As you’ve no doubt noticed, Logic comes with over 1500 pages of documentation. There is no possible way that we could have included visual walk-throughs for all those functions! Hopefully, the previous 12 chapters have given you a solid grounding in the basics and you’re ready to make music using Logic. We did, however, want to leave you with at least a brief look at some of Logic’s more advanced capabilities. These are covered in more detail in the user manuals and in Logic Pro 7 Power! (2004, Course Technology).

In this chapter, you will explore:

- Folder tracks
- Track automation
- The Environment window
- The Transform window
- Using Logic as a ReWire master
- The Project Manager
- Video in Logic
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Folder Tracks

Folder tracks are unique in that they contain other tracks. You can cut and move and loop Folder track regions just like any region on any other track. All the tracks contained in the folder will be affected accordingly.

Folder tracks can be used as organizational tools; for example, you could keep all your drum tracks in a “Drum” folder so that they are kept together and don’t take up space on your main Arrange window. You can also use them as creative tools, by putting a number of regions that you want to act as a single region inside a Folder track. You can also use them to create “arrangements inside arrangements,” since each Folder track opens up to its own Arrange window.

Here is a basic overview of how to use Folder tracks.

Packing a Folder

In order to fill a Folder track, you need to “pack” it.

1. Select the regions you want to pack in the folder in the Arrange window.
2. Go to Region > Folder > Pack Folder.

Key Command Alert: Pack Folder

You can pack a folder by pressing COMMAND + F once you have selected the regions to pack.
The Folder track is automatically created in the Arrange window.

Double-click the Folder region to open the folder in its own Arrange window. Only the tracks in the folder will be displayed in this Arrange window.

Opening and Closing Folder Tracks
You can double-click a Folder track to open an Arrange window with the folder’s contents. To exit back to your main Arrange window, just double-click any empty area of the folder’s Arrange.
Unpacking a Folder

Unfortunately, taking tracks out of a folder isn’t quite as easy as dragging and dropping, unless you have two Arrange windows open. You’ll need to unpack the folder.

1. To place the Folder tracks back where they originally came from, select the Folder region and go to Region > Folder > Unpack Folder (Use Existing Tracks).

2. You will see the regions back where they originally were, and the Folder track will be empty.

The Pitfalls of Unpacking

Unfortunately, Logic has always been a bit finicky when it comes to unpacking folders. While the above should, and usually does, work this way, you might experience problems. Forewarned is forearmed....
Track Automation

One of Logic’s advanced mixing features is its track-based automation. Put simply, you can configure nearly every parameter on Logic’s channel strips, as well as in effects and software synthesizers, to change automatically over time. This automatic change over time is called automation. Logic offers a comprehensive set of tools and functions to automate nearly every parameter on each track. A comprehensive look at Logic’s automation capabilities is beyond the scope of this book, but here’s a quick run through of how to automate a parameter.

1 Select one of the Automation modes, either on the Arrange track or in the track’s Channel Strip.
Ch 13 Logic’s Automation Modes

Logic offers six automation modes. While we don’t have enough room to go into detail about them in this book, we did want to give you at least an overview of the modes:

- **Off**: This mode turns off automation for the track, even if there are automation events on the track.
- **Read**: In Read mode, a track will play back automation data, but you cannot record automation data.
- **Touch**: This mode will write automation data every time you click-drag (“touch”) an automatable control. When you release the control, it will revert to its original value.
- **Latch**: Latch mode operates exactly like Touch mode with one exception: When you release the control, the value stays at its current position and does not revert to its original value.
- **Write**: When you use Write mode, all existing data on every control you automate will be overwritten (deleted). This is used mostly for erasing data. You will not use Write mode very often.
- **MIDI**: MIDI mode doesn’t actually write Track Automation at all—it writes Hyper Draw, or Region-Based Automation, which was discussed in Chapter 9. This is mostly useful when working with MIDI tracks.

For more information about these automation modes, please see the Logic Express or Logic Pro documentation, or of course Logic Pro 7 Power (2004, Course Technology).

2 Press Play and, as you adjust parameters that can be automated—in this case, volume—you will see the automation being written to your track.
The Environment Window

The Environment window is arguably the deepest window in Logic, and it’s perhaps the reason Logic earned a reputation for being extremely complicated. The Environment is a virtual representation of your studio. It consists of all the channel strips, MIDI devices, MIDI processors, sequencer inputs, and so on that determine how the various elements in Logic interact with each other. You can use the Environment window to route objects to objects that process MIDI in either simple or complex ways, to create virtual representations of MIDI hardware and adjust them in real time…the possibilities are nearly endless!

If you think about it, every sequencer has an “Environment”—it’s just normally hidden from view and fixed so that users can’t configure it themselves. Logic gives you access to all of it, much like an automobile with a see-through hood. If you don’t know anything about cars, looking under the hood can be daunting. If you are an auto enthusiast, or you are fascinated by mechanics, however, it is a dream come true. It is the same with the Environment window; if you like to play with MIDI objects and processes at a fundamental level, no other sequencer allows you the flexibility and power of Logic. But if you’d rather not have to deal with it, you’ll want to avoid the Environment.

Of course, that is one of the nice things about the Environment—if you don’t want to use it, you don’t have to!
Just as a teaser of the sorts of routings you can create in the Environment, here is an example of how to cable the Environment’s Arpeggiator object to one of Logic’s synthesizers.

1. Create an Audio Instrument Track in the Arrange window.

2. CTRL + double-click on the Arrange track to open the Environment window with your instrument selected.
Go to New > Arpeggiator. This will create the Arpeggiator object and place it in the Environment.

Click and hold on the Output triangle of the Arpeggiator, and drag over the Instrument object. You will see a white connection line once you are over the Instrument. Release the mouse button and the connection will be made!
The parameters for the Arpeggiator are set in the Parameter pane.

COMMAND + double-click the Arpeggiator object to add it to the Arrange window.
Return to the Arrange window and select the Arpeggiator track.

Press Play or Record and play on your MIDI controller. You will hear the input notes arpeggiated through the Instrument you cabled the Arpeggiator to!

The Environment Toolkit

If Logic’s Environment sounds exciting to you, in addition to your Logic 7 Reference manual and Logic Pro 7 Power!, you can download Len Sasso’s excellent (and free) Environment Toolkit PDF from http://www.swiftkick.com. It was written before Logic 7, but its tutorials and information are still applicable.

The Transform Window

The Transform window allows you to “transform” MIDI data in all sorts of complex ways. It is one of the more mathematically oriented windows in Logic, but also one of the most powerful. In a nutshell, you select a MIDI region, set up selection and operation criteria in the Transform window, and the Transform function will then select MIDI data based on your selection criteria and transform that data based on your operation criteria. Basically, if you want to be able to single out some MIDI data and have that data altered in some way, be it complex or simple, the Transform window allows you to do it.

To give you a short taste of the sorts of operations possible with the Transform window, we’re going to select MIDI notes within a range of pitches and randomize their velocity to create a more human feel.
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1. **Select a MIDI region** in the Arrange window.
2. **Go to Windows > Transform.**

3. **Make sure that Hide unused parameters** is unchecked so you can see all the available options.
4. **Under the Status column, select =** from the menu.
5 Select Note under the Status parameters.

6 Under the Pitch column, select Inside from the menu.

7 Set the range of notes in the High and Low fields.
8. Select **Random** under the **Vel** column from the **Operations on selected Events** menu.

9. Set the **High** and **Low** fields for the range within which you want the velocity to randomize.

10. Press the **Select and Operate** button to process the changes!
ReWire Support in Logic

ReWire is an audio application communication protocol created by Propellerheads, developer of some great music applications such as Reason, ReCycle, Rebirth, and so on. ReWire allows you to send MIDI and audio between two audio applications. One application is the ReWire master, and the other application is the ReWire slave. The ReWire master sends MIDI data to the ReWire slave, and the ReWire slave sends its audio data to the ReWire master.

Logic is capable of being a ReWire master, and it can communicate via ReWire to any application capable of being a ReWire slave. Logic’s ReWire handling is not the most intuitive, but here are the basics.

Creating a ReWire MIDI Connection

Logic’s MIDI ReWire support is complicated but flexible. It can be configured to not only send MIDI to the ReWire application, but to specific MIDI synths and devices inside the ReWire application. Here we are just going to walk through a basic MIDI hookup.

1 In the Environment, go to New > Internal > Rewire.
2 Name your new object, and select the Rewire instrument or application to route it to.

3 In the Arrange window, create a track with your new Rewire MIDI object.

Creating a ReWire Audio Connection

In Logic, all audio must stream into channel strips. This means that, while a Rewire MIDI object can stream MIDI to a ReWire application, that application must deliver its audio to an audio object. Luckily, Logic offers the Rewire audio object for just this purpose.

1 In the Environment, go to New > Audio Object.
In the Channel parameter, select Rewire > RW:XXXX, where XXXX is one of your Rewire application’s outputs or buses.

3 Name your Rewire object.

4 COMMAND + double-click on the Rewire object to add it to the Arrange window.
The Project Manager

When you start using Logic seriously, you’ll find that you will end up with tons of related files: Logic songs, projects, audio files, sampler instruments, samples, movies, and so on. All this can get tricky to keep track of, especially if you have a number of hard drives or huge sample libraries. Thankfully, Logic comes with an extremely powerful advanced media manager called the Project Manager. The Project Manager is capable of keeping track of every media file on all scanned drives so that you can instantly search and access any file you are looking for. It lets you leave comments, audition media, and create bookmarks to specific directories you use most often. Moreover, you can then add those files directly into your Logic project—either into the Audio window or straight into your Arrange window!

Again, a full exploration of the Project Manager requires far more space than is available to us here, but we’d like to run through how to browse through a Project Manager directory list and audition an audio file.
1. Go to Windows > Project Manager.

2. Go to Functions > Scan. Logic will scan all the files on your hard drive and any connected drives. Be prepared, this process can take a while if you have a lot of files!
Navigate to a file by opening the hierarchy of folders in the file type you wish to search.

Select an audio file and go to Functions > Start/stop preview to audition it.
Video in Logic

Considering that Apple Computer is the company that brings you iMovie and Final Cut Pro, I’m sure you won’t be surprised to know that Logic has many advanced video features! Both Logic Express and Logic Pro have a Global Track just for video (the Video Track), and Logic Pro has even more advanced video features such as Digital Video playback over FireWire, playback offset and sync adjustments, and so on. In this section, we will quickly walk you through how to add a video to the Video track and detect scene cuts on your video.

1. Open the Video Global Track.

2. With the Pencil tool, select and click at the point in the Video Track where you would like to insert the movie.
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3 Choose a movie file, and press the Open button.

4 Press Detect Cuts to scan for markers within the video to assist with aligning audio events to the video.

For More Information on These Topics and More

As mentioned at the beginning of this chapter, Logic is a huge topic. We’ve done our best to ensure that, by reading this book, you will be able to understand how Logic works and to start making music. But for more in-depth explanations, tutorials, tips, and tricks, we highly recommend Logic Pro 7 Power! (2004, Course Technology; ISBN 1592005411) written by one of this book’s co-authors, Orren Merton. It covers these topics and others in far greater detail.