

# Radio Show How-To

## Opening Remarks

This is a guide to walk through a simplified version of the Audio Hijack session file that was used for the web radio show [Lunchable Learning](#) which streamed on [DS106 Radio](#) October 2021– May 2022. [Lunchable Learning](#) was created by Leva Lee and Helena Prins from the Learning and Teaching team at BCcampus. The session file was created by Harper Friedman, the technical producer on Lunchable Learning and Coordinator of Open Textbook Publishing at BCcampus.

You will need to download and purchase licences for [Audio Hijack](#) and [Loopback](#), produced by [Rogue Amoeba](#). You can find the [Audio Hijack licence price](#) and [Loopback licence price](#) on their website. To use this software, you need an Apple computer running MacOS.

Unfortunately, I am unsure if this software is accessible to those who use a screen reader.

## What is Audio Hijack and Loopback?

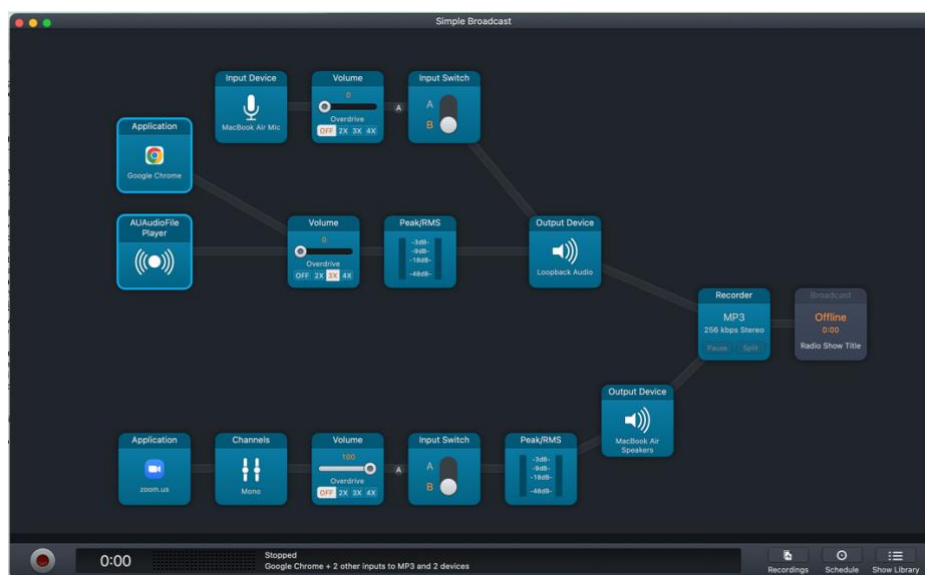
[Audio Hijack](#) is a software that allows you to take in audio from various sources, alter them, and then send that audio out to be livestreamed, recorded, or broadcast. [Loopback](#) is a software that allows you to take in audio from a source (in our case, our Audio Hijack session file) and send it back into another application such as Zoom or Skype. Both these applications allow us at Lunchable Learning to take in audio from Zoom, a browser such as Chrome, and mp3 files and broadcast them to [DS106 Radio](#), as well as record them.

## Functionality of Session File:

This Audio Hijack session file ([Simple Broadcast.ahsession](#)) is a simplified version of the session file used to broadcast Lunchable Learning. The main features of this file is:

- Take input from a microphone, Google Chrome, audio files, and Zoom
- Allow those in the Zoom call to hear the audio from microphone, Google Chrome, and audio files.
- Record and broadcast audio from inputs

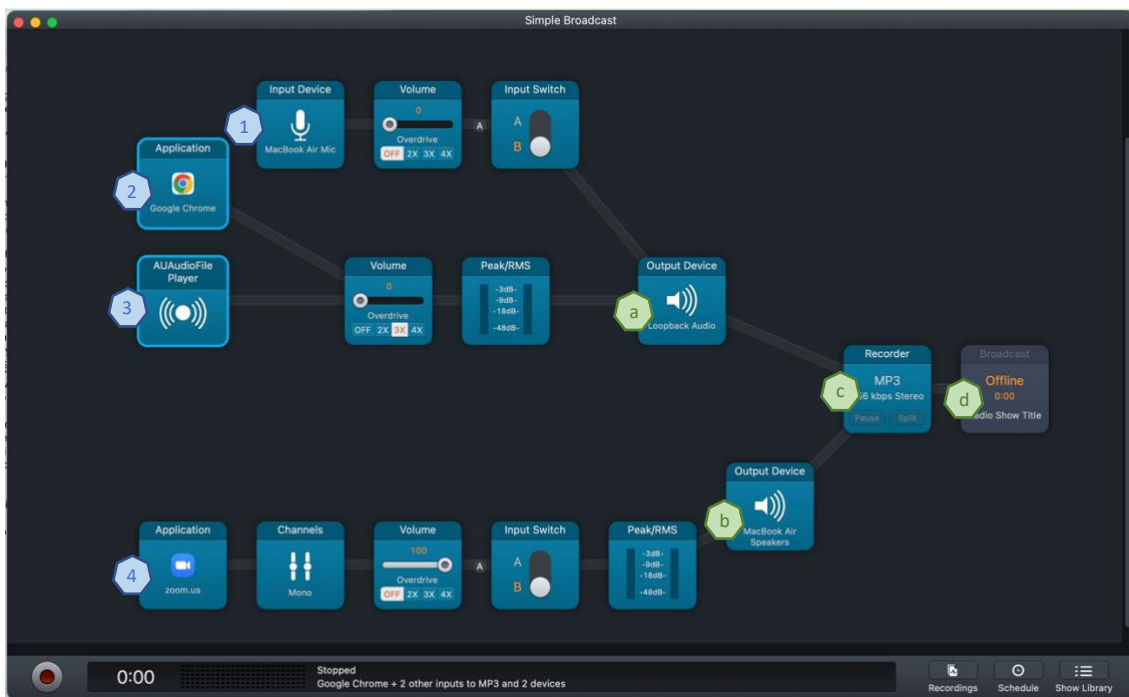
This is what you will see when you first open the session file.



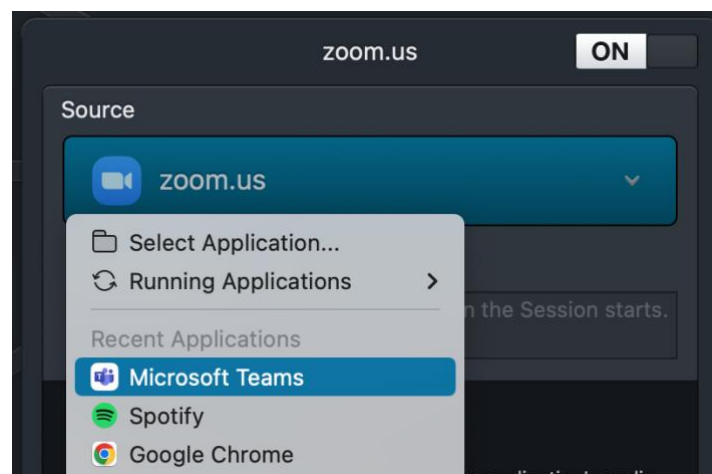
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In this file, you have four inputs and four outputs:

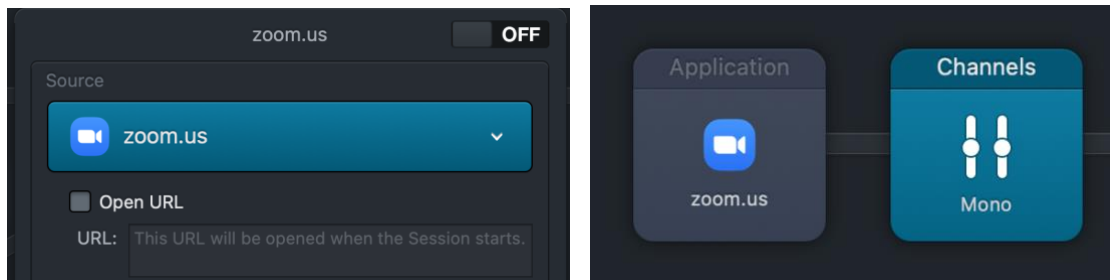
- Inputs:
  1. Input Device - Built-In Microphone
  2. Application - Google Chrome
  3. AuAudioFile Player
  4. Application - Zoom
- Outputs:
  - a) Output device - Loopback Audio
  - b) Output device - Built-In Speakers
  - c) MP3 Recorder
  - d) Broadcaster



These inputs or outputs can be replaced with any other inputs that you would like. For example, if you wanted to use Microsoft Teams instead of Zoom for your conference call software, you simply have to click on the block and then select Microsoft Teams as your source.

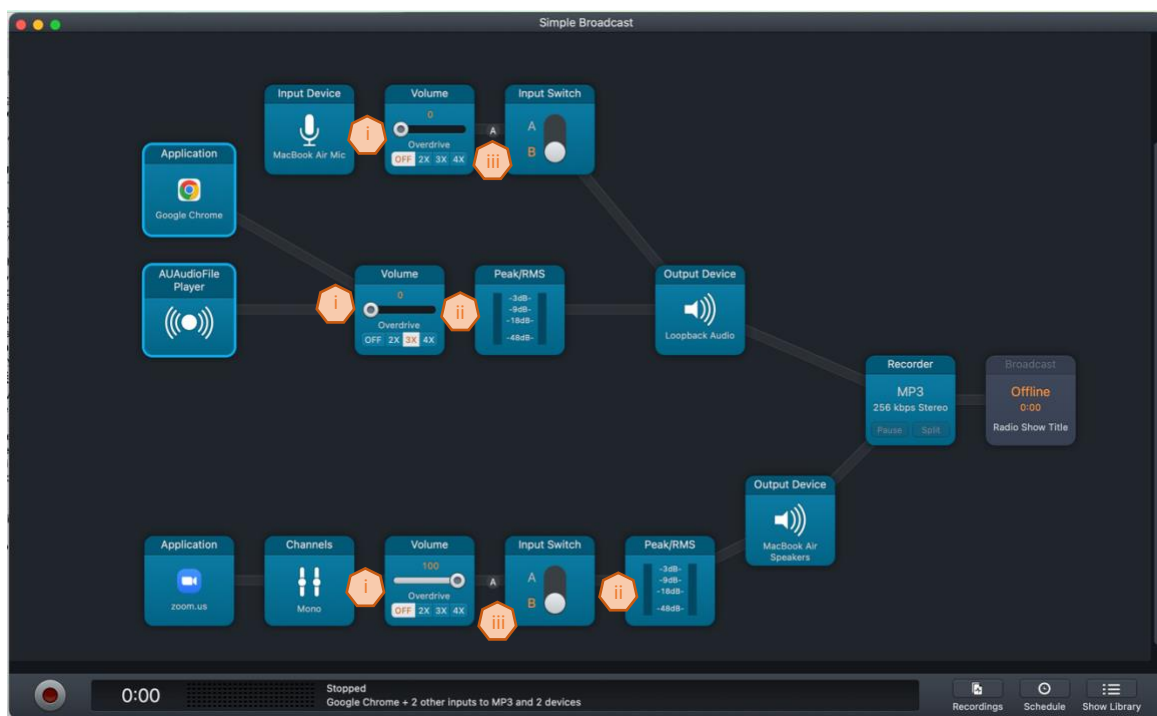


You may also notice that, in the top right corner of the previous image, there was an “On” toggle switch. If you click it, it will turn that block “Off” and the block will turn grey instead of blue. This means that this block has been disabled and it will not function anymore.

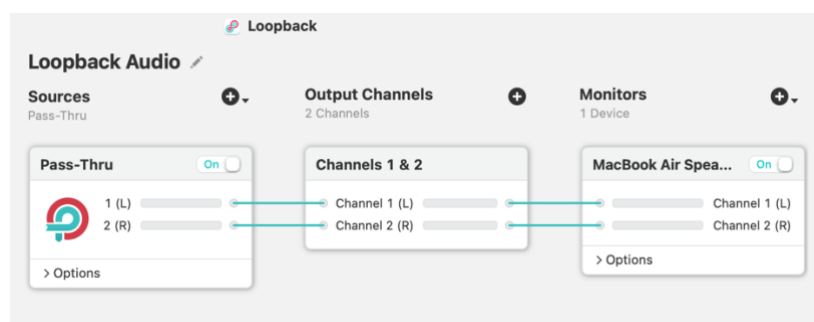


There are also some additional blocks to pay attention to:

- i. Volume blocks that control of their inputs
- ii. Input Switch blocks that act as a mute button to their inputs. When Input Switch is on A, audio is permitted to flow through. When Input Switch is on B, then audio does not flow through and is essentially muted.
- iii. Peak/RMS meter blocks that monitor the sound levels to their inputs



For the Loopback application, it’s only necessary to have it open. It requires no additional action.



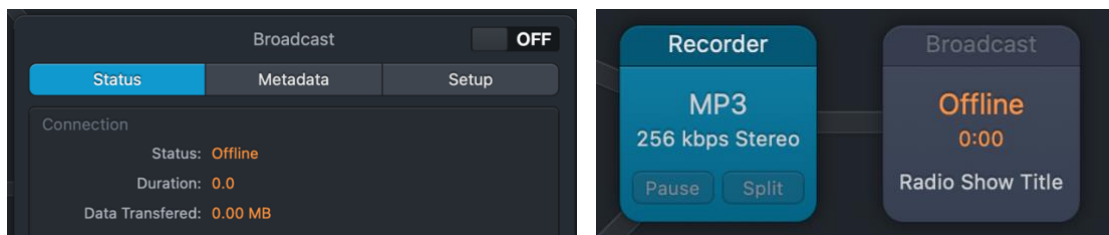
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## How-To Broadcast a Radio Show:

### Pre-Show:

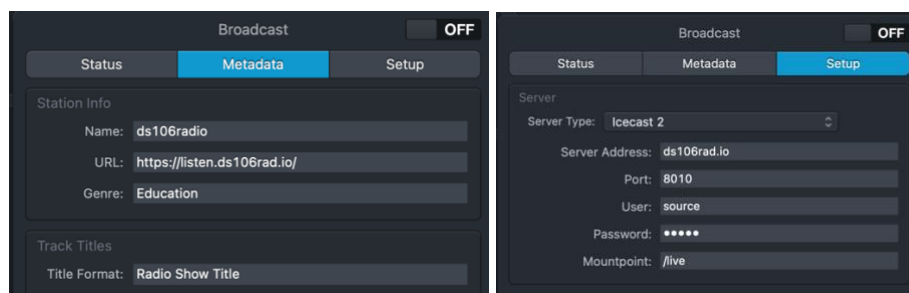
1. Open the application Audio Hijack.
2. Open session file.
3. Open application Loopback.
4. Ensure Broadcast block is turned off.

This is to make sure you don't accidentally go live when you don't want to. If the Broadcast block is turned on, you will immediately start broadcasting when the session goes live.



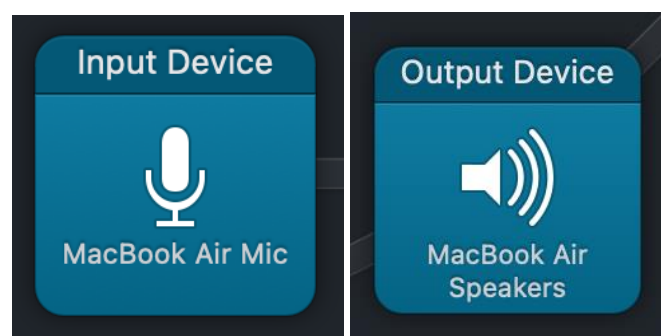
5. Specify Broadcast set-up and meta data.

This will depend on what web radio station you are using. This session file is set up to use [DS106 Radio](#). If you're using a different web radio station, you will need to get their set-up info from them.

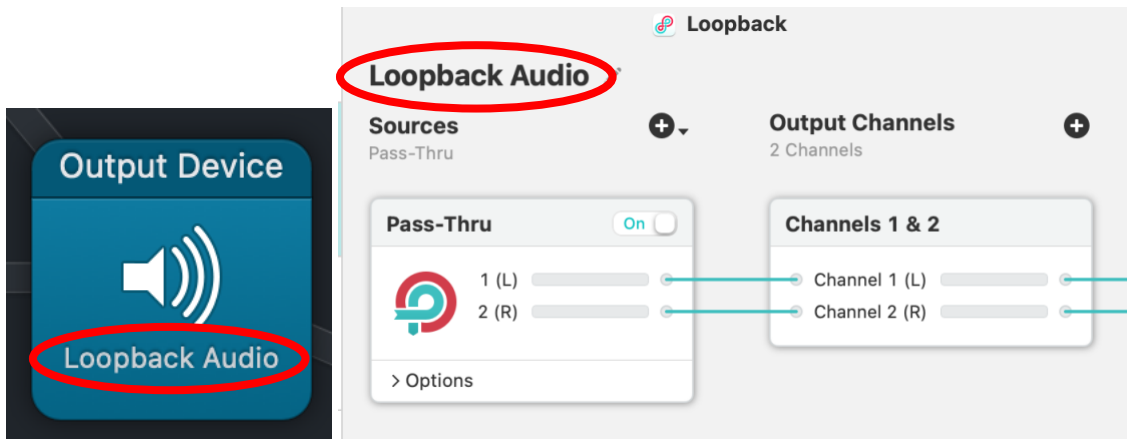


6. Ensure the names of your Input devices and Output devices are the correct ones.

Here, I have my input device (my microphone) and the output device (my speakers) to the right of the conference call set to the default MacBook microphone and speakers, respectively.

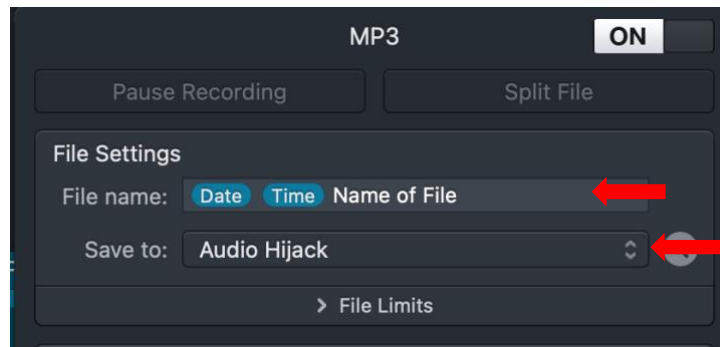


Since we want the people in our conference call to hear any music or audio that we play, we need to route our microphone and any applications to play audio through Loopback. We have to ensure that this output device matches our Loopback session name, in this case Loopback Audio.

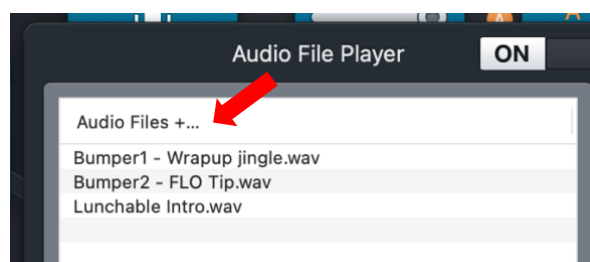


7. Name your mp3 file.

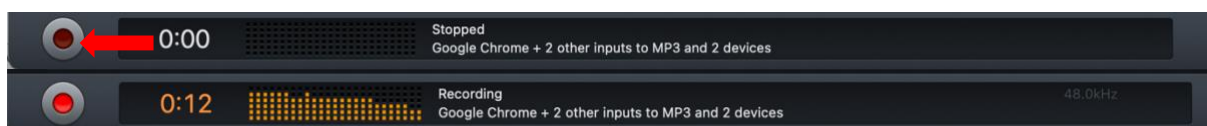
Click on the Recorder block and edit the name in the “File name” box. It will automatically capture the Date and Time of recording in the file name (unless deleted). You can also choose which folder to save it to by selecting the “Save to” dropdown menu.



8. Ensure any audio files that you want to play are in the AUAudioFile Player
- To upload files, click on the AUAudioFile Player block, then click “Audio Files +...”, navigate to the file you want to import, click on desired file, and press Open.



9. Turn on session (click the large round, grey button along the bottom).



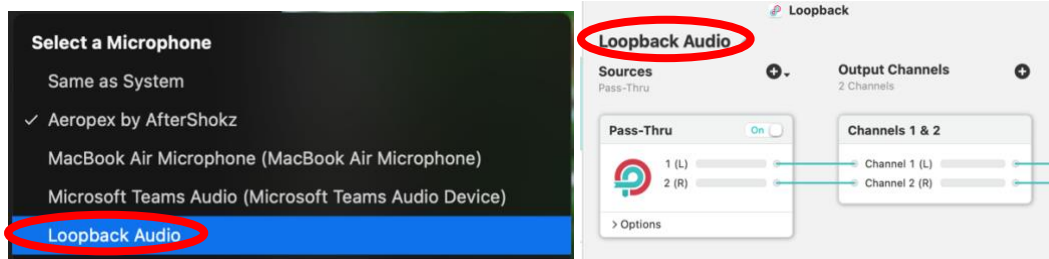
When you turn on the session, the recording will start automatically.

Any applications that are inputs will also automatically open (in our case, Google Chrome, and Zoom) if they are not open already.

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10. In Zoom (or your desired conference call software), switch your microphone to the Loopback session

This allows the other people in the call to hear the music and other audio that you're playing. In Zoom, go to the audio settings and then, under Select a Microphone, select your Loopback session. Similar to our Output before, you need to make sure that the names match.

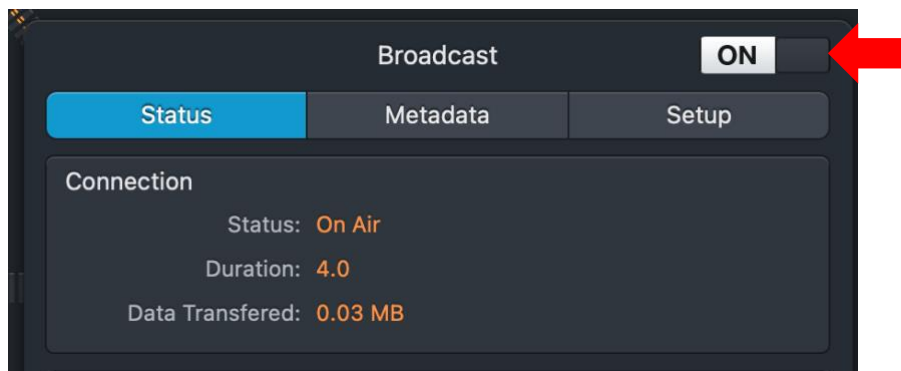


11. Do an audio levels check.

Check levels in the Peak/RMS block to the right of the application you're testing. You want the volume around -3dB. -1dB to -9dB is an acceptable range. Adjust as necessary by moving the slider on the adjacent Volume block. If you want it louder than 100, click 2X Overdrive and then you can adjust it to a max of 200. You can keep doing this until 4X.

- a) Check the volume of your call
  - i. Have the people in your call talk amongst themselves. You can adjust the volume so that the whole call is at the right level.
  - ii. If you notice that one person is louder than another, you can ask that person to speak louder/softer, be closer or farther from their microphone, or to turn up the volume or gain of their microphone. You can also adjust your input level in conference call software such as Zoom.
- b) Check AuAudioFile Player
  - i. Navigate to AuAudioFile Player
  - ii. Click on file you want to play
  - iii. Press play button to play the file
  - iv. Once you're happy with the levels, press the pause button in the AudioFilePlayer, then the left-facing rewind button to return the file to the beginning.

12. Once you're ready to go live, navigate to the Broadcast block and turn it on.



During Show:

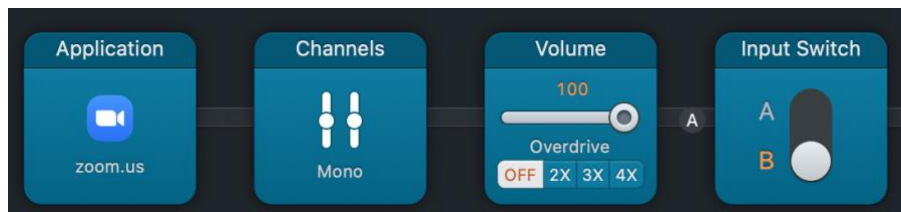
This session file is routed with the intention of the person running it to not speak during the broadcast. Additionally, it is routed to have the best quality audio possible. Because of this, you must

mute the call when music is playing, and you cannot play music while people are talking in the call. This would result in the audio being doubled and, with the delay of the call, would sound very funny.

- Mute your microphone.
  - a) You can do this by turning the Input Switch to the right of the microphone block to B.



- While playing music, mute the call.
  - a) You can do this by turning the Input Switch to the right of the microphone block to B.



Mute the call first before playing the music.

- Remember to unmute the call after playing music.

You should have some sort of way for the people in your call to know that they are able to speak. Either a hand signal (we use a thumbs up), a text in the chat, or a specified number of seconds after the music ends.

- Monitor and adjust levels during the broadcast.
  - a) Adjust volume live so that it averages at -3dB. Some fluctuation is normal
- **When you're ready to stop broadcasting, turn off the Broadcasting block.**
- Turn off the session by clicking on the round, grey button on the bottom.
  - a) This will turn off the recording automatically. It will save in the specified folder, which is by default in Music -> Audio Hijack.

## Closing Remarks

This session file was created to facilitate our radio show Lunchable Learning, which had specific goals and set functionality. If the functionality of this file does not suit your particular needs, then you are welcome to change it as you see fit. Audio Hijack has a page that houses their [Audio Hijack Manual](#) where you can learn more about the different blocks. You can also find many tutorials on places like YouTube. We encourage you to play around with it and have fun!

For more information, contact Harper Friedman at [hfriedman@bccampus.ca](mailto:hfriedman@bccampus.ca)

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