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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 GarageBand.

Microphones primarily come 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.

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.

XLR Connector
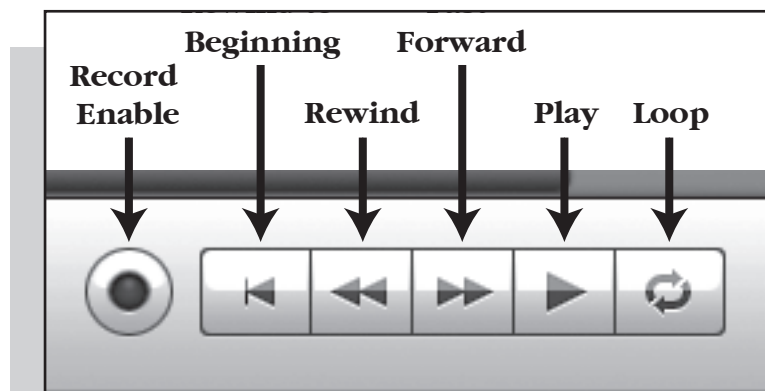
Recording Some Test MIDI Data

The first track in your GarageBand default project should still be the Grand Piano, not that the particular sound selected has any bearing on this test recording. Earlier, we went through testing your keyboard to make sure your MIDI data was triggering the sound when you pressed the keys. Unless you've changed some setting unaware, it should still be set right.

With your microphone input monitoring turned off, you're safe to turn up the speakers connected to your audio device if you wish to hear the piano sound through speakers. Otherwise, you can just continue using headphones.

Click on the track with the Grand Piano picture on it so it lights up, which shows it is selected. Play your keyboard, and you should hear the Grand Piano. Even without monitoring turned on, your keyboard should trigger the sound, as long as the track is highlighted.

To test that we're able to record a MIDI track, make sure the Grand Piano track is armed (record enabled), and then click the Big Round Record button in the bottom area of the screen, where you'll also see the play button, record button and other controls. This area is commonly referred to as the *transport*, a terminology held over from tape recorders of yesterday, where one pushes buttons to engage the play button, record buttons, fast forward and rewinding controls. This section should be familiar to anyone who has ever used a recording device like a cassette recorder or a digital recorder. Simply pressing the round Record button will cause the track to start recording. When you want to stop recording, hit the play button.

▲ *FIG. 19: This is the Transport Control section of GarageBand, visible on the bottom of the application. As you can see, it closely resembles a tape deck, CD player or other media player device with record, rewind to the beginning, rewind, fast-forward, play, and cycle (or loop) buttons.*

If you've enabled the Metronome during recording, you should be able to hear it click, just as it did with the audio track test. As the Metronome clicks away and you begin to play the keyboard, you should see little marks on the track. These marks indicate that data has been entered each time the key was struck on your keyboard. If so, congratulations, you're now recording MIDI!

CHAPTER 8 — WORKING WITH MIDI LOOPS IN GARAGEBAND

In addition to a great library of audio loops, GarageBand also comes with some awesome MIDI loops.

Click on the eyeball icon to open your Loop Browser again. Be sure to find the same genre as your drum loop so you're more likely to get a part that fits your song. This is important. If you try to use a Jazz loop in a country song, odds are pretty good it won't fit well. Select Guitars and Rock/Blues for now.

If you'll recall, the loops that are audio have blue boxes next to them to the left of the loop's name, and the ones that are MIDI are shown with green boxes next to them in the same place, allowing you to quickly tell what's what. We're going to work with the green ones now.

If you look at the tags to the right of the loop's name, you'll see key signatures. You can filter the list by key by clicking the word Key at the heading of the list of loop names. In fact, you can change or filter the order of the loops by key, tempo, or number of beats in the loop more simply by clicking the name of what you want to filter by. In this instance, filtering by key will help you pick a MIDI loop that is already in the same key of the song you're working on at the moment.

You can also choose a loop that is fairly close to the key of your song and change it, because with MIDI loops you have a lot more freedom to edit and change keys and tempo than you do with an audio loop or recording part.

Click on a loop that looks interesting to audition it. Keep doing that until you hear something cool that you think will fit with your song.

When you find one you like, just click, hold, and drag the part into the track area in GarageBand, and then click, hold and drag the loop in your song to the point where you want the loop to begin playing. You'll have to likely play the part a few times to drag it to just the right position.

Notice you will not see a waveform in the loop as you do with recorded audio loops. Why? Because MIDI is not audio—it is data that tells your computer which audio sound to play according to what instrument you tell it to be and according to how you've entered (i.e. played) the data into the song's track.

CHAPTER 13 | SHARE IT WITH THE WORLD!

Once you're done mixing your song and you're ready to take it to your adoring public, GarageBand makes it really simple to do so.

But let's hold up just a moment because you're not completely done yet. Do not jump the gun and release something onto the Internet, your Website, on CD, or anywhere else until you know it sounds great. Believe it or not, sometimes you'll make a mix that sounds great in your headphones or through your speakers, but when you mix it all down, sometimes something changes in it somehow when you hear it differently on another set of speakers. You need to listen to your mixes on a variety of speakers and systems—such as the car, your home stereo, and so on—before you go sharing them with the world. By checking your mixes in this way, you will find out whether you've done a good job with the mix.

As excited as you may be to get your latest masterpiece out there, it is all too easy to have the mix unbalanced, the bass louder than you thought, or too much reverb or other effects, and not notice it through your headphones or speakers. When you get the chance to hear your song in a different medium than GarageBand, you'll begin to hear things you'll want to go back and adjust in your mix. It may even sound different just listening to the final mixed version in iTunes, even though you're using the same speakers or headphones.

In the next section, you'll learn the steps in the Share process. After you take these steps and listen back to your song through various systems, you'll probably need to tweak your mix until it sounds great in every listening environment. This means you'll have to go through the Share process each time you tweak the mix until you get it just perfect.

Share and Share Alike

First, we'll get your songs into iTunes. At the top of the GarageBand screen, click on the word Share. There you have the options of sending your song's stereo mix directly to your iTunes application, exporting the mixed song to your hard drive, or burning it directly to a CD so you can listen to it in your car.

When you send your song to iTunes, you can then play it back in iTunes and listen to it on your Mac. You can add it to playlists, download it to your iPod, or burn it to a CD from iTunes. Songs are automatically sent to iTunes in AIFF format.
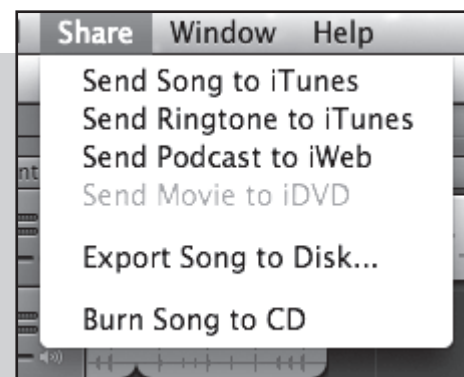
▲ *FIG. 42: The Share Menu gives you six different choices for how you wish to take the final mix from GarageBand to the world.*