# 10
# Recording Automation

In this chapter, we will cover:

- Using automation for virtual instruments and effects
- Creating automation clips

## Introduction

Automation is a tactic used by all professional engineers and music producers. Almost every knob and slider in FL Studio allows you to automate music. You can automate filters, effects, virtual instruments, channel settings, volume, and panning. The movements you record (recording your automation movements) are referred to as automation curves. The automation movements you record will be represented by a correlated readout in the FL Studio Playlist. You can record these automation curves with your mouse, a MIDI controller, or by manipulating shapes and lines on the FL Studio Playlist. Drawing or painting in points, lines, curves and shapes affects your mix as soon as you implant your drawing; it doesn't need to be recorded as a performance. These are referred to as automation clips. The shapes and lines will correlate with certain parameters. You can also see the parameters you are affecting within the FL Studio browser. You may also right-click on a volume or panning knob next to every channel in the step sequencer and click on the **Edit** events for pattern automation.

Recording automation is truly the icing on the cake; the suspenseful high pass and low pass filters are crucial tools for dance and electronic music of all types. It allows you to manipulate your sounds inside your spatial field, and can make your track more human and distinct. It is loved by many users because it allows you to use physical controls. Again, we will mention MIDI controllers. Today, MIDI controllers designed to control automation include turntables, touchpads, knobs, sliders, and buttons. The mixer slots and sliders you work with in FL Studio can all be mapped to a MIDI controller. It allows you to feel more connected to the mix because you can manipulate and play with parameters on the fly instead of drawing them statically. You may also map multiple knobs or controls by using the **Multilink to controllers** function discussed the *Working with MIDI controllers and MIDI pads* recipe in *Chapter 4*, *Building Your Song*. All of the steps mentioned here can be performed with a mouse or a MIDI controller's physical knobs, buttons, and sliders. Automation can also serve as an on/off button, totally silencing or disabling a control, then turning it back on like a light switch.

# Using automation for virtual instruments and effects

The basic knobs, sliders, buttons, and parameters equipped for automation include the step sequencer's panning and volume, all channel settings, and the FL Studio Mixer. We will illustrate a fundamental example on the **Channel panning** knob, which can be found directly next to each channel.

## Getting ready

The steps that need to be performed to record automation are similar to the steps used before recording audio. However, in this case, we will be recording mouse movements as we click-and-drag a knob. If we wanted to use a physical MIDI control like a knob or slider, we can right-click on the function to be automated, select **Link to controller**, and then move the knob or fader you want to assign. This was reviewed in the *Working with MIDI controllers and MIDI pads* recipe in *Chapter 4*, *Building Your Song*. However, some third-party VST plugins don't allow that exact method, but there is a workaround. In cases where your plugin does not show any options after right-clicking on a parameter you wish to assign to a physical control, you can do the following:

1. Click on your **Plugin options** drop-down box (the upper-left-hand corner triangle of your plugin window).
2. Select the **Browse parameter** option and then right-click on the parameter you want to automate, which will be populated in the **Browser** window.

3. You will then be able to select **Link to controller**. You can also click on plugin knobs and the pertinent parameter will be automatically focused on the **Browser** window.

Moreover, you may also simply click-and-drag a parameter you want to assign by going to the FL Studio **TOOLS** main menu, hovering on **Last tweaked**, and selecting **Link to controller...**.

## How to do it...

Let's commence recording automation with the **Channel panning** knob using the following steps:

1. Highlight a section on the playlist. We have selected four measures as shown in the following screenshot:


Fig 10.1

2. Click on the record button on the transport controls on the main FL Studio window and then select **Automation & Score**, as shown the following screenshot:

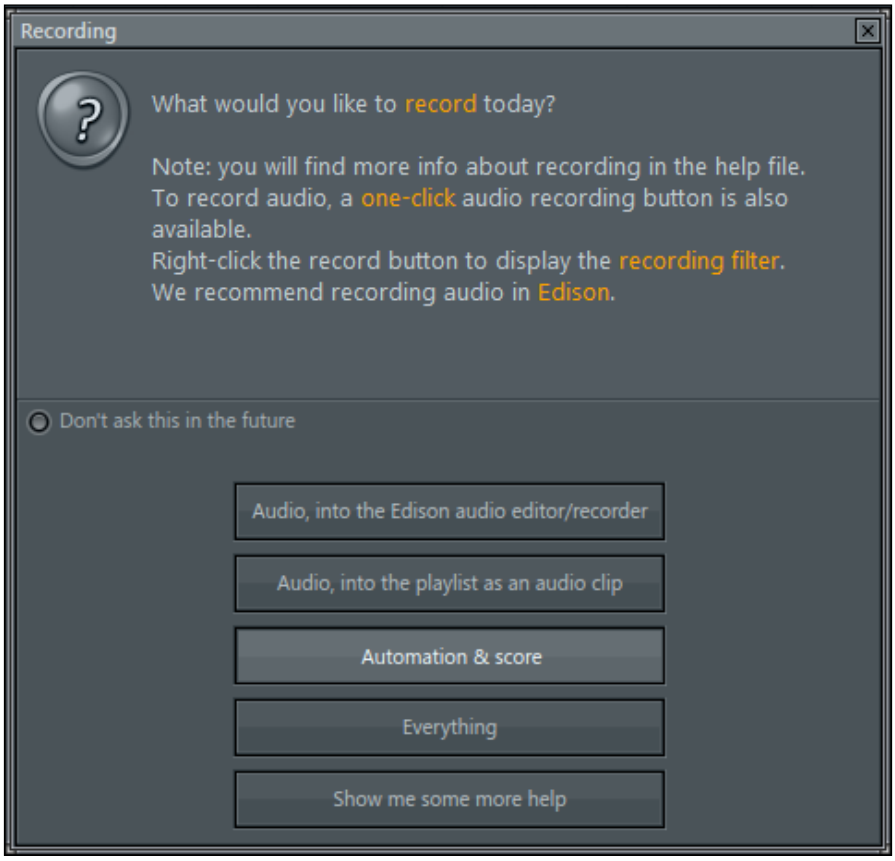


Fig 10.2

3. Press the Space bar to begin recording. During your song's playback, adjust the **Channel panning** knob by clicking-and-dragging. In Fig *10.3*, note that the **Time** panel at the top of the window is a little bit past bar 4 (**4:10:014**). At that particular moment in time, we have the panning knob pulled to the right. In this example, when the automation recording started, we began at the far left and then slowly moved the knob all the way to the right for a sweeping type of effect—from the left, up to the center position, and finally turning to the right. Remember, this example is a four-measure recording example. Have a look at the following screenshot:

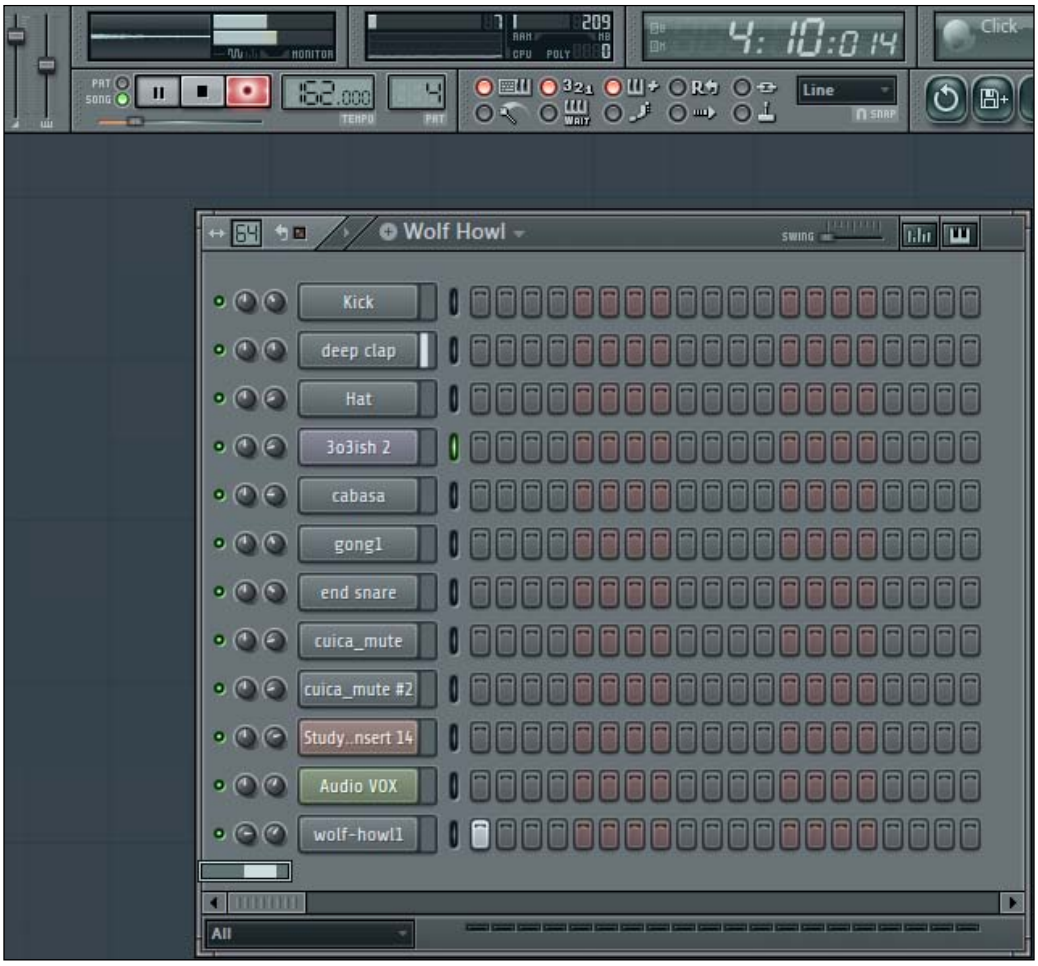


Fig 10.3

4. Our recording will end based on our selection in the playlist. You may now look at the playlist to see the automation curve you made with your mouse on the **Channel panning** knob, as shown in the following screenshot. You can see that the graphical representation shows the gradual turn from left to right we did with our mouse. When you play your song back, the **Channel panning** knob next to the **wolf-howl1** channel will be moving from the left to right like a ghost! This is playing back the exact movements we made during our automation performance.


Fig 10.4

5. Double-clicking on the **Wolf Howl** automation clip on the playlist will bring up the **Event Editor** menu. You may also click on the small box next to **Wolf Howl** and select **Edit pattern** to bring up the **Event Editor** menu. The **Event Editor** menu will enable you to edit your automation movement as per the following screenshot:

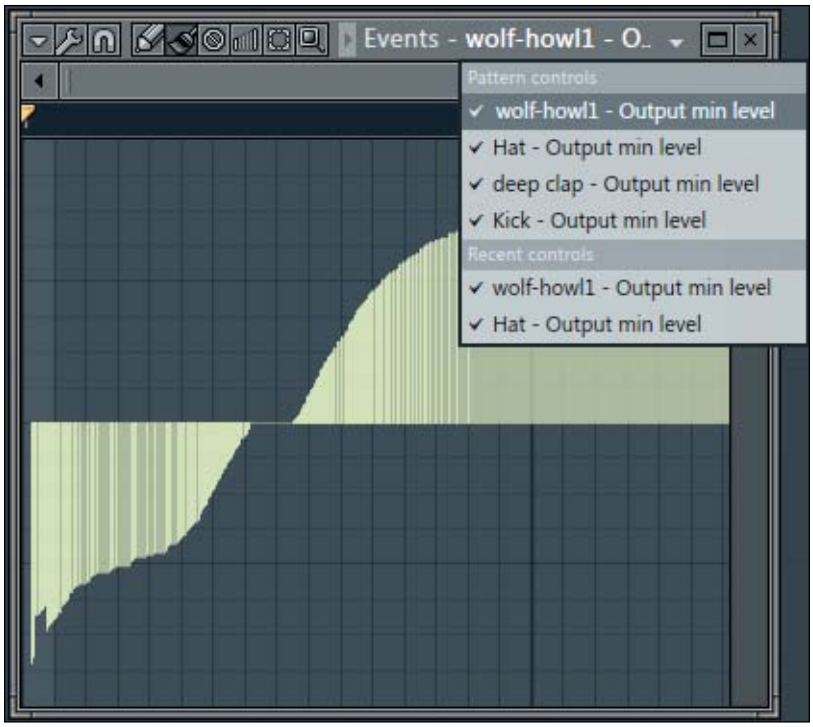


Fig 10.5

6. While **Event Editor** is open, we may also use the options in the drop-down menu as per the preceding screenshot and choose different automation pattern controls.

## How it works...

In this example, we clicked-and-dragged our performance parameters with our mouse. You could very well have used a physical knob on a MIDI controller. It all depends on your individual preference. These parameters can also be mapped to a MIDI controller for greater control and for live performances. Be sure to review the **Multilink to controllers** function in the *Working with MIDI controllers and MIDI pads* recipe in *Chapter 4*, *Building Your Song*.

Also, we don't necessarily have to highlight a section in the playlist. We can simply record the automation and then turn any knob we want while the song is playing. While doing this, you can tweak multiple knobs during automation recording and all of the song's information will be saved and played back. The opportunity for creativity is boundless.

The same exact principles hold true with the knobs and parameters on virtual instruments and virtual effects. In a typical scenario, we would have recorded our harmony of the instrument on the Piano roll, though you could simultaneously use automation and note performance. The automation ability adds icing to the cake. We can tweak as many knobs as we want on any type of plugin. The same holds true for all effect plugins in the FL Studio Mixer effect chain. In the screen depicted in the following screenshot, we could use our mouse or MIDI controller knob/slider on the **VCF**, **TUNE**, and **VOLUME** controls in the lower-left-hand side of the **TAL U-NO-60** virtual instrument plugin. As mentioned earlier, some third-party plugins require you to select **Browse parameters** (the dropdown on the upper-left-hand corner) and then right-click on a parameter in **Browser**. This is true for the **TAL U-NO-60** plugin, as shown in the following screenshot:


Fig 10.6

## See also

- The *Building your digital audio workstation* recipe in *Chapter 1*, *Configuring FL Studio*
- The *Working with Browser* recipe in *Chapter 2*, *Using Browser*
- The *Working with MIDI controllers and MIDI pads* recipe in *Chapter 4*, *Building Your Song*
- The *Viewing the playlist* recipe in *Chapter 5*, *Using the Playlist*
- The *Adding effects and your effect chain* recipe in *Chapter 6*, *Using the FL Studio Mixer and Recording Audio*

# Creating an automation clip

Automation clips are a great way of controlling synthesizer parameters (your software virtual plugin). For example, the pulsation virtual synth has elements such as chorus knobs, delay, distortion, filters, envelopes, LFOs, pulses, and so on.

Specifying shapes, curves, tensions, and drawings of automation clips enables powerful audio manipulation. We are able to have various automation clips, which are like directions for your plugin parameters. Generally, a 0 percent value is the minimum value of the clip and 100 percent is the maximum.

The previous recipe showed how to use automation with a knob or a physical MIDI device. This recipe is based on drawing inside automation clips and on your **Snap to grid** setting in the playlist. Automation clips help you specify precise values of parameters. Automation clips are also a way to automate the tempo of your project.

## Getting ready

You may have any virtual instrument or effect open. We will be working with the software synthesizer pulsation in this example.

## How to do it...

Let's take a look at the various ways to instruct FL Studio to create automation clips, using the following steps:

1. By default, the automation clip spans the entire project. Select and highlight a specific length in the playlist if you only want a range. Right-click on a parameter you want to use automation on and select **Create automation clip**.

This method will work for native plugins (plugins that are manufactured/made by FL Studio). For third-party plugins, you may simply tweak the knob you want to create a clip for, go to the main **Tools** menu in FL Studio, hover your mouse on **Last tweaked**, and select **Create automation clip**. You may also use the triangle drop-down box on the left-hand corner of third-party plugins. You will then select **Browse parameters** and FL Studio will automatically open **Browser**. Click on any knob in your given plugin and FL Studio will lend a helping hand by highlighting the correct browser parameter. You can then right-click on it and select **Create automation clip**.

2. Your clip(s) will now exist on the playlist and as a new channel on the step sequencer, as shown in the following screenshot:

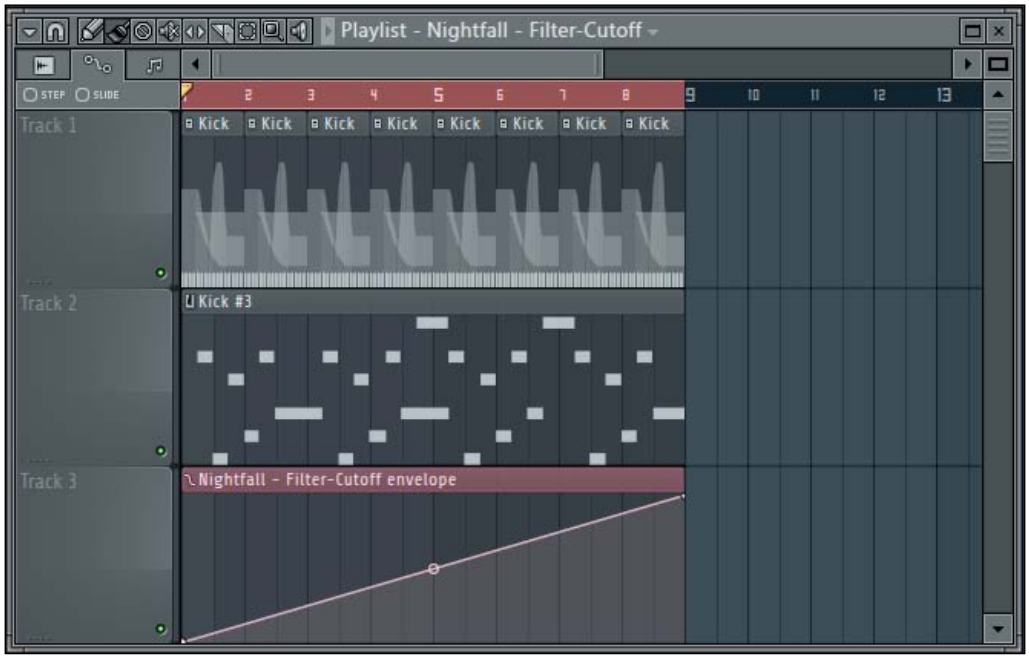


Fig 10.7

You can move the automation clips forward or backward in the playlist and they can automate other patterns during any part of your song. You may also copy and paste them anywhere in the playlist.

3. In the screen depicted in the preceding screenshot, we selected eight measures, and then automation clip titled **Nightfall – Filter-Cutoff envelope** appeared. The default automation shape is a straight diagonal line, as shown in *Fig 10.7*, with two automation points on the either end and a tension knob in the middle. The point to the far-left bottom corner represents 0 percent. The top-right corner represents 100 percent, and is controlling the filter **CUTOFF** section of the pulsation parameter knob, as shown in the following screenshot:


Fig 10.8

Increase or shorten the length of your automation clip by hovering your mouse over its headers to the rightmost side until your mouse becomes a horizontal arrow.

In default mode, right-clicking on the automation line makes a new point and a regular click lets you drag points. Click-and-drag up and down on the middle tension knob to adjust the curve or shape of your line.

4. Right-click on a rightmost point to bring up default options for the shape of your waveform. Also, you can right-click on a point to delete it.

Bring up a default shape like a pulse or wave sign, turning the tension (up and down) knob into a frequency adjuster.

5. When dealing with a single curve, right-clicking on the tension knob returns it to its default position. The single curve is where the tension can adjust the shape and ramping up or down of the automation value.

Look at the upper-left hand corner of your playlist in *Fig 10.7* that reads **STEP** and **SLIDE**. Click on the button to the left of the music note, which is the **Focus: automation clips** function on the FL Studio Playlist. With the **STEP** button enabled, you can now click-and-drag points on your automation line. In step mode, right-clicking and dragging the points will delete them. Turning off step and selecting slide will allow you to drag (slide) a point and all points to the right of it. Both the step and slide functions are locked to the **Snap to grid** setting, so you can hold down *Alt* and click-and-drag to create automation curves irrespective of the grid.

6. Double-click on the automation clip in the playlist to bring up its **Channel settings**, as shown in the following screenshot:


Fig 10.9

7. The **MIN** and **MAX** values in the **Channel settings** shown in the preceding screenshot are the values inside of the automation clip from bottom to top (defaults from 0 percent minimum to 100 percent maximum). If you find a specific range you want to focus on while tweaking a knob, you can specify the range with the **MIN** and **MAX** values. For example, you can set **MAX** to 50 percent instead of the default 100 percent, making your automation clip governed by and locked to that range. This way, you can find where the automation curve sounds best and focus around that so your movements or drawings have more effect and more control.

The volume and panning knobs next to the automation clip channel in the step sequencer no longer function as volume and panning; they are now the minimum and maximum value ranges of your clip.

8. Engage the **LFO** orange box in the **Channel settings** window to oscillate your given automation parameter. LFOs are generally used to modulate the value of a parameter repeatedly. Make sure you look at the playlist and your automation clip as you adjust your LFO values; it is very cool to visually see what happens to your waveform as you adjust the LFO knobs.

Engaging the LFO switch does not get rid of the main automation you previously drew in the automation clip, even though the original drawing will be invisible. It will be combined and multiplied with the LFO parameters when the **Multiply** switch is turned on. This means the LFO will provide amplitude modulation for the original automation. When the **Multiply** switch is turned off, the original automation and LFO parameters will be added together. Note that you can right-click on any of the LFO parameters and create an automation clip!

9. In order to have a separate parameter or knob move in the exact same manner as your original automation curve, right-click on any parameter you desire and select **Link to controller**. This brings up the **Remote control settings** window. Open the drop-down box under the **Internal controller** section and select your original clip parameter; then click on **Accept**. These actions are shown in the following screenshot:


Fig 10.10

The **Automation clips** drop-down list will be populated in chronological order of when you made them an instance in FL Studio. Use the **Mapping formula triangle** drop-down to bring up default curves and options; in this manner, you can adjust the linked parameter to something slightly different. You can see the shape of any default curve selected in the graphical display next to **Input**. You may also type in equations in the **Input** text field. Engage **Smoothing** (left-hand side corner in the screen depicted in the preceding screenshot) when your automation has really sharp movements that may be clipping or approaching clipping.

## How it works...

Using automation clips is an extremely powerful tool because it enables you to precisely specify the parameters you want to affect and to what degree. Your creativity can definitely be taken to the next level when harnessing the power of automation clips. Using the **LFO** section in the **Automation clips** under **Channel settings** is also very powerful, and an example of how an LFO can potentially look is shown in the following screenshot:


Fig 10.11

Generally, the most common uses for LFOs include the quiver and pulse types of effects. With regard to general automation clips, any parameter you believe will add a craftiness and creative angle to your mix can be automated. Other parameters can mimic the exact motion of your clips, as reviewed with the **Link to controller** function.

## There's more...

Sometimes, a third-party plugin will not show all the adjustable parameters on its plugin graphical interface. In these cases, use the **Browse parameters** function and scroll all the way down past the main parameter listing. You will then find the **MIDI CC** parameters, which include sustain, expression pedals, modulation wheel, and a plethora of other options. You can then right-click on a parameter to create an automation clip. For example, a sustain pedal can help in cases where you are using a piano sound on a virtual instrument.

Click on any area at the top of the FL Studio Playlist to specify clip sources you want to paste into the playlist. You can also right-click on the top of the playlist header to bring up **PROJECT PICKER**.

## See also

- The *Exploring Channel settings* recipe in *Chapter 3*, *Working with Step Sequencer and Channels*
- The *Working with MIDI controllers and MIDI pads* recipe in *Chapter 4*, *Building Your Song*
- The *Viewing the Playlist* recipe in *Chapter 5*, *Using the Playlist*
- The *Adding effects and your effect chain* recipe in *Chapter 6*, *Using the FL Studio Mixer and Recording Audio*