Audio Recording Studio

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Version 3.0 (2023-04-20)
Before using the studio

1. Turn all Gain knobs counterclockwise to their lowest setting (10) (Fig. A).
2. Move all monitor (output) sliders down to their lowest setting (-infinity) (Fig. B).
3. Ensure that all microphones are connected to the audio board:
   3.1. The two booth-mics are labelled **Mic 1** and **Mic 2**. They should be plugged into the channels (lanes) labelled 1 and 2, respectively.
   3.2. The desk-mic should be plugged into port 4.

Instructions

1. **Turning on the devices**

   1. **Turn on the PC** using the power button on the front of the case.
   2. **Turn on the audio board** by sliding its power switch (on the back) to your right side (Fig. 1a). The board’s display and various lights will turn on.
3. Sign into the PC using your Passport York credentials.

4. Decide how you want to hear audio while at the desk:

![Fig. 1b. Switches and knobs to adjust master- and headphone-volume](image)

4.a. **Headphones:**
- **Adjust the master volume** by turning the knob in the *Master Out* section of the top-right area (Fig. 1b, Item 1).
- **Adjust the volume of specific headphones** by turning the knobs in the *Monitor Out* section of the top-right area (Fig. 1b, Item 2)

4.b. **Speakers:**
- Turn on the speakers using the power switch on the left-side speaker; adjust the volume using the knob on that same speaker.

5. **Enable the Mix A, Mix B, Mix C switches in the top-right area:**

5.1. Locate the *Mix A, Mix B, and Mix C* switches (Fig. 1b, Item 3).

5.2. Push all three switches upward.

2. **Setting up the computer**

1. **Start the Hindenburg software** by double-clicking its taskbar icon or its Windows desktop icon (Fig. 2a).

![Fig. 2a. Hindenburg](image)
2. Select *Tools* -> *Options* in the Hindenburg menubar (Fig. 2b). A pop-up window will appear with three tabs (*Audio, Interface, Advanced*).

![Fig. 2b. Selecting Options from Tools in the Hindenburg menubar](image)

3. Set the following settings in the *Audio* tab of the *Options* window (Fig. 2c):

   3.1. Select/enable the *ASIO* checkbox.

   3.2. Set the *Playback* and *Record* dropdowns to *ZOOM L-8 ASIO Driver*, and set their accompanying dropdowns to 1-2.

   **Note:** You might need to enlarge the *Options* window.

   3.3. In the *Record Mode* section, select the *Auto* radio button.

   3.4. Click *OK* to apply these settings.

![Fig. 2c. Settings to apply in the Options window](image)
4. Set the input (microphone) for each Hindenburg track by using the dropdown in each track’s panel (Fig. 2d):
   
i. Board channel 1 (Mic 1, in booth): Select
   \[\text{Zoom L8 Master L/R} \rightarrow \text{Zoom L-8 ASIO Driver} \rightarrow \text{Mono} \rightarrow 3 \text{ (In 1)}\].
   
ii. Board channel 2 (Mic 2, in booth): Select
   \[\text{Zoom L8 Master L/R} \rightarrow \text{Zoom L-8 ASIO Driver} \rightarrow \text{Mono} \rightarrow 4 \text{ (In 2)}\].
   
iii. Board channel 4 (Mic 4, at desk) Select
   \[\text{Zoom L8 Master L/R} \rightarrow \text{Zoom L-8 ASIO Driver} \rightarrow \text{Mono} \rightarrow 6 \text{ (In 4)}\].

![Fig. 2d. Available input sources (mic) for a given track](image)

5. (Optional) Double-click a track name to change its title. Consider using descriptive titles (e.g. “Natasha,” “Interviewer,” or “Mic 1”).

6. Arm (enable) each desired track (horizontal lane) by clicking the circle button in its toolbar (Fig. 2e). This icon will turn from a dim, pink colour to a solid, red colour. The latter shows that the given track will be included/audible in the recording.

![Fig. 2e. Button that enables track-recording](image)
3. Adjusting listening-volume (headphones)

1. Press the Mixer button in the lower-right area of the board (Fig. 3a). The button will light up.

2. Press the Audio I/F button in the lower-right area of the board (Fig. 3a). The button will light up.

3. Use the board’s screen and selection knob to set the output destination (PC) and the mix (Master):
   3.1. Locate the screen display and the selection knob (middle-right area, Fig. 3b).
   3.2. Twist the knob to highlight PC/Mac.
   3.3. Press the knob down/inward to select PC/Mac.
   3.4. Press the knob again to select Yes.
   3.5. Highlight Master as the mix setting.

4. Use the Input Sel button of channel 7 to select how the board communicates with the computer:
   4.1. Locate the Input Sel (input selection) button in channel 7 (middle-top area, Fig. 3c).
   4.2. Press the Input Sel button until you select USB 1-2 (if Line or Sound Pad for channel 7 is selected). The USB 1-2 indicator light will turn on.

Fig. 3a. Mixer and Audio I/F buttons

Fig. 3b. Screen and knob

Fig. 3c. The Input Sel button toggles among three options; USB 1-2 is the middle and preferred option
Note: The following adjustments won’t affect the recording volumes. They only affect the monitoring (live-listening) volumes.

5. Set all necessary monitor sliders to their 0 setting, which is not their lowest setting (Fig. 3d):

5.1. Note that the 0 mark for each slider is in the upper-third of its scale. The labels mark the output gain of the microphone; gain represents change to volume, not volume itself. Thus, a gain value of 0 indicates that the volume is unchanged from its default level.

5.2. Move the Master slider (red-coloured and right-most slider) to 0.

5.3. Move the channel 7 slider to 0.

5.4. Move the sliders of the channels (lane) used for recording to 0.

Fig. 3d. The red arrows show where to move sliders for output gain (i.e., change to output volume audible in headphones) for specific channels and the Master level
4. Adjusting recording-volume (microphones)

1. Start with the *Gain* knobs (recording-volume change) at their lowest setting. These knobs should all be turned counterclockwise to +10.

2. Find a suitable gain (volume change) for each channel’s connect mic:

   2.1. Slowly turn a channel’s *Gain* knob clockwise (Fig. 4a) while sound goes into its connected mic as if recording. Consider reciting the alphabet in the mic to produce a continuous source for testing.

   2.2. In Hindenburg, observe the volume meter for the current track. The height and colour of the volume level represent the suitability of the volume. The ideal (peak) level is at or just below the white notch. **Note:** Consider the possibility of natural spikes in volume, like laughter.

   2.3. Adjust the *Gain* knob as needed until the Hindenburg volume level peaks at or just below the white notch on the meter. Avoid *Gain* settings that cause the (peak) volume level to rise well above the white notch or even fill the meter.

   2.4. Repeat steps 2.1 - 2.3 for each channel (connected mic) that you want to use. The ideal gain level can vary between people and/or sources.

**Fig. 4a.** To increase a channel’s input *Gain* (increase to recording volume), turn its knob clockwise.
5. Recording audio

1. **Start recording** by clicking the record button (red-circle icon) in the Hindenburg controls toolbar (lower-left area of window, Fig. 5a).
   *Note:* This button also lets you pause or resume a current recording.

2. **Stop recording** by clicking the stop button (white-square icon) in the controls toolbar (Fig. 5a).
   *Note:* After you stop recording, Hindenburg will automatically adjust the audio levels for you.

3. **(Optional) Edit the recording** by selecting tracks on the Hindenburg timeline and dragging, trimming, and/or deleting as needed.

6. Playing recordings

1. **Play the recording** by clicking the play button (triangle icon) in the Hindenburg controls toolbar (lower-left area of window).

2. If nothing is audible, repeat the directions in Section 1, Step 4 (page 3) and/or the directions in Section 3 (page 6).

7. Exporting, saving, and transferring files

1. **Select File -> Export** from the Hindenburg menubar or top toolbar.
   *Note:* To export a single track or part of a track, click and drag the cursor to highlight the track/part and select File -> Export Selection.

2. **(Optional) Choose a file format.** The default format is .wav, but you can export in .mp3 format.

3. **(Optional) Select File -> Save** from the menubar to save the Hindenburg project file. You can re-open it on any computer that has this software.

4. **Transfer your exported/saved file(s) to another storage medium** because the studio computer deletes all local files when it locks and restarts.
   Consider:
   - i. Emailing to yourself
   - ii. Using online-storage services like Dropbox, Google Drive, or OneDrive
   - iii. Using removable storage devices like SD cards or USB drives
After using the studio

1. Turn all knobs and sliders to their lowest setting.
2. Put all microphones and stands back in their original positions.
3. Close the Hindenburg software, sign out of your account, and restart the computer.
4. Turn off the audio board.


**Attributions**

**1. Contributors**

**Media Creation Lab / York University Digital Scholarship Infrastructure**

- Maykel Faragalla, photographer & contributing writer
- Tim Huynh, editor & contributing writer
- Kris Joseph, lead writer
- Rafia Naz, lead writer & photographer
- Ananth Putcha, contributing writer

**BonaFide Communications, York University Writing Department**

- Nicole Bednarski, consultant
- Charlotte MacDowell, consultant
- Sophie Morgan, consultant
- Amanda Naoum, consultant
- Lorena Urican, consultant

**Patrons of the Media Creation Lab**

**2. Assets**

Fig. 1a is adapted from [Zoom support](#)

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