browser (*F8*) and expand the folder called `Channel presets`. You can then expand the `Sampler` folder and drag the **Default** option into the step sequencer. When using this method, your new blank channel will read **Default**.

Fig 7.22

5. Click on the small folder icon directly under the **SMP** tab within your sampler's **Channel settings**. This will open up another window where you can browse and retrieve your saved sample. Once retrieved, the area to the right of the small folder icon will change to your sample name and the bottom of your channel will show the waveform.

   You may also use FL Studio Browser (*F8*) to scroll through your saved samples as well as drag files over from a separate window into FL Studio. If you are using FL Studio Browser in this manner and you are saving files to an external hard drive or somewhere not inside the FL Studio, make sure your FL Studio Browser extra search folders include the proper locations. This setting can be found by pressing *F10* and clicking on `FILE`. The following screenshot shows the settings in the **SMP** tab:

Fig 7.23

6. The name of your channel will automatically change to the sample you have selected, as shown in *Fig 7.24*. It will squeeze as much text as possible into the **CHANNEL** view on the step sequencer. Hover your mouse on the channel and look at the FL Studio hint bar to see the full name of your channel.

Fig 7.24

How it works...

When saving your file to your computer or external hard drive, FL Studio defaults your saved file into the Microsoft WAV file format. You have the ability to change this to a Microsoft-compressed WAV file, WavPack audio file, MP3, or OggVorbis by using the **Save as type** drop-down box before saving. You can also set your folder location as a favorites by using the **+** sign next to the **Favorites** area. If you have an external drive, make sure your drive is connected to your computer, or it will not bring up the drive location.

There's more...

Remember that when working with the step sequencer, you can easily add a new channel by right-clicking on any channel in the step sequencer and then selecting **Insert**. This avoids the need to go to the main **CHANNELS** menu.

You may also save your file to a location inside of the FL Studio Browser. In this manner, when your browser is refreshed, you can choose your files from inside the browser. The computer hierarchy to save your files in the browser is reviewed in *Chapter 2*, *Using Browser*.

You can also simply use the **Drag / copy sample / selection** or **Send to playlist as audio clip / to channel** button in Edison. Additionally, you can drag your waveform from the bottom of your **Channel settings** into the FL Studio Playlist. There are many options available when working with Edison and it all depends on your personal workflow.

See also

- The *Finding a sample* recipe
- The *Obtaining a seamless loop* recipe
- The *Getting new sounds in the browser* recipe in *Chapter 2*, *Using Browser*
- The *Exploring Channel settings* recipe in *Chapter 3*, *Working with Step Sequencer and Channels*

Time-stretching your sample to your project

Time-stretching the samples you have used in Edison is arguably the most enjoyable and rewarding process, especially for remixers and mash-up producers. This doesn't necessarily have to be a sample from a commercially released song. You can also be working with percussion, drum, and audio loops of all sorts. Anything that has a detectable rhythm is fair game. The pitch of your sample, the embedded tempo of your sample, and the main project tempo in FL Studio are all related. This recipe will break down what this means.

Getting ready

To time-stretch your sample from Edison to your FL Studio project tempo, you *must* have your tempo embedded in your sample. Once this is done, you simply need to have your sample exist in a channel on the step sequencer. This is extremely vital to working with your sample and getting the best out of your project. If your tempo is not embedded in your sample, these steps will not work.

How to do it...

Let's study the steps required to time-stretch our sample to our FL Studio project.

1. Get an audio sample from Edison into a channel in the step sequencer with your tempo information embedded.
2. Go to the **SMP** tab in **Channel settings**, right-click on **TIME**, and select **Autodetect** as shown in the following screenshot:

Fig 7.25

3. The **Tempo detection - DJ Premier - Seven Days (remix instrumental)** window will appear. Click on the option that says 185 (embedded). This is basically telling you that there is a tempo embedded in the file. In this example, we want the 185 tempo because this is the work we previously did in the Edison **Sample properties**! The following screenshot shows the 185 (embedded) option in the tempo detection window:

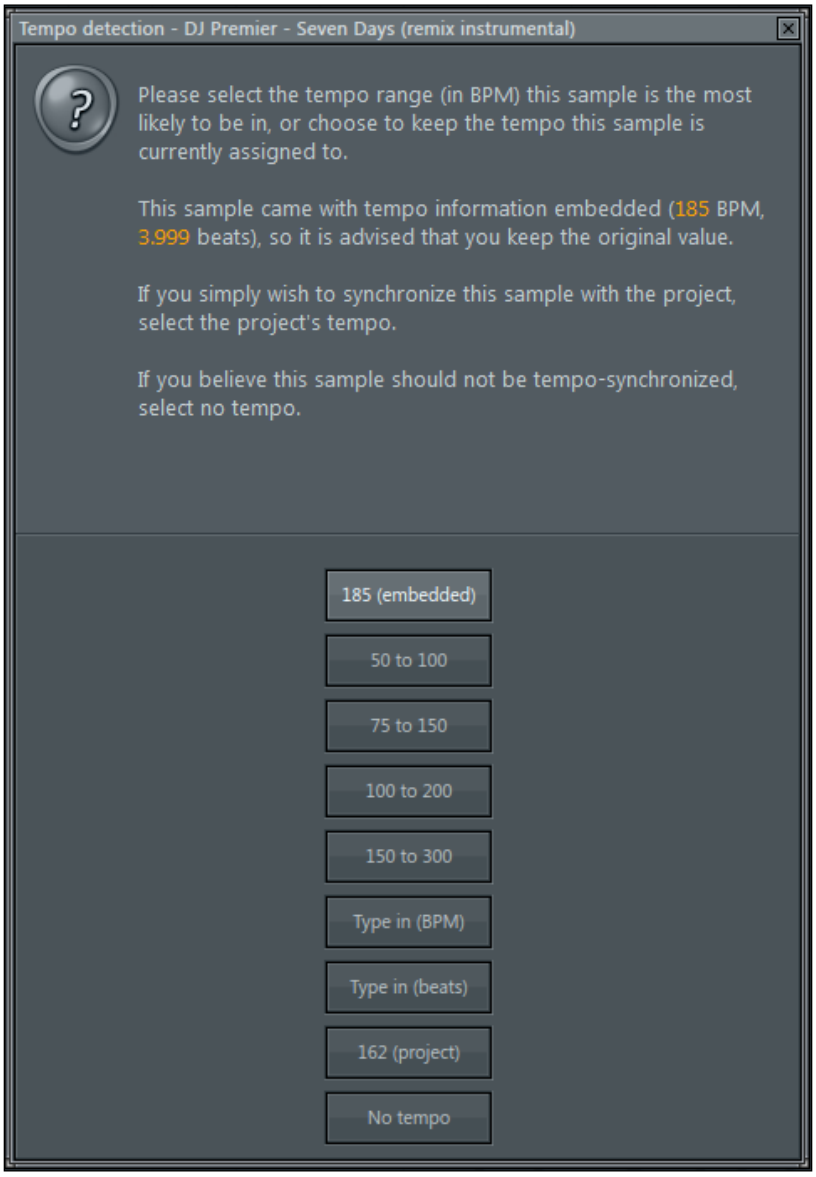

Fig 7.26

4. Test out your sample by clicking on the first step on your given channel in the step sequencer. In the current situation, our tempo of 185 (embedded, in our sample) is stretching to the FL Studio project tempo of 144! The following screenshot shows the step sequencer with the new tempo settings:

Fig 7.27

5. Select **Pro default** from the drop-down menu next to **TIME** in order to keep the same pitch of your original Edison sample when your main FL Studio Tempo is adjusted. This is shown in the following screenshot:

Fig 7.28

How it works...

When you adjust your FL Studio project tempo as shown in *Fig 7.26*, your sample will stretch accordingly, but the pitch will change. This is because your drop-down menu next to **TIME** is still defaulted to **Resample**. The lower your project tempo, the lower in pitch your sample will become, but it will still stretch as much as it can. When working with a loop, you will notice the pitch of your sample (both the harmony and the percussion) will get very low when adjusting to a slow tempo. When you raise the tempo higher, your sample pitch will increase accordingly and simultaneously get faster.

Fig 7.28 shows different rules because we have changed our stretching method to **Pro default**. This means that our sample will keep the same pitch irrespective of our main project tempo. If we adjust the main project tempo very slow, our sample will be very slow, but it will maintain the same pitch as that of the original sample. If we make our tempo fast, our sample will get faster, yet still maintain the same pitch as the source audio sample from Edison.

There are different reasons for using both of the methods mentioned earlier. Sometimes, you want to keep the same pitch no matter what your project tempo is (using the **Pro default** method). At other times, you want to have a chopped and screwed type of effect, and that can be managed by keeping your stretching method as **Resample**.

When using this method or working with any type of audio samples in FL Studio, you may also drag your sample from the bottom of the **SMP** channel settings folder (where the waveform appears) directly into the FL Studio Playlist. This will create a second instance of the sample as an audio clip. You can then use the knobs in the **Time stretching** section and get super handy visual feedback by looking at how your waveform changes as you adjust the knobs. You may also press and hold *Alt* while moving samples in the playlist to toggle the grid on and off.

See also

- The *Finding a sample* recipe
- The *Obtaining a seamless loop* recipe
- The *Exploring Channel settings* recipe in *Chapter 3*, *Working with Step Sequencer and Channels*
- The *Sending a channel to a mixer slot* recipe in *Chapter 3*, *Working with Step Sequencer and Channels*
- The *Adding effects and your effect chain* recipe *Chapter 6*, *Using the FL Studio Mixer and Recording Audio*

Fine-tuning your sample

Sometimes, it can be difficult to get a loop in perfect tempo, so do your best in Edison but remember that you have another weapon in your FL Studio arsenal—the **MUL** button. The hint bar reads that the **MUL** button is the **Time Stretch (multiplicator)** functionality. This can make your loop time stretch very finely in order to move it ever so slightly in time, forwards or backwards. This recipe does not relate to the pitch or tune, but shifts the timing in fine increments.

Getting ready

You will want to have a sample completed in Edison (looped, embedded tempo, and saved, as discussed in the earlier recipes) and open in an FL Studio channel in the step sequencer. You should also be using the **Time stretching** button, where you right-click and select **Autodetect**. We will be working with the **SMP** tab within **Channel settings** and adjusting the knob that reads **MUL**.

Prerequisites

You must right-click on the **TIME** knob and select **Autodetect** in the exact same way as the previous recipe, *Time-stretching your sample to your project*.

How to do it...

Let's review how to shift your sample ever so slightly in time (forwards or backwards).

1. Open an FL Studio channel, hold down *Ctrl*, and click-and-drag with your mouse to the left or the right with the **MUL** knob, as shown in the following screenshot:

Fig 7.29

2. While dragging, look at the FL Studio hint bar (have a look at *Fig 7.30*). **99.72%** means it has been clicked-and-dragged (while pressing *Ctrl*) to the left.

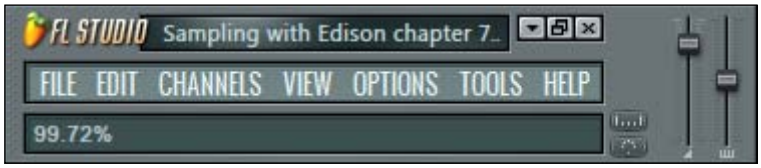

Fig 7.30

How it works...

After you get as close to a seamless loop as possible and set your time stretch to autodetect a sample (by setting **Autodetect**), the **MUL** knob adjusts ever so slightly in either direction. You may hold down *Ctrl* for even finer increments. Sometimes, only a slight adjustment either way can greatly impact the timing of your samples. You may also press the *Ctrl* key on most knobs in FL Studio for extremely small adjustments. If you want to adjust in chunks of time, you don't need to hold down *Ctrl*. You can simply click-and-drag the **MUL** knob.

There's more...

You must have patience to salvage your sample with the **MUL** knob when getting a seamless loop proves to be difficult. This involves testing different settings with the **MUL** knob. You can also use an EQ technique called a **low pass filter** on your sample to find the bassline. You want to get as seamless a loop as humanly possible. The **MUL** knob is a great helper in order to pinpoint the exact groove of your hard work in Edison.

Also use the **POGO** knob located on the **SMP** tab within the **Precomputed effects** section. This helps adjust any silences in the beginning of the sample, in cases where it wasn't chopped correctly from the beginning. This usually helps when working with sampled percussion.

See also

- The *Finding a sample* recipe
- The *Obtaining a seamless loop* recipe
- The *Sending a channel to a mixer slot* recipe in *Chapter 3*, *Working with Step Sequencer and Channels*
- The *Exploring Channel settings* recipe in *Chapter 3*, *Working with Step Sequencer and Channels*
- The *Perfecting equalization* recipe in *Chapter 6*, *Using the FL Studio Mixer and Recording Audio*