

# Arranging For Singers-B – GarageBand Final – Study Guide and Review

## 1. NAME THE THREE PLACES TO GET SOUND ON YOUR LAB COMPUTER:

Your object is to get sound from the program you are using to the sound output you want to use. On our Passage Lab computers, there are three places to get sound:

- Built-In Output – this is where the sound comes out of the computer’s built-in speakers.
- Built-In Headphones – this is where you plug in your headphones at the back of the computer, using a minijack plug.
- M-Box 2 – this is the audio/MIDI interface used for the ProTools program. It has a standard ¼-inch headphone jack

## 2. NAME THE THREE WAYS TO ACCESS SOUND ON YOUR LAB COMPUTER:

On the computer, there are several ways to access the sound:

- Through the **Sound Preference** in System Preferences
- Through the **Audio/MIDI Utility** in the Utilities Menu
- Through the **sound preferences in the program**

**FYI:** To get to the Sound Preference panel, you go to the Apple menu (farthest upper left on your screen) and choose System Preferences. From there, you will find Sound all the way to the right in the Hardware section. The Sound window will show you what sound choices you have – in our case, Built-In and M-Box 2. This is the overall system sound for the computer, and its volume control can be found on the right-hand side of the menu bar. The icon looks like a little speaker with sound waves. Mac people will probably be familiar with this; PC people maybe not so much. If the slider is all the way down, there will be no little sound waves, and it will be muted, so be sure and check that the volume is up there.

The Audio MIDI Setup utility can be found in Utilities, which is a folder inside the Applications folder. To find it, click on the Desktop to get to the Finder. From there, go to the Go menu, and choose Utilities – or, an easier way is to use the key command Shift-Command-U. Audio MIDI Setup gives more detail about what’s happening with sound, and it also lets you know what MIDI connections are active. You can choose from here which output you want to be active – Built-In Audio or M-Box 2.

Your individual audio program will also have its own sound preferences, so once you check the first two, if you still don't have sound you will need to go there. Every Mac program (or application) has a set of Preferences which let you decide how you want that application to work – on a PC they're often called Options. Not all audio applications keep the Audio/MIDI settings in Preferences – Finale gives it a menu item – but many do. GarageBand does, so you will go to the upper left where it says GarageBand in the menu, and under that you will see Preferences. There is also a Key Command to open Preferences, which is Command-Comma. In the Preferences window that opens up, choose Audio/MIDI. This will show you where GarageBand's inputs and outputs are set. Choose the one you want.

At this point you should have sound.

If you are playing the controller keyboard, and you're not getting sound, check that:

- The power plug in the back is plugged in
- The MIDI cable is plugged in – it should be in MIDI Out, and the other end should be plugged into the M-Box 2 into MIDI In.
- If these are all right, try turning the power on and off on the controller.

### 3. WHAT ARE THE DIFFERENCES BETWEEN MIDI AND AUDIO?

MIDI stands for Musical Instrument Digital Interface. A MIDI file is information about a musical performance on the computer – what notes are played, what sounds are used, the note values and velocity of the notes being played. It is a smaller file because it is only a set of directions and does not contain the sound itself.

An audio file is a digital recording of a sound performance. An audio file is a large file because it contains the complete sound data of what was recorded.

### 4. WHAT ARE THEY CALLED IN GARAGEBAND AND HOW ARE THEY USED?

In GarageBand, a MIDI track is called a Software Instrument track and it is green. You can choose any of the available sounds in GarageBand to assign to a Software Instrument track, and can change that sound at any time you wish. Apple Loops that are MIDI files are green.

In GarageBand, an audio track is called a Real Instrument track and it is blue. The sound on a Real Instrument track comes from whatever audio input is plugged into the computer – guitar, bass, microphone, etc. – and chosen as the sound source for that track. Apple Loops that are audio files are blue.

**FYI:** MIDI and audio can be compared to a recipe for a cake (MIDI) compared to the cake itself (audio). The recipe on a piece of paper may only weigh a few ounces, but a cake can weigh a pound or so. You can change the recipe (MIDI) – using pickles instead of strawberries, or using organ instead of piano, but once the cake is baked (audio), you can't separate the eggs from the flour, or the guitar track from the drums.

## 5. WHAT CAN YOU EDIT (CHANGE) ON A MIDI TRACK?

- You can change the software sound, add or delete notes, make them longer or shorter, louder or softer.
- You can record a performance into the track by playing it on a MIDI keyboard, or add notes one at a time manually.

## 6. WHAT CAN YOU EDIT (CHANGE) ON AN AUDIO TRACK?

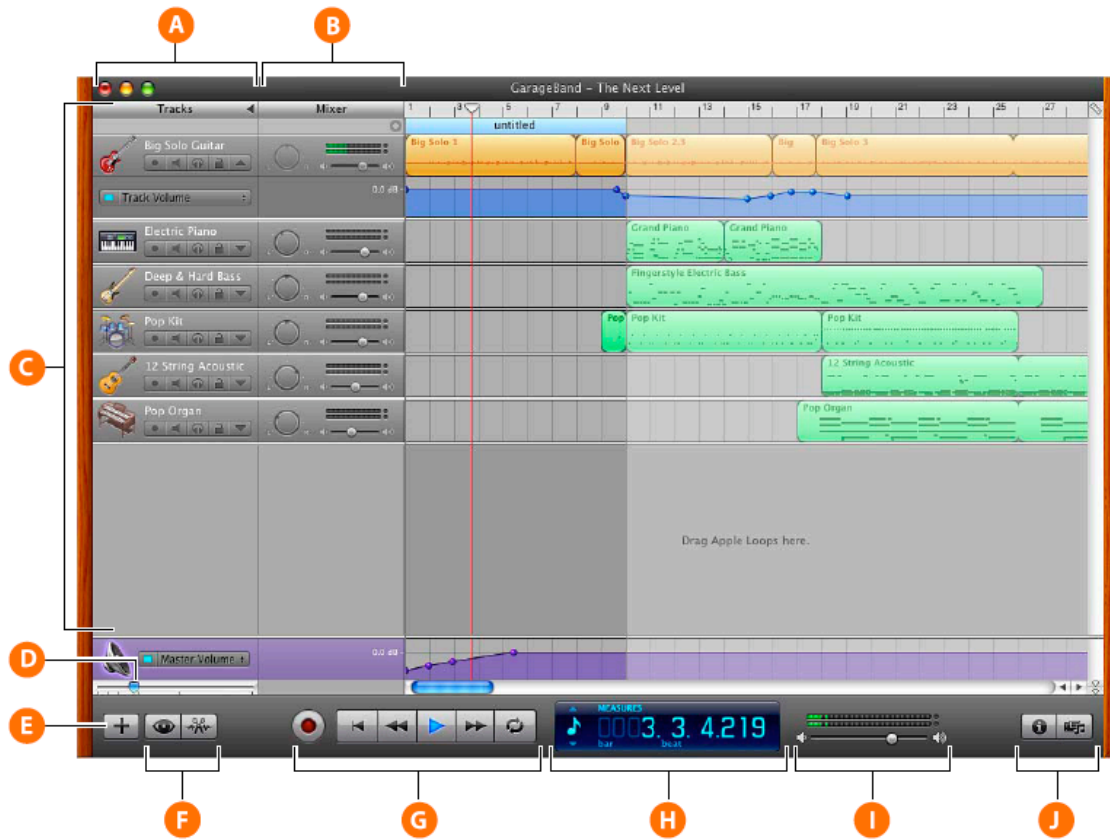
- You can change the audio input – the sound source that is being recorded, such as a mic input (mic XLR cord) or a line input (guitar, keyboard or bass cord).
- You can record a performance into the track by playing it on your instrument or recording with a microphone.

## 7. WHAT CAN YOU EDIT ON BOTH AUDIO AND MIDI

- You can drag a green (MIDI) Apple Loop into the Track Window, and use the loop the way it is or change it.
- You can change an audio file (Apple Loop or your recorded performance) by cutting, copying, pasting, and dragging.
- You can merge two or more sections by selecting them using command-J to join, or split one section by using command-T to split at the playhead.
- You can also add effects from the Info Window and automate those effects in the track.

## 8. IDENTIFY THE PARTS OF THE GARAGEBAND WINDOW, LETTERS A THRU J:

# GarageBand Window



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- A Track headers:** The instrument icon and name are shown at the left of each track's header. Click the name to type a new track name. Click the Record Enable button (with the red circle) to turn on the track for recording. Click the Mute button (with the speaker icon) to silence the track. Click the Solo button (with the headphone icon) to hear the track by itself. Click the Lock Track button (with the padlock icon) to lock the track. Click the triangle to show the track's automation curves.
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- B Track mixer:** Drag the pan dial to adjust the pan position of the track (the left-to-right placement in the stereo field). Drag the volume slider to adjust the track's volume. Watch the level meters to see the track's volume level as you record and play.
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- C Timeline:** Contains the tracks where you record Real and Software Instruments, add loops, and arrange regions. Also includes the beat ruler, which you use to move the playhead and align items in the timeline with beats and measures. See "Timeline" on page 11 for a description of the features and controls of the timeline.
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- D Zoom slider:** Drag the zoom slider to zoom in for a closer view of part of the timeline, or to zoom out to see more of the timeline.
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- E Add Track button: (+)** Click to add a track below the existing tracks in the timeline.
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- F Loop Browser and Editor buttons:** Click to open the loop browser or the editor.
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- G Transport controls:** Click the Record button to start recording. Click the Play button to start or stop the project playing. Click the Go To Beginning, Rewind, or Fast Forward buttons to move the playhead to different parts of the project. Click the Cycle button to turn the cycle region on or off.
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- H LCD:** The LCD has four modes: Time, Measures, Chord, and Project.  
In Time and Measures modes, the LCD shows the playhead's position in either absolute time (hours, minutes, seconds, fractions) or musical time (measures, beats, ticks). Drag or double-click the numerals to move the playhead.  
In Chord mode, you can see chord symbols when you play any Software Instrument. You can also use the built-in tuner to tune guitars and other Real Instruments connected to your computer.  
In Project mode, you can choose a different key and time signature for the project, and change the project tempo.
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- I Master volume slider and level meters:** Drag the volume slider to adjust the project's master volume level. Watch the level meters to see if clipping is occurring before you export a project.
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- J Track Info and Media Browser buttons:** Click to open the Track Info pane or the Media Browser.
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9. NAME THE TWO MOST COMMON UNCOMPRESSED AUDIO FILE FORMATS, WHAT IS THEIR SIZE PER MINUTE, AND WRITE THEIR EXTENSIONS:

- AIFF and WAV
- 10 MB per minute
- .aif and .wav

10. NAME THE TWO KINDS OF COMPRESSED FILE FORMATS THAT GARAGEBAND USES, WHAT IS THEIR SIZE PER MINUTE, AND WRITE THEIR EXTENSIONS.

- Mp3 and AAC
- 1 MB per minute
- .mp3 and .m4a

THIS WILL BE YOUR TEST ON WEEK 11.

YOU WILL NOT BE TESTED ON ANYTHING INSIDE THE "FYI" BOXES - THEY ARE ONLY THERE FOR YOUR INFORMATION, AND TO HELP YOU.