
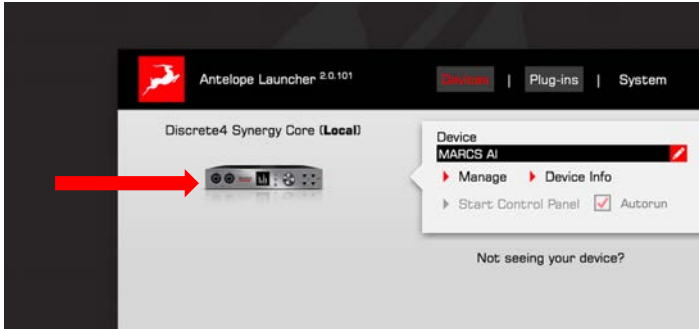


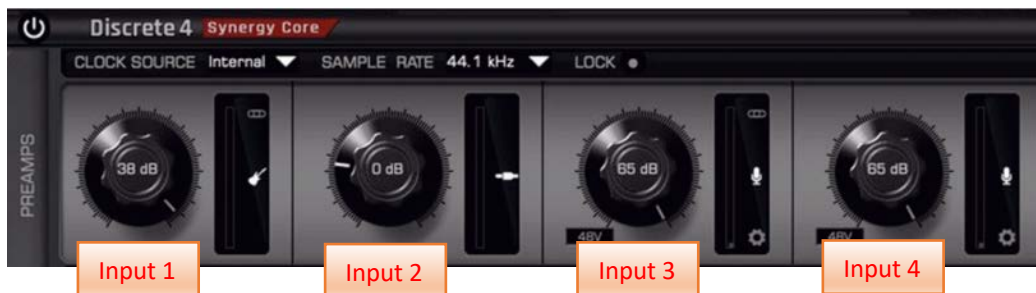
Audio Interface | Discrete 4 Synergy Core

1. Log into the computer using your Emory credentials.
2. Open **Antelope Launcher**  from the Dock.
3. Once the Antelope Launcher opens, it should automatically launch the Discrete 4 Synergy Core audio interface (AI) control panel (it may take a few seconds). If it does not, click on the **Discrete 4 Synergy Core** image in the window:



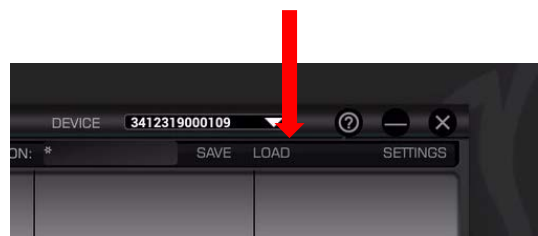
- ⚠ Do not click on the image multiple times, as each click will open an extra control panel window.
- ⚠ If you don't see the Discrete 4 image in the window, 1) check the back panel of the AI under the iMac and disconnect/reconnect its power cable (needs to be unscrewed) and 2) ensure that AI is connected to the iMac with its USB cable.

4. **Microphone/Instrument Inputs.** The PREAMPS section controls mics/instruments gain. The four gain dials correspond to inputs 1 and 2 on the front of the AI console and inputs 3 and 4 on the back (the left boom arm mic is input 3, the right is input 4):

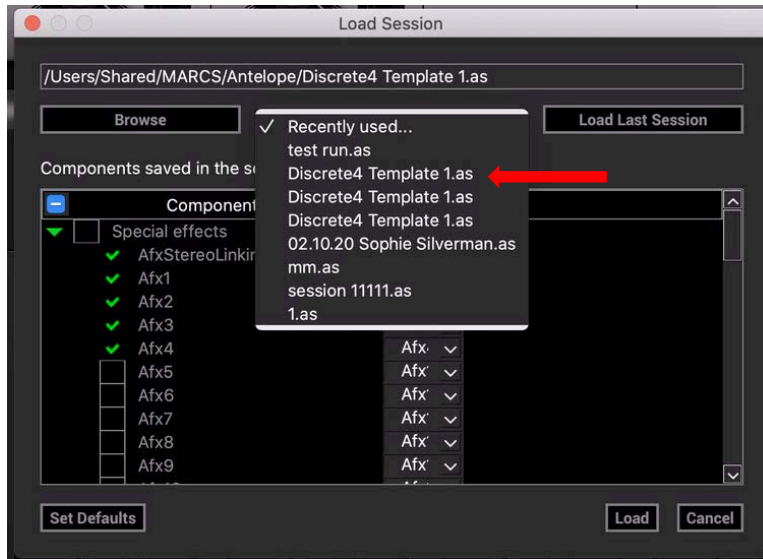


Start with loading the default settings—it is easier than adjusting settings after a previous user. To load the default settings:

- Click on Load in the top right of the window:



- Select Recently Used:



- Select "Discrete4 Template 1.as" and click Load.

5. Make sure that **the microphone icon** is selected for the given input when using a microphone, **the guitar icon** when connecting an electric guitar, and **the line-in icon** when connecting synthesizers keyboards, samplers, players, amplifiers, etc.:



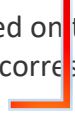
6. The two microphones (Shure SM7B) mounted on two arms are connected to **input 3** and **input 4** on the back of the console. Ensure that the gain of these mics is at 60-65 dB:



- i** Note that for the additional studio mics (Shure SM57, SM58, and Beta58A) used with input 1 and input 2, the gain level of about 45 dB is sufficient.

7. Whichever input you are using, its sound bar should fluctuate between -20 and -5dB (see the image below). Adjust the respective gain while speaking into the microphone or playing your instrument as needed to keep the bar in that range. Avoid the bar going into the red.



8. **Headphone Outputs.** Four headphone outputs are located on the front panel of Discrete 4 AI. Their volume controls can be accessed the corresponding section of the control panel and adjusted with the corresponding dial: 

9. **Monitor Outputs.** Studio monitors (speakers) volume can be adjusted by the MONITOR dial on the control panel in the MONITOR/HP1 section.

⚠ To avoid unwanted feedback, do not increase monitor volume past about half-way. You can also mute the monitors during the recording and mute the mics during the playback.

⚠ If the monitors are not on, reach up in the back of each monitor for the power switch.

10. **Front Panel Controls.** The physical controls on the front panel of the Discrete 4 AI can also be used to adjust output volumes and preamp levels.


Use the top small button to cycle through monitor, headphones 1-4, and line out volumes. Use the large dial to adjust the volume of the selected output. Press the dial to mute/unmute the selected output.



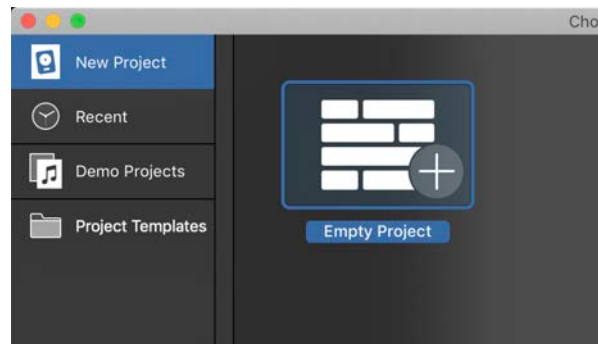
Use the bottom small button to cycle through input preamp gain levels. Use the large dial to adjust the gain of the selected input.



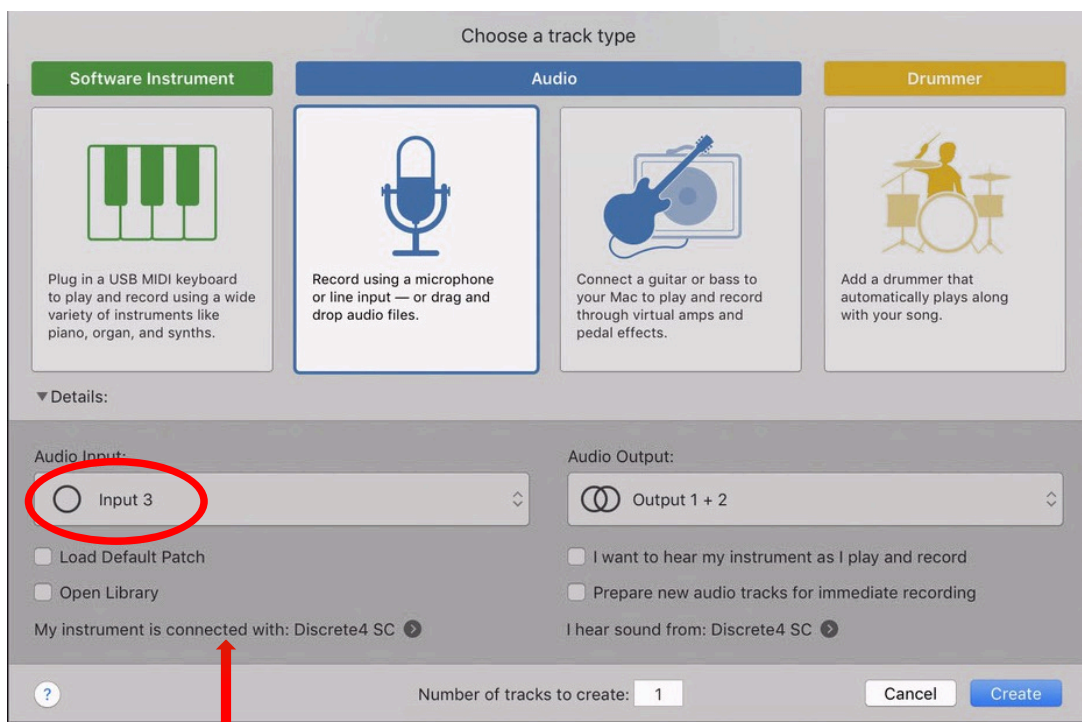
Logic X Pro Basics

1. Launch Logic Pro  from the dock.
! If it does not launch reporting that someone else is using it, reboot the computer: hold the power button on the back of the monitor (bottom left) until the computer shuts down, then power it back up.

2. Choose the Empty Project option:

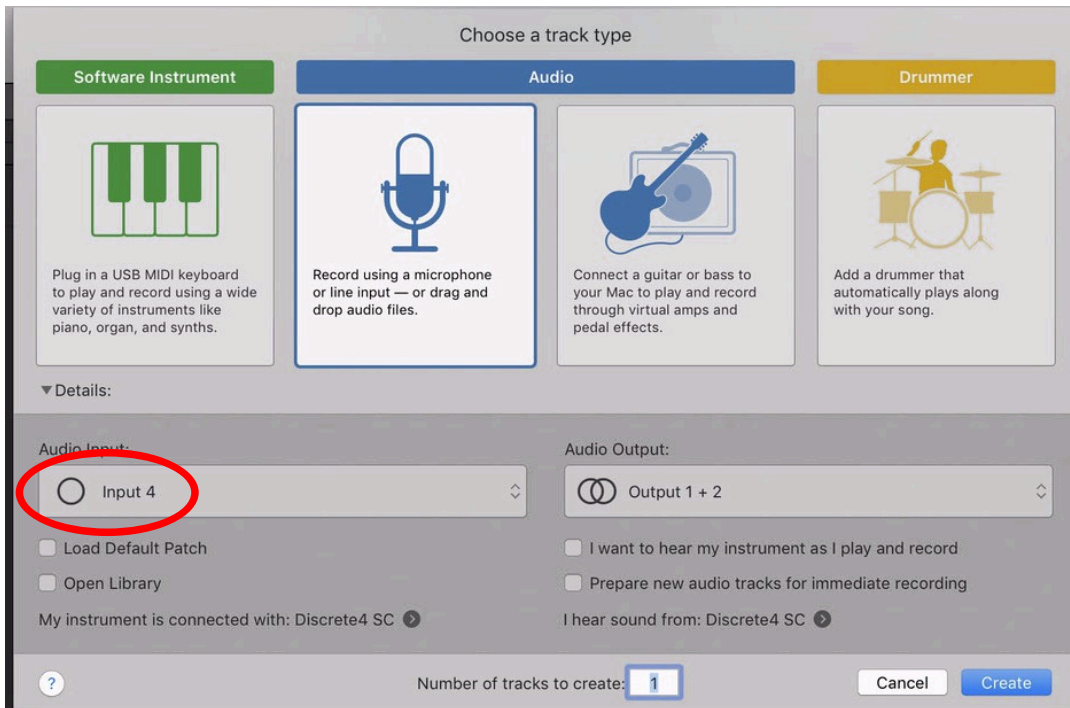




3. For voice recording, click the **Microphone** icon (or select Audio). Select **Input 3** for the left microphone mounted on the arm. Press **Create**.

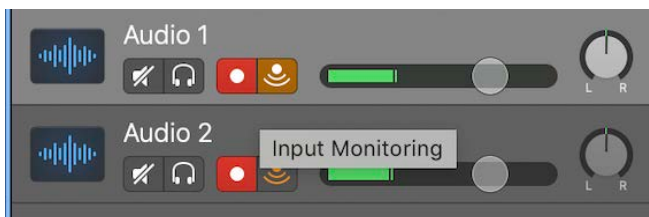


- !** If Input 3 is not in the drop-down list, ensure that Discrete4 SC is selected for inputs/outputs—in the above window, it should say, “My instrument is connected with: Discrete4 SC.”

- To add another track for another mic, click the “+” above the first track, and **repeat step 3** now selecting Input 4 for the right podcasting microphone mounted on the arm:



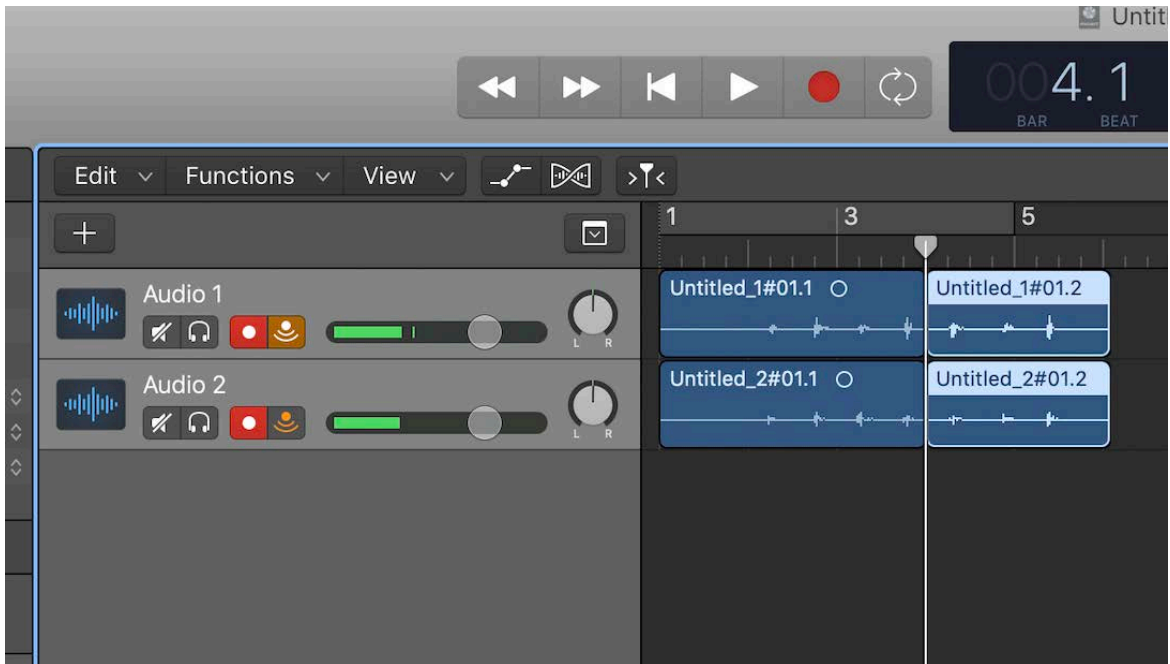
- To enable recording, press the **Record Enable**  button. To enable both mics for the recording, click the Record Enable buttons for both tracks. For monitoring, press Input Monitoring  button.



- To start recording, press the letter ‘R’ on the keyboard or Record button in the Logic window. To stop your recording, press the **Spacebar** (use the Spacebar to play/stop a recording) or Stop button in the Logic window.
- Press the **Return** key to bring the cursor back to the start of the project, then press the **Spacebar** or Play button in the window for playback.
- You can zoom in on the tracks by using the buttons and sliders in the top right corner:

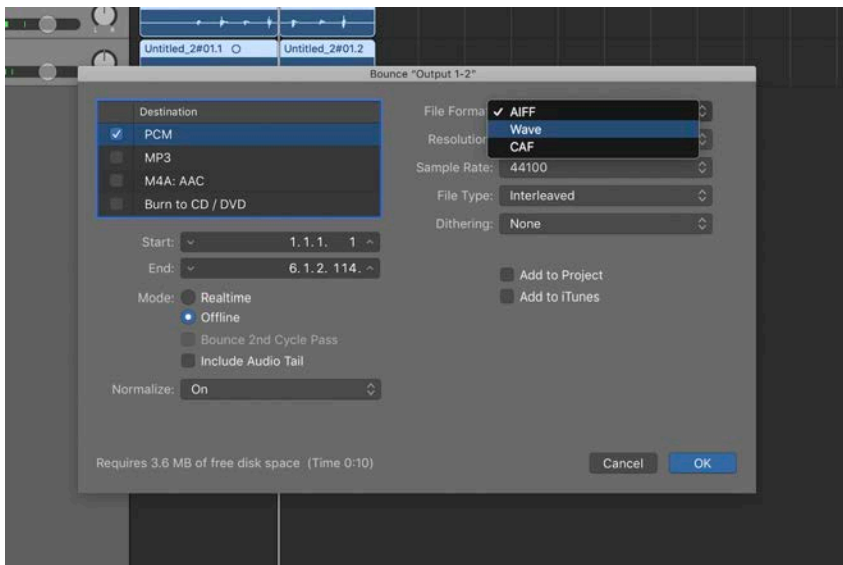


- 10 If you need to split an audio region/track, highlight the section you'd like to split, move the cursor to the preferred mark, and press **Command + T**:



- 11 Press **Command + S** to save your Logic project.

- 12 To export your project into an audio file, press **Command + A** to highlight all regions/tracks. Then, press **Command + B** or go to File/Bounce to bounce your project. Choose the desired format (can choose more than one):



Microphones

1. **Shure SM7B** is a dynamic unidirectional cardioid microphone with a smooth, flat, wide-range frequency response and is an industry standard mic for **podcasting, voice over,** and other **vocal** recordings. It can also be used for **musical instruments** recordings. Two Shure SM7B mics are mounted on broadcast arms on the studio desk and are connected to inputs 3 and 4 on the back panel of the Discreete4 Synergy Core AI.
2. **Shure SM58** and **Shure Beta58A** are unidirectional cardioid dynamic industry-standard mics for **vocal** recording. The mics can also be used to record **instruments**.
3. **Shure SM57** is a dynamic unidirectional cardioid microphone for recording **musical instruments**, such as drums, guitar, and woodwinds. The mic can also be used to record **voices**. The studio has two such mics.

Application	Suggested Mic Placement	Tone Quality
Vocals	0-6 inches away from mouth, on axis to mic.	Robust sound, emphasized bass, maximum isolation from other sources.
	6 in – 2 ft away from mouth, just above nose height.	Natural sound, reduced bass.
	8 in – 2 ft way from mouth, slightly off to one side.	Natural sound, reduced bass, minimal “s” sounds.
	3 – 6 ft away.	Thinner, distant sound; noticeable levels of ambient noise.
Guitar and Bass Amplifiers	1 inch from speaker, on axis with center.	Sharp attack; emphasized bass.
	1 inch from speaker, at edge.	Sharp attack; higher frequency sound.
	6-12 inches from speaker, on axis with center.	Medium attack; full, balanced sound.
	2-3 ft from speaker, on axis with center.	Softer attack; reduced bass.
Tom-Toms	One mic on each tom or between each pair of toms, 1-3 in above drumheads aimed at their tops.	Medium attack; full, balanced sound.
Snare Drum	1-3 in above rim of top head of drum, aimed at drumhead.	Most “snap” from drumsticks. More “snare” sound.

Best Practices

- Aim the mic toward the desired sound source and away from unwanted sources to take advantage of the cardioid pickup pattern, which focuses on the main sound source in front of the mic.
- Place the mic as close as practical to the desired sound source.
- Work close to the mic for extra bass response.
- Use only one mic to pick up a single sound source.
- Use the fewest number of mics as practical. Use only necessary mics, mute the others.
- Keep the distance between the mics at least 3 times the distance from each mic to its source.
- Place mics as far as possible from reflective surfaces.
- Do not cover any part of the mic grille with your hand.

AKAI MPK249 Musical Keyboard Controller



- Turn on the keyboard by pressing a small power knob on the back of the keyboard (to the right of the cable when facing the keyboard).



⚠ If you see a Keyboard Setup Assistant message on the computer display saying that your keyboard cannot be identified, do not click “Continue.” Simply close the window. If you see another window asking you to select your type of keyboard, select ANSI (US and others) and click Done.

- Launch the sound editing application of your choosing. The keyboard is usually pre-set for Logic Pro X, but you can select a different preset or set the keyboard as you like.

Troubleshooting

⚠ GarageBand / Logic Pro application does not launch reporting that someone else is using the application →

- Hard restart the computer:
 - Press and hold the power button on the back left side of the computer until the computer shuts down (ignore any warning messages).
 - Press the button again to power the computer back up.

⚠ The Antelope Launcher does not show/start the Discrete 4 audio interface control panel →

- Disconnect and reconnect the Discrete 4 audio interface power cable:
 - Locate the power cable on the back right side of Discrete 4 audio interface.
 - Unscrew the cable from its socket, disconnect and reconnect it.
- Make sure the audio interface is connected to the computer with its USB cable (marked with a red stripe).