This tutorial covers the basics behind GarageBand’s functionality and Digital Audio. It shows you how to get things up and running while learning some fundamentals of the digital recording process.

**Topics include:**

1. Creating a New Project
2. Creating a New Track
3. Working with Loops
4. Creating a Song with pre-recorded loops
5. Creating Custom drumbeats
6. How to Record Software Instruments
7. Editing Software Tracks
1. Creating a New Project

To create a new project, make sure the New Project tab is selected on the left menu column.

That gives you 7 options to choose from:

These are just some templates for particular types of music to get you started or you could select Empty Project and start from scratch.

Choosing a template doesn't lock you in to a particular style or project type. You're always free to add or delete any tracks you want regardless of which template you pick. These templates are just meant to be convenient starting points.

Empty Project creates a blank project.

Before starting you can specify your project settings by clicking the Details arrow on the bottom left. This changes the Time Signature, Key (minor or mayor), and Tempo
(you can use Tap Tempo by clicking the button to the beat of the song you want to create).

You can also select your **Audio Input and Output**.

Once you've specified your project's settings, just click **Choose** to create the project.

When you select it, you're asked to choose the **type of track** you're going to record.

In this case we'll work with **Software Instrument** (sounds from Mac), the principles for any kind of project are similar.
This is what your interface should look like.

You notice this creates our first track, *Classic Electric Piano*. (You can change your instrument by selecting a different one from the Library that appears on the left.)
And in this case it opens up the **Musical Typing window** because I currently don't have a real music keyboard connected to my Mac. By typing the keys shown here, I can play the corresponding notes through the default instrument, which again is this *Classic Electric Piano* right now.

Any time you want to add an instrument or sound to your recording, you have to first **create a new track** to hold the sound you're recording or bringing in.
2. Creating a New Track

You can create a new track by choosing new track.

Or pressing **Option + Command + N** on your keyboard.

Or by clicking the **new track button** up here. Either one of those options opens up this new track dialog box.

In here you have to decide whether it's going to be a
- **Softer instrument track**
- **One of two types of audio or real instrument tracks**
- **A drummer track**
**Software instrument tracks** are for recording sounds from a MIDI source. We'll be getting into this much more later, but MIDI stands for musical instrument digital interface.

Essentially, a software track is a track where you'll either be recording your performance on a MIDI piano keyboard, or some other MIDI instrument like drums.

MIDI performance is not actually a recording of sounds. It's a recording of data that tells GarageBand things like what notes were played, how long they were held, how hard they were hit, and so on.

With this data recorded, you can play back your performance with any of GarageBand's built-in software instruments.

*i.e. if you originally recorded a flute sound with just a few clicks you can change it to a saxophone, a guitar, or a piano.*

**Another advantage** of software instruments is you can easily fix wrong notes or add missing ones. But the main takeaway right now is that software instruments are virtual instruments.
An audio track on the other hand, is used when you want to record a real instrument. You create a real instrument track when you intend to sing or play into a microphone, or plug your instrument, an electric guitar for example into your Mac, or using your iPad and the GarageBand app as an analog keyboard.

The recording on a real instrument track is **not data, but actual audio**, so it's not as easy to fix wrong or missing notes. **GarageBand** does have some features that'll let you fix things like timing and intonation, but you don't get nearly the control you do with software instruments.

The real advantage of recording real instruments is that you get real instrument sounds. Now, some of the software instruments sound amazingly realistic, and they should because they were created with real instrument samples. But recording a real instrument track lets you capture the sound of your own personal instrument or voice.

The third type of track is a **drummer track**.

Drummer is a tool for adding realistic drum parts to your projects which you can highly customize to fit your song. Drummer parts change dynamically. So, it's much more advanced than dragging in pre-recorded drum loops, which can change to conform to the key and tempo of your song.
With a drummer track, you get fine grain control over the types of parts that are being played, down to which drums are being hit, which style of drummer is playing, and much more.

**Note that you can only have one drummer track per project.**

So, most of the time, you are going to be creating either software or audio tracks in your projects.

**QUICK REVIEW**

If we select *Software Instrument* and click *Create*, that creates a second software instrument track.

Create another *New Track*, this time select an *audio track*.

With that selected, as long as the details tab is toggled open, you can choose the input the microphone or audio input device is connected to.

You can also *check the box* on the right if you want to be able to *monitor your playback*. And below that clicking either of these arrows opens up the audio input output preferences. (You can always change settings later).
3. Working with Loops

GarageBand has nearly 2,000 loops included with it. So finding what you need can be daunting unless you know how to efficiently browse through your selections.

Clicking the letter O on your keyboard, or pressing the Loop button (selected in image) on the top right side of the interface to open the loop menu.

Choose the categories for the instrument/style you want to narrow down your loop search.

Click on the loops to play them and find the ones you like best.

You can also view them as list form in different categories by clicking the option below the search box.

TIP: You can favorite loops by checking the favorite check box on the right side of the loop menu next to the loop name.

BLUE TRACKS: Audio tracks
GREEN TRACKS: Software Instruments

When you find the loop that you want to use, just drag it from the loop browser right onto your timeline.

Notice that we have this area that says Drag Apple Loops here. You can just slide it up to the point in the project where you want it to start, and release your mouse.

This way, the proper type of track is automatically created. You are now making sure you're getting the exact sound of the instrument loop, instead of adding a loop to a different instrument (which you can eventually change – Explained later).
**QUICK REVIEW**

*Software Instrument tracks* (GREEN) are mini tracks that contain not *audio* files, but *data* files that tell *GarageBand* what notes to play, how loud to play them, and so on. (Recorded Data)

Because they consist of data, *software instrument tracks* can be easily edited note by note, and you can completely change the type of instrument playing those notes.

*Audio tracks* (BLUE), on the other hand, are for recording real instruments like electric guitars, wind instruments, vocals, and so on. (Recorded sound shown in wavelength)
4. CREATING A SONG with pre-recorded loops.

I. Create a New Empty Project

II. Open the loop menu and start by selecting the Drums. Once you found one you liked, drag and drop it on your timeline window.

III. If you want to loop your loop, place your cursor in the upper right portion of the loop region. With this cursor you can drag out the loop as long as you want it to be.

If I needed it to be longer or shorter you could just drag it out again, in either direction.

Make sure that you have Edit > Snap to Grid selected here if you want it to line up exactly to the beats.

You've got your drums lined up now. Let's move to the bass.

IV. Do the same thing as the drum selection, choose your loop and drag it to your timeline. Loop selection as much as you want. Now you've got a Drum track and a Bass track.

V. Now, you can sample other instruments while you play the loop automatically so that you don't have to constantly rewind and hit play. To do this click on the Cycle Region arrows and place the yellow bar over the region that plays both the drums and bass, then click play and select different loops/instruments on your loop menu. You'll start sampling other loops with the rhythm you have just created.
You can **change your loop settings.**

Click the **Library** button on the top left. This will open your settings/instruments options. You can select different effect patches for your loops.

*With real instruments* you run the existing recording through effects. *With software loops* you can change the instrument being played altogether.

One of the greatest advantages of working with loops is that you can change the tempo, the key and even the time signature of your song even after you've laid down several tracks.

You can **change the tempo** where it says **bpm**. (Faster or Slower)
You can also **change the key** (Tone).

You don’t want to stray very far to your original tempo or keytone so your song won’t sound artificial or weird.

**QUICK OVERVIEW OF TRACK OPTIONS**
TRACK

**Mute button**: Mutes single track.

**Solo button**: Plays only that track.

**Volume Slider**: Change track’s volume

**Left and Right**: Balances track sound on either side.
5. Creating custom drumbeats

You can customize your drum set for a particular style of song that you’re trying to create.

Open a New Empty Project at the Drummer option.

This is what your interface will look like now.

On the timeline you notice two different tracks: that is to start with two different beats.

If you want to copy and paste one, just hold the Command key and drag it elsewhere on the same track. You can also loop the drum beats.

On the bottom we’ve got different drummer profiles. Kyle is the default drummer, you can change beat styles, but you need to buy the GarageBand package.

Here you can use the different settings presented to change the sound of your beat.
You can move the Yellow dot around the square to change the sound from Soft to Loud, or Simple to Complex. On your left you change presets (usually a jumping off point), and on your right you can select the different parts of the drums that are being played, change its fills and swing, which essentially changes the beat.

Playing with this tool is the best way to understanding its functionality.

You can also select different drum kits on the Library that’s on your left. You could even change the drums to sound like a different instrument if you wanted to.

Again, it really depends on what you want and playing with the tools given will get you more experience and understanding of the different drum parts.
6. How to Record Software Instruments

You can use the musical typing keyboard that appears when you select to open a New Software Instrument track, or connect your own MIDI keyboard via USB which should be automatically recognized by the software.

**BEFORE YOUR START**

To help you keep time, GarageBand has a built-in metronome to click off beats for you. Whenever you create a New Project, the metronome is on by default as it is here. The metronome provides a click that falls on each beat to help you keep time.

You can also select this Count In option, which is also on by default. With Count In selected, GarageBand will count in a full measure before going into record mode. This gives you some time to get the feel of a song before you actually start playing.

When both of these options are on (Default) your interface should look like this.

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I. **Select an instrument from your Instrument Library on the left** (Remember you can always change it later).

II. To start Recording, **Click the red Record button**, or R on the keyboard.

You’ll hear the metronome at the beat you’ve selected, and you can now start playing with your On-screen keyboard or MIDI connected keyboard.
You can see here that I’ve
  • Recorded various tracks
  • Changed their respective volumes
  • Loop my recordings
  • Placed them where I wanted them to start playing.

**REMEMBER** My tracks are all green tracks because they are all Software Instrument tracks.
7. Editing Software Tracks

GarageBand lets you:
• Delete bad notes
• Move them around
• Stretch them out
• Fix their timing
• Insert new notes around them

The point of fixing stuff in GarageBand is so that you can quickly correct mistakes, so you spend less time trying to nail a part down, and more time crafting the entire song.

**TIP** You don't want to go overboard with perfecting your song. Being slightly out of time or a little off-key gives your song a definite human quality.

1. To start editing your tracks, select the one you want to work on first and open your Editing tool, which is located on the left top side of your interface (Scissors).

This window will open on the bottom of your screen interface.

You have your time bar on top, and notes the go up and down and a keyboard that describes each note is displayed on the left side.

In the effects section you can change the region or a couple notes.
• Strength
• Time

You can basically move your notes to leave them exactly where you want them to, and sound at the right time, or you can delete extra notes, or create new ones.
Just Select your track and then you can start working on them individually.