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CHAPTER 4 CHOOSING AND USING MICROPHONES

Let's talk a bit about basic microphone types and what you should choose to get the best results for your songs in Cubase.

Microphones come primarily in three types:

MINI GB LESSON

Three Types of Microphones

- **Condenser Microphones**. These are the kind of microphones commonly used in recording, broadcast media, and similar uses. Condenser mics typically require power from the mixer or device they connect to in order to work.
- **Dynamic Microphones**. These are the kind of microphones one would typically use in a hand-held situation or on a microphone stand for a live performance.
- **Ribbon Microphones.** A ribbon mic is a type of dynamic microphone. It uses a thin aluminum, duraluminum, or nanofilm ribbon placed between the poles of a magnet to generate voltages by electromagnetic induction.

Professional-level microphones typically use an XLR connector cable. This cable has three prongs inside one end of the end, which connects to your mixer or audio device, and a three-hole connector on the other end, which connects to the microphone.

XLR Connector

Condenser Microphones

Condenser microphones work differently from dynamic microphones and are the preferred choice for serious audio recording. Condenser microphones are more sensitive and pick up a wider range of frequencies, allowing you to pick up more detail in your recordings and hear subtle nuances you might not otherwise capture with a dynamic microphone. With a condenser microphone, the sound enters into the diaphragm of the "capsule," which is made up of two plates. The two plates of the capacitor are made up of fixed and movable plates. One plate acts as a capacitor, and the vibrations from your voice or instrument produce changes in the distance between the capacitor's plates.

Condenser microphones can be *unidirectional*, meaning they are intended to pick up sound primarily from one side of the microphone. They can also be *bidirectional*, meaning they pickup from both sides, which is usually controlled by a switch on the microphone.

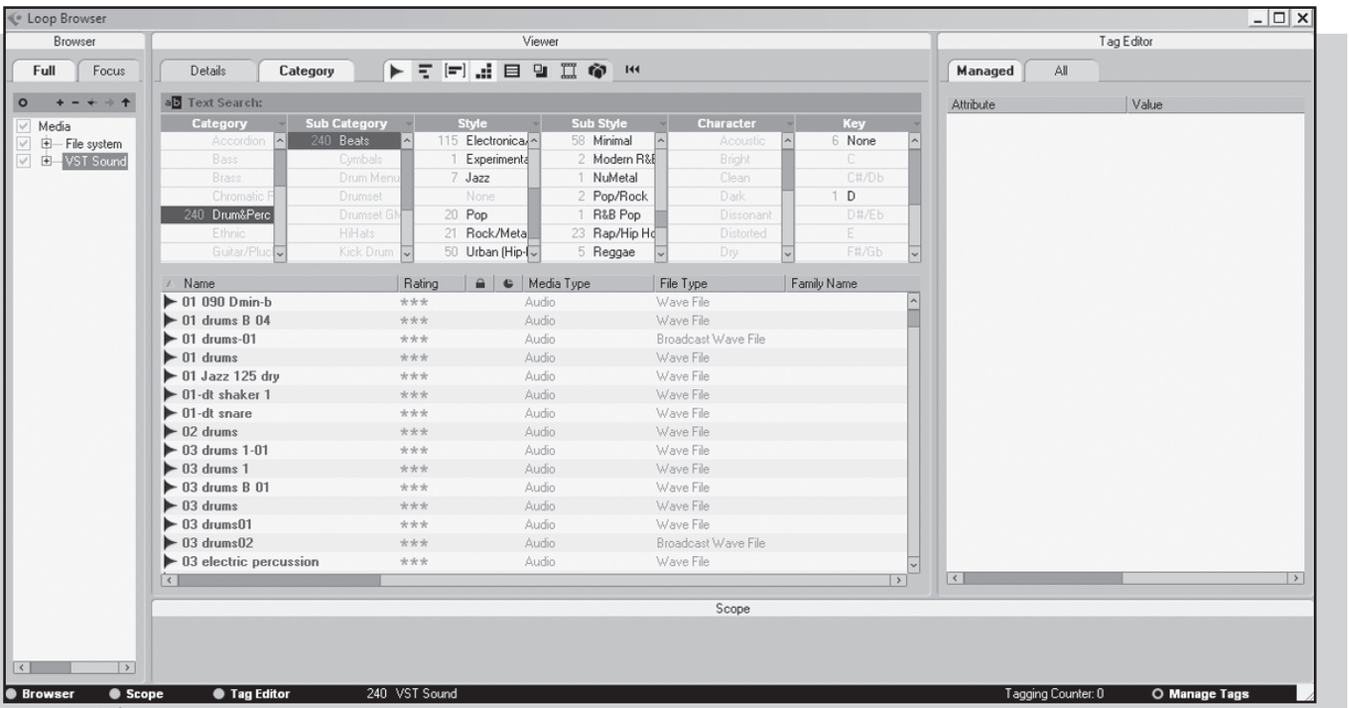
CHAPTER 6

WORKING WITH LOOPS

Now that we've talked about connecting your audio and MIDI devices, choosing a microphone and selecting your basic project settings in Cubase, it is time to make some music. We'll start by getting familiar with some basic loop handling.

Importing a Loop

There are a number of ways to use pre-recorded loops in Cubase. The easiest is to use some of the wonderful loops that Cubase ships with. You'll find these by opening the Loop Browser. You do this by clicking on the Media menu at the top of the screen then selecting Open Loop Browser from the drop down menu. I highly recommend reading the chapter in the manual regarding the loop browser, media bay and sound browser. But the quick overview is as follows.

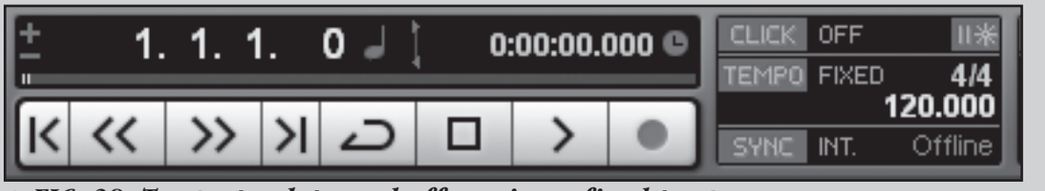


▲ *FIG. 24: Loop Browser*

CHAPTER 7 RECORDING AND EDITING AUDIO

When I start a new project, I always start by defining a tempo. Whether I am writing something from scratch or producing a typical Nashville recording session I like to have the tempo defined. Even if I decide to change it later, it is a good idea to define it as a starting point. Probably the easiest way to decide on a tempo is to turn on the click track by clicking the "Click" button on transport panel and pressing the spacebar. The default tempo for a new project is 120 beats per minute. While the transport is running, you can manually type in different tempo values in the tempo field on the Transport panel as long as the tempo track is turned off and the fixed tempo is engaged. You can toggle between these two settings by clicking on the "Tempo" button on the transport panel. The tempo track should be used if you plan on programming tempo changes and/or meter changes into your song. Otherwise the fixed tempo option is probably a better choice.

▲ *FIG. 27: Tempo Track engaged.*

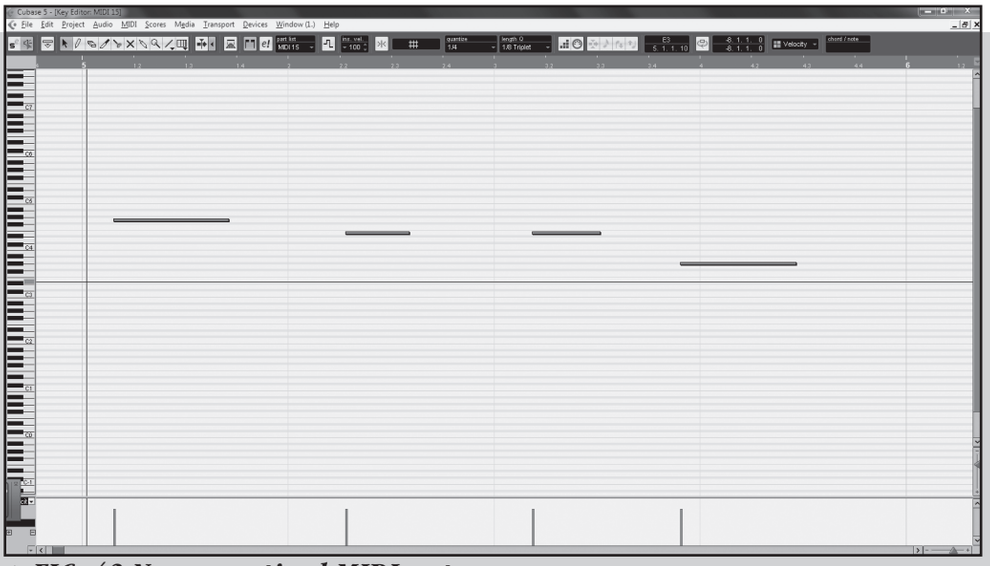


▲ *FIG. 28: Tempo track turned off – using a fixed tempo*

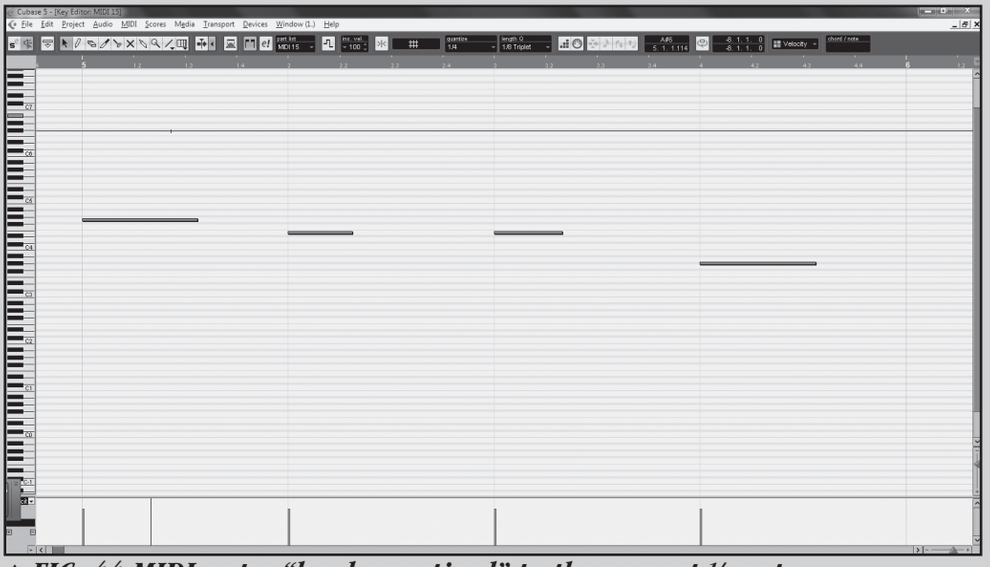
Next you should create as many audio tracks as you need for your recording session. If you only have a two-channel audio interface but you know you are going to be recording 4 guitar tracks and 4 vocals you may want to go ahead and create 8 mono audio tracks. You do this by right clicking in the Track List area of the project page and selecting "Add Audio Track" or by clicking on the "Project" button at the top of the screen and selecting "Add Track" then "Audio". Be sure to name the tracks before you begin recording so you don't end up with a bunch of files named "Audio 1, Audio 2" and so on.

The Iterative Strength setting

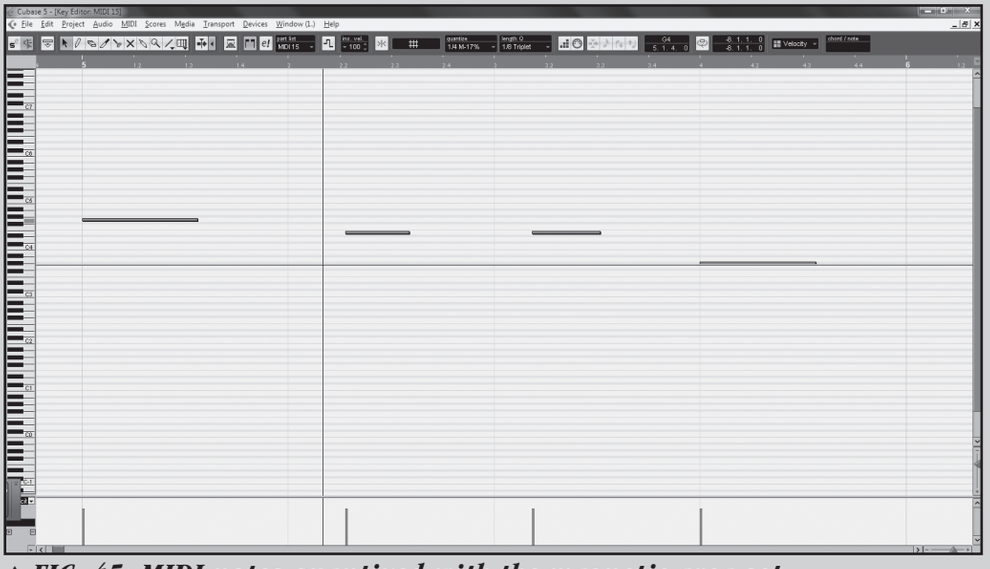
Here you specify how much the notes should be moved towards the grid when using the Iterative Quantize function.



▲ ***FIG. 43 Non-quantized MIDI notes***



▲ ***FIG. 44 MIDI notes "hard quantized" to the nearest ¼ note***



▲ ***FIG. 45: MIDI notes quantized with the magnetic area set to 17%. Notice that the middle 2 notes didn't move.***

Setting Up the Mixer

Now that your files are imported you'll need to layout your mixer so it makes sense to you. I always start with the drum tracks at the far left of the mixer and at the top of the project window. I put them in a logical order, followed by the rest of the rhythm section, then followed by the rest of the instruments and vocals. A typical mid-sized track list for a song might look like this.

QUICK GUIDE

Typical Mid-Sized Track List

- Kick Inside
- Kick Outside
- Snare Top
- Snare Bottom
- Hi Hat
- Tom 1
- Tom 2
- Floor Tom
- Overhead Hat
- Overhead Ride
- Room Hat
- Room Ride
- Loop L
- Loop R
- Tambourine
- Shaker
- Bass DI
- Bass Amp
- Acoustic Guitar 1
- Acoustic Guitar 2
- Electric Guitar Rhythm 1
- Electric Guitar Rhythm 2
- Electric Guitar Lead
- Electric Guitar Color Track
- Piano L
- Piano R
- Organ L
- Organ R
- Synth 1 L
- Synth 1 R
- Background Vocal 1 L
- Background Vocal 1 R
- Background Vocal 2 L
- Background Vocal 2 R
- Background Vocal 3 L
- Background Vocal 3 R
- Lead Vocal
- Lead Vocal Double