

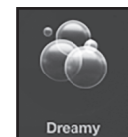
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Figure 1.27 GarageBand effects selection for audio tracks.

- **Small Room.** This adds reverb (echoes) to the recording, as you might experience when performing in a small room. Reverb often enhances the original recording. The Compression slider and Original Signal slider select how much of each is applied to the track. See the glossary for an explanation of compression—or just experiment with different values.
- **Large Room.** This adds a reverb as might be experienced in a larger room.
- **Dreamy.** This adds reverb and additional chorus/echo.
- **Telephone.** This removes low and high frequencies, permitting only middle frequencies to pass, as would be common if recording audio from an analog telephone.
- **Dry.** This applies no effects.
- **Bullhorn.** This adds some amplification and clipping distortion.
- **Chipmunk.** This raises the pitch by an interval that is sure to not match the song. However, there is a pitch slider, which may permit you to put it in a useful range. Unless you can get this in tune, it is best to use this effect only on speech.



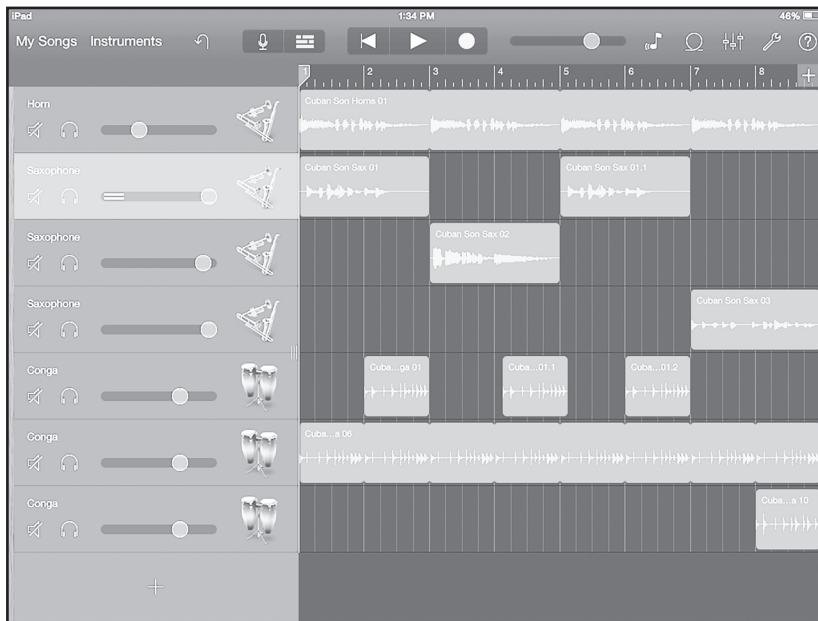


Figure 2.19 GarageBand Cuban Loops song example.

EDITING LOOPS

GarageBand will automatically repeat the loop from the point you dropped it into the song to the end of the section. If you want a loop to play only one time, tap it and then drag the loop icon at the end until the loop is the desired length. If you want this loop to play at a different time, you can drag it to the left or right until it aligns with the desired measure. (See the ruler at the top of the screen that shows measure numbers, shown in Figure 2.20.)



Figure 2.20 GarageBand ruler showing measures.

If you want a loop to play multiple times with rests between, the easiest way to accomplish this is to drag it from the Apple Loops into the same track again, shortening and positioning it as desired. Alternatively, you may copy and paste an existing loop in a track. To copy and paste a loop, tap it, select Copy from the menu that appears, move the playhead to the desired location in the track, tap in the track (to make certain nothing else is selected), and choose Paste from the menu that appears. If you paste a loop at the end of a track, into a space in which it won't fit, only the portion that will fit will be pasted.

If you wish to undo a copy/paste or move operation, tap the Undo button at the top of the screen (see Figure 2.21).

You can tap Undo multiple times to undo several operations. The Undo function is invaluable, so it's good to be thoroughly acquainted with it. The Undo button even has a special feature so that if you inadvertently undo something, you can tap and hold it, and a menu will appear permitting you to redo an operation (see Figure 2.22).

Figure 2.21
GarageBand
Undo button.

Practice with the Undo button until you have mastered it.

One last note about loops: sometimes, loops don't sound correct together when played at the same volume, but they do if one is made softer. To view a track's volume control, tap the gray area beneath the last track and slide right. There are also lines on the right middle of the tracks that can be used to slide open the track's volume controls. Adjust each track's volume as desired.

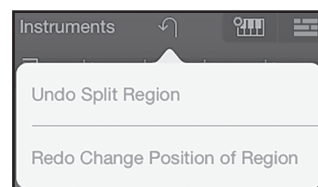
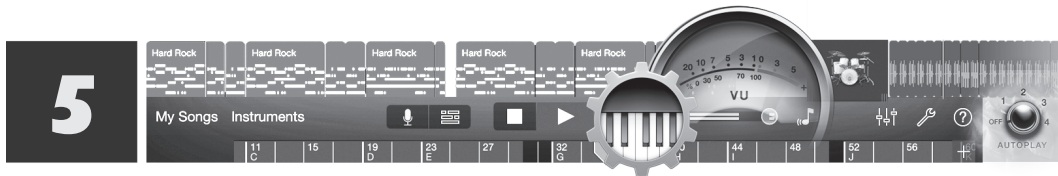


Figure 2.22 GarageBand Undo/Redo menu.



Chapter 5: Other GarageBand Operations

When you're composing a song, you need to set or check a number of options early in the process. The most important ones are the key signature, time signature, and tempo. Also, you often need to be able to turn the metronome on and off. The options to do all these tasks are found in the Settings menu. Tap the wrench tool at the top of the GarageBand toolbar to access the menu.

The Settings Menu

To turn the metronome on and off, move the slider to the left for off and to the right for on (see Figure 5.1).

The count-in is a measure of clicks that will sound before recording. The Count-In option is turned on and off in the same manner as the Metronome option.

The sound (Woodblock in Figure 5.1) is the sound that will be used for the metronome and count-in. By selecting the Sound submenu (see Figure 5.2), you can select other metronome sounds.

You can also select the Tempo, Key, and Time Signature options from the Settings menu. If you are uncertain about any of these options, they default to excellent values, but for slower or faster songs or for songs in different keys, the Settings menu will be useful. Each option produces its own submenu (see Figures 5.3 through 5.5).

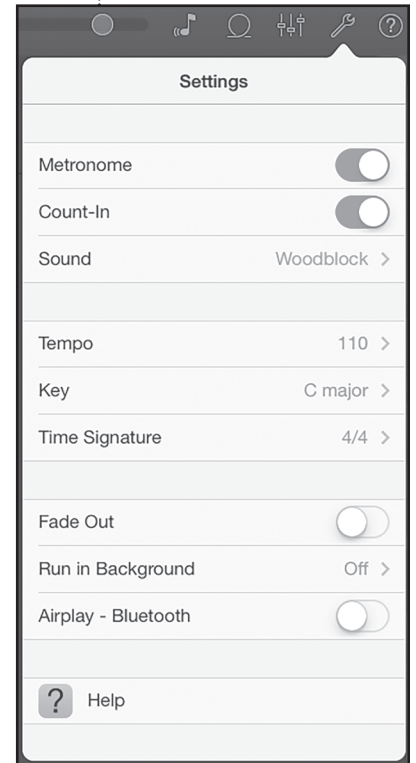


Figure 5.1 GarageBand Settings menu.

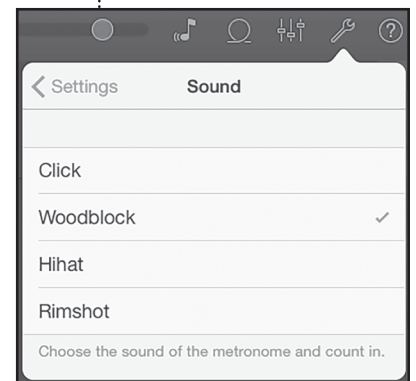


Figure 5.2 Sound submenu.

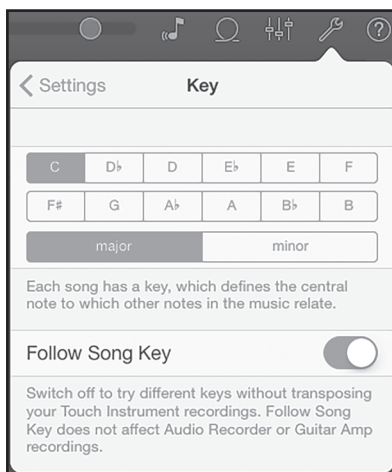


Figure 5.3 Key submenu.

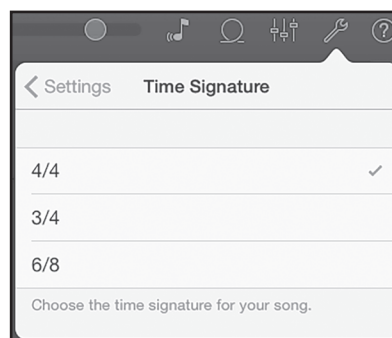


Figure 5.4 Time Signature submenu.

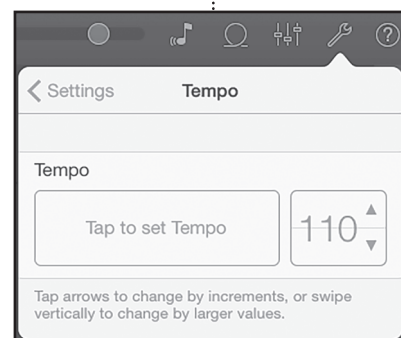


Figure 5.5 Tempo submenu.

MIDI Devices

MIDI technology has been included on keyboards and other electronic instruments since the 1980s. GarageBand on the iPad can play notes received through its MIDI input with any of its virtual instruments, and can record MIDI data in any of its songs.

Connecting Your MIDI Instrument to Your iOS Device

Many modern keyboards and drum machines have a USB MIDI output that allows you to plug them directly into the Camera Connection Kit. These MIDI USB devices, however, will only work if they use Apple's Core MIDI technology and if they don't require special software drivers.

If you have a keyboard or other MIDI device that does not have USB MIDI output, you can still use it with the iOS device if it has a MIDI Out port and can be used with a MIDI-to-USB interface like the one in Figure 10.3. In this case, the USB cable from the MIDI interface would plug into the Camera Connection Kit, and the MIDI In cable from the MIDI interface would plug into the keyboard's MIDI Out port. (The signals coming out of the keyboard go into the iOS device.)

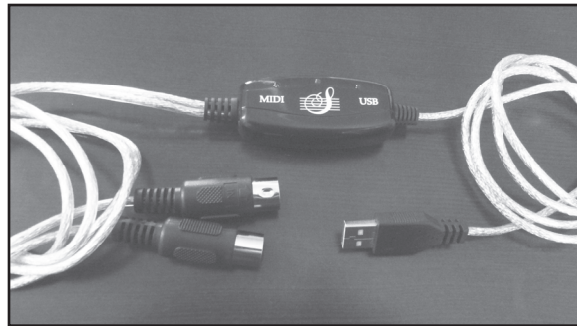


Figure 10.3 MIDI Interface

There is a second cable from the MIDI interface that would normally be used, but GarageBand for iOS cannot send MIDI signals to the keyboard, so you don't need to plug the MIDI Out cable from the MIDI interface into the keyboard's MIDI In port.

If you are using another recording program that can send MIDI signals to an external keyboard (and if your keyboard has sounds and is not just a controller), then you would plug the MIDI Out cable into the keyboard's input.

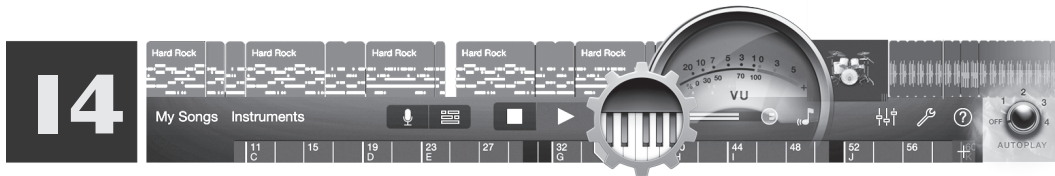
The MIDI keyboard shown in Figure 10.4 is a controller, so it also needs MIDI communications in the first direction (from keyboard to iOS). Figure 10.5 shows a pedal that plugs into the keyboard. Although, technically, this is external hardware for the keyboard rather than the iOS device, because it is critical to the operation of the keyboard, it is included here. Every MIDI keyboard should have a foot pedal to aid in performance.



Figure 10.4 MIDI Keyboard



Figure 10.5 Keyboard Pedal



Chapter 14: Inter-Application Communications

GarageBand for iOS has an extensive collection of instruments, including smart instruments that enable easy but impressive performance of musical materials. GarageBand also has a strong collection of effects (echo, reverb, and so on) that you can apply to various tracks. Even with all of that, wonderfully creative developers have written additional musical apps with features not found in GarageBand. Fortunately, starting with version 2, GarageBand supports inter-application communication, which permits third-party apps to seamlessly integrate with GarageBand.

Two classes of apps can use GarageBand's inter-application communications: instruments and effects.

Inter-Application Instruments

While Apple's Smart Drums do an outstanding job, many people enjoy performing with and recording the drum patterns that are available in programs like FunkBox. Because FunkBox supports inter-app communications, it can be used as an instrument input for a GarageBand inter-app communication track.

Here's how to do it:

1. Create an inter-app track in GarageBand for iOS. (Tap the + button at the bottom of the tracks and select an inter-app communication track (see Figure 14.1).
2. When the screen permitting you to select instruments or effects appears, click instruments and select FunkBox (or another instrument you would like to use as an input). The only instrument apps available on this screen are those that support inter-app communications (see Figure 14.2). If you don't see any icons, you may not have any compatible apps. A number of free apps are available, so a basic search should yield some choices for you. After you make this selection, you will notice a plug icon in the upper-left corner of the screen that lets you change the settings (select a different instrument app) if desired.
3. Switch to the desired app by tapping its icon in GarageBand.
4. Tap Record on that app's transport (in Figure 14.3, in the upper-left corner). Note that you will see a GarageBand icon by the transport that is not normally there, because inter-app communication is active.

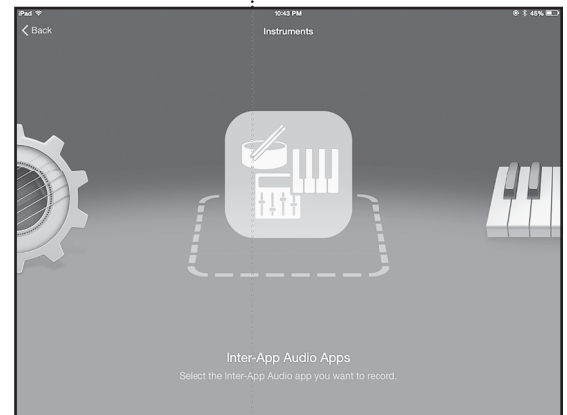


Figure 14.1 GarageBand instrument selection: Inter-App Audio Apps.



Figure 14.2 GarageBand inter-app communication: Instruments.

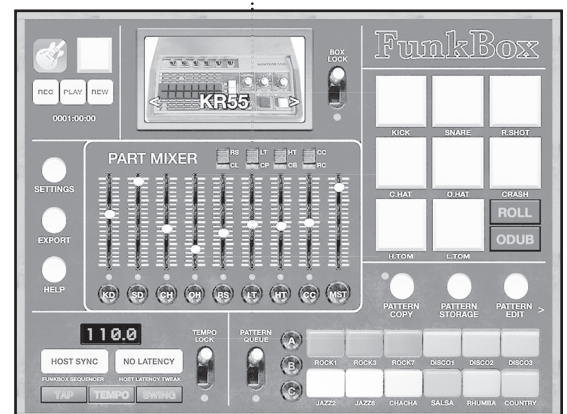


Figure 14.3 FunkBox drum machine.