

# CAUCC Livestream Protocol

Created by Kade Dean  
(520) 954-4655 | [kadehdean@gmail.com](mailto:kadehdean@gmail.com)  
*(Last updated 12/08/2024)*  
**Please read the Disclaimer on pg.2**

# Table Of Contents

---

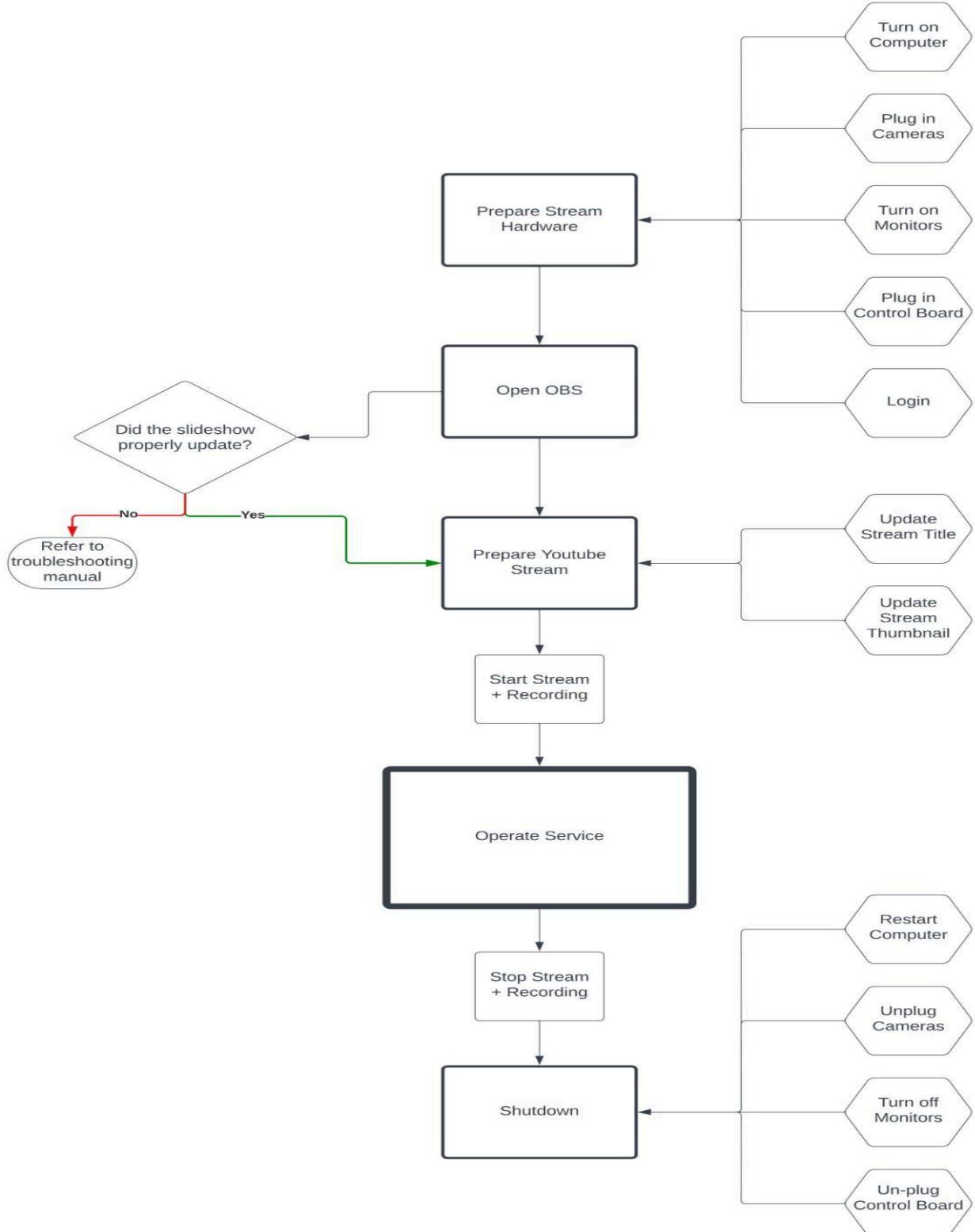
<i>Disclaimer -</i>	2
<b>Quick Overview of Operations -</b>	3
<b>Startup Guide (4 Steps ~15min) -</b>	4
Step 1: Turning the System On	4
Step 2: Starting OBS and Preparing the Cameras (Middle Monitor)	5
Step 3: Preparing Youtube (Leftmost Monitor)	6
Step 4: Starting the Stream (Middle Monitor)	7
<b>Operating the Stream -</b>	8
Understanding the Position of the Cameras -	8
Operating OBS -	9
Hypothetical Example -	10
<b>Table of Camera Angle Presets -</b>	10
<b>Playing Music on the Computer through the Sanctuary Sound System -</b>	11
<b>Shutting Down the Livestream -</b>	13
<b>Troubleshooting -</b>	14
Slideshow not updating/Missing Slides -	14
Audio not working/no sound output -	15
Cameras not working/Lagging -	19
Audio lagging/Audio not matching camera/Too quiet -	23
<b>Slideshow Directory Naming Scheme -</b>	25

## *Disclaimer -*

It is **NECESSARY** to allot **at least 15 minutes** before the start of any livestream to test all systems and troubleshoot if necessary. **It is also REQUIRED that you text Anne Bailey when you have arrived at the church.** **IF YOU DO NOT TEXT ANNE, WE WILL ASSUME YOU ARE NOT PRESENT TO OPERATE AND WE WILL CALL UPON AN EMERGENCY OPERATOR TO FILL YOUR SPOT.**

It is also very helpful to check the stream using a phone or other device to make sure the audio levels are adequate and the stream is properly functioning.

# Quick Overview of Operations -



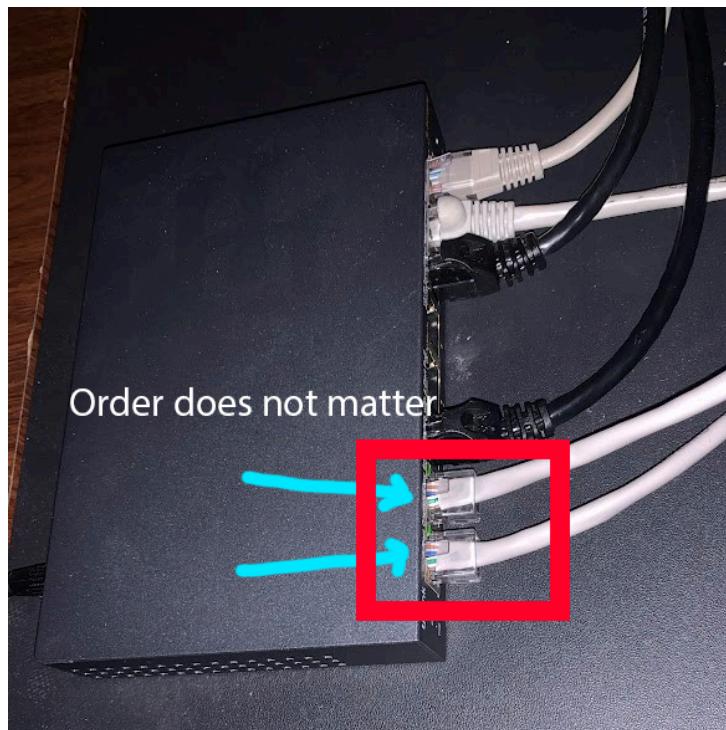
# Startup Guide (4 Steps ~15min) -

---

**PLEASE USE THE QUICK START GUIDE IF THERE IS LESS THAN  
15min BEFORE SERVICE**

## Step 1: Turning the System On

1. **Plug in** the **TWO** camera ethernet cables into the switch box directly in front of the left stairs. These cables are usually laying on ground/near switch box (This turns on and activates the cameras)



2. **Plug in black** ethernet cable into the back of the **camera control board** sitting on the desk. (Cord is laying on the ground in between the computer desk and audio desk. It will **beep** once when it is on)
3. **Turn on** all **three** computer monitors. (Power buttons are on bottom right hand side of each monitor)
4. **Press any key** on the keyboard to wake the computer.
5. **Login** with the password “**record1**”

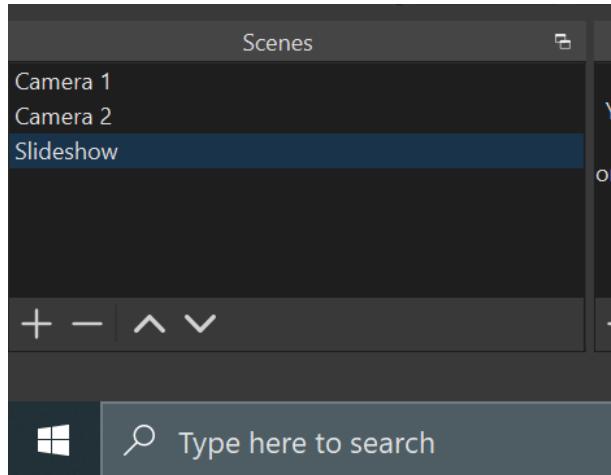
## Step 2: Starting OBS and Preparing the Cameras (Middle Monitor)

1. Open the **OBS Studio** application on the bottom task bar.



(Looks like this)

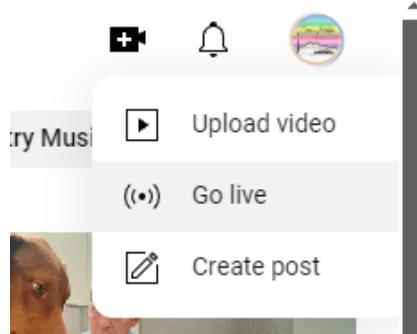
2. Select the “Slideshow” scene in the bottom left. (*The slideshow should auto-update with the newest weekly slides but, if it does not work please refer to the troubleshooting section of this document.*)



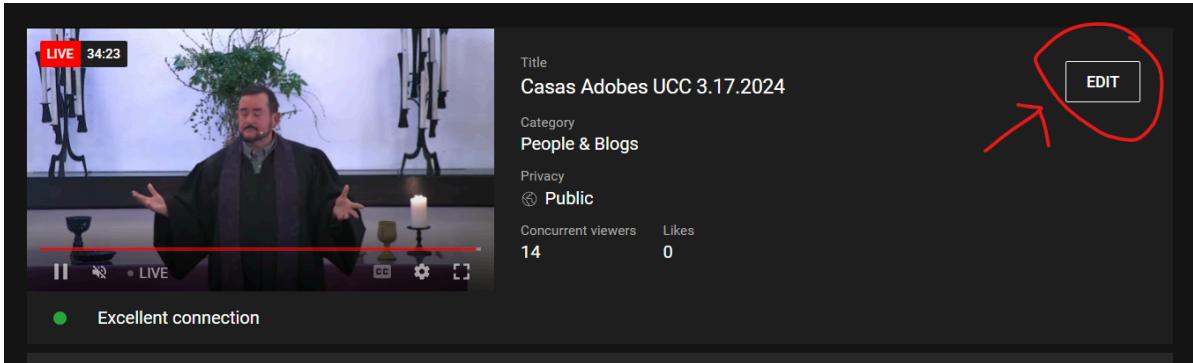
6. Press “CAM 1” then “1” on the **camera control board** sitting on the desk.
7. Press “CAM 2” then “1” on the **camera control board** sitting on the desk.

## Step 3: Preparing Youtube (Leftmost Monitor)

1. Prepare **Youtube** -
2. Open Google Chrome and navigate to <https://www.youtube.com/>
3. Click on the camera icon (shown below) in the top right corner, then click on "Go Live".



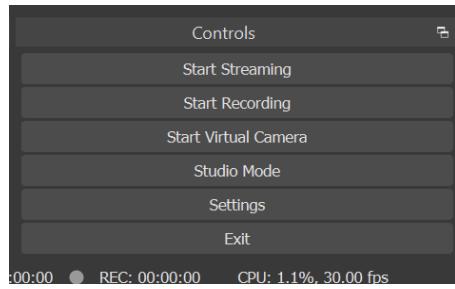
4. On the right side of the screen, click on "EDIT".



5. Update the title of the livestream to follow this format: "**Casas Adobes UCC MM.DD.YYYY**" using the current date. (For example, "Casas Adobes UCC 3.17.2024")
6. Scroll down to the "Thumbnail" section and click on the three dots on the current thumbnail, then click "Change".
7. In the file browser that pops up, navigate to the "**RollingSlideshowDONOTDELETE**" folder located on the Desktop.
8. Select the first .png image file in that folder. This will be used as the thumbnail for the livestream.
9. Click on "SAVE" in the top right corner to update the livestream settings.

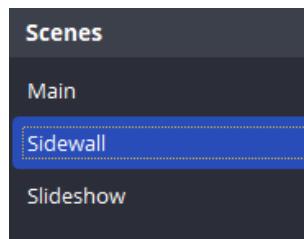
## Step 4: Starting the Stream (Middle Monitor)

1. **Return to OBS** and click the “Start Streaming” button on the bottom right side of the screen at approximately 9:25 (**This will also start recording the service**) (*a green square will appear at the bottom indicating you are live along with a red dot for recording*)



(the very top button)

8. **Wait** for the pastor to walk out, then switch to one of the two cameras in the “Scenes” tab and begin operation!



## Operating the Stream -

---

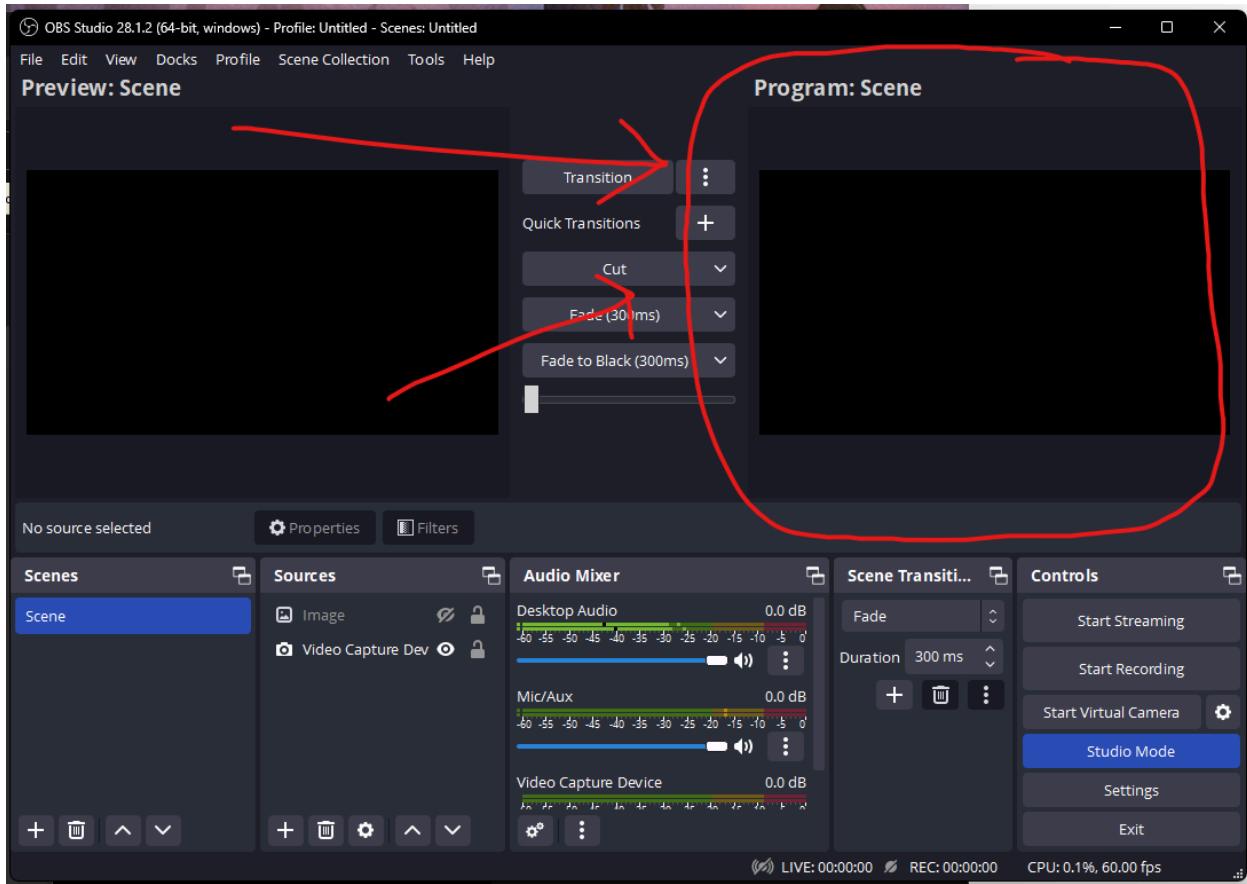
Operation is a **combination** of switching between “**Camera 1**” and “**Camera 2**” in the “**Scenes**” tab of OBS, all while using the **Camera Control Board on the desk** to move the cameras to preset locations.

## Understanding the Position of the Cameras -

“**Camera 1**” is directly above the clock on the back wall above the entryway to the sanctuary. This camera can be thought of as the Main camera that will frame everything from a head-on perspective.

“**Camera 2**” is on the right wall near the front of the sanctuary. This Camera is mainly used as the backup/transition camera. It is helpful to have this camera active when “**Camera 1**” is moving.

## Operating OBS -



The viewport circled on the right is the OUTPUT viewport. This is what the Stream is going to see. Understanding this is VERY CRUCIAL to properly operating the stream. The viewport on the left is the next scene that is currently queued up.

In order to transition, you have to select the scene in the “Scenes tab” then press “**number pad 0**” or you can click the “**Transition**” button in between the two viewports. When switching to a new scene, the previous scene will be auto-selected to be transitioned back to, this means that sometimes you wont even have to select a scene (i.e, you are bouncing back and forth from “Camera 1” and “Camera 2” during service)

## Hypothetical Example -

Let's say Pastor Michael has moved from the middle of the sanctuary to the pulpit and we would like to get good camera coverage of him. **First**, we would want to move the camera **on the Left Side of the screen (this is the non-active camera so when we move this, the motion won't be displayed to viewers of the stream)**. Once the camera is done moving, we can then press "numpad 0" to now display it on the main output. We are then free to move the other camera as we please (i.e. to line up the next shot or get another perspective).

This takes a little getting used to but, try tinkering with this before the service starts to get an understanding on how it can be used to toggle between two scenes. You can change the camera presets with the list of presets described **below**.

## Table of Camera Angle Presets -

---

In order to use these, press the appropriate “CAM #” button on the **camera control board on the desk**, then the “#” of preset you would like to use.

**EX:** “CAM 1” -> “4” would tell the first camera to move to focus on the lectern.

If you forget which camera is active, the small display on the control board shows (*I recommend playing around with this for a bit before service/while the slideshow is active*)

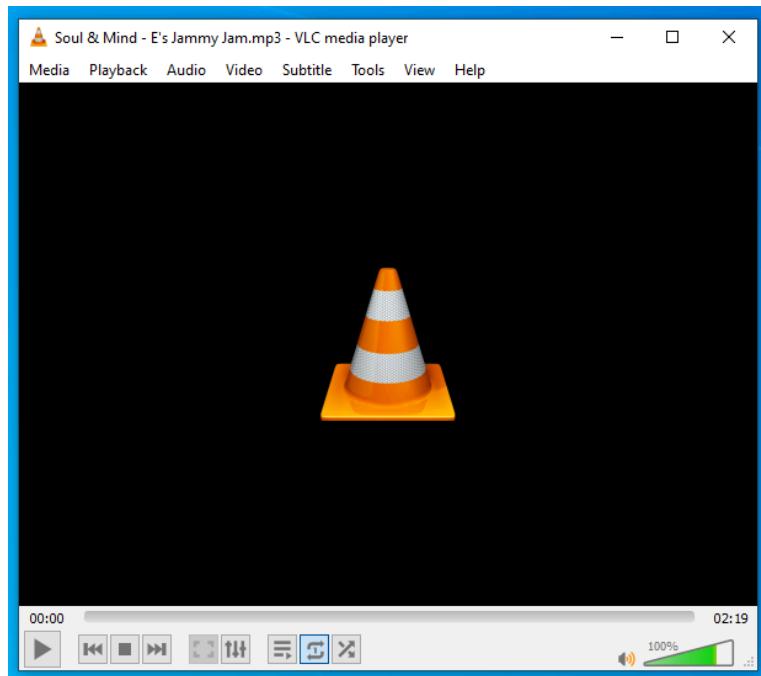
**Highlighted are the ones most frequently used.**

	CAM 1	CAM 2
1	<b>WIDE SHOT</b>	<b>WIDE SHOT</b>
2	Medium shot	<b>Standing Sermon</b>
3	<b>Sermon Close Up</b>	<b>Choir Shot</b>
4	<b>Lectern</b>	<b>Lectern</b>
5	<b>Pulpit</b>	<b>Pulpit</b>
6	<b>Christ Candle</b>	Piano Shot
7	Choir Wide Shot	<b>Crowd Shot</b>
8	Piano Shot	Organist Shot

## Playing Music on the Computer through the Sanctuary Sound System -

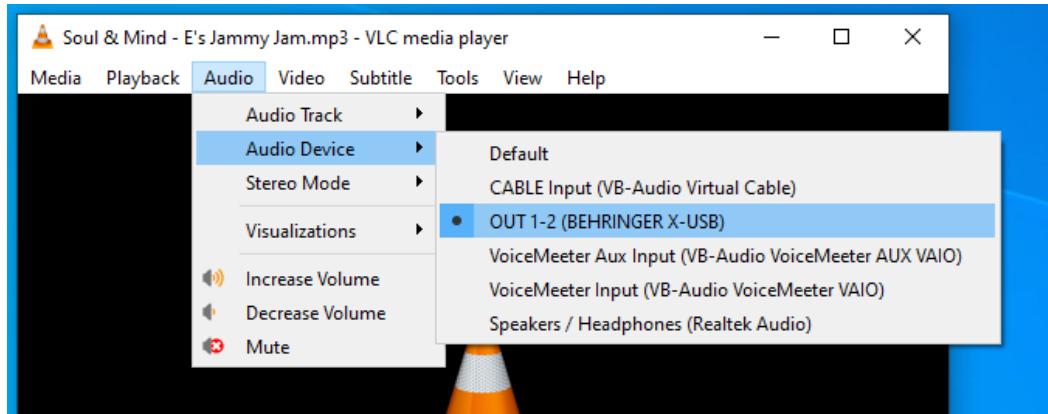
**PLEASE TEST PLAYING ALL MUSIC/AUDIO BEFOREHAND TO  
MAKE SURE IT WON'T BE TOO LOUD IN THE SANCTUARY**

1. **Locate the audio file** you would like to play on the computer.
2. **Open the file.** (*it should automatically open in VLC Media Player*)



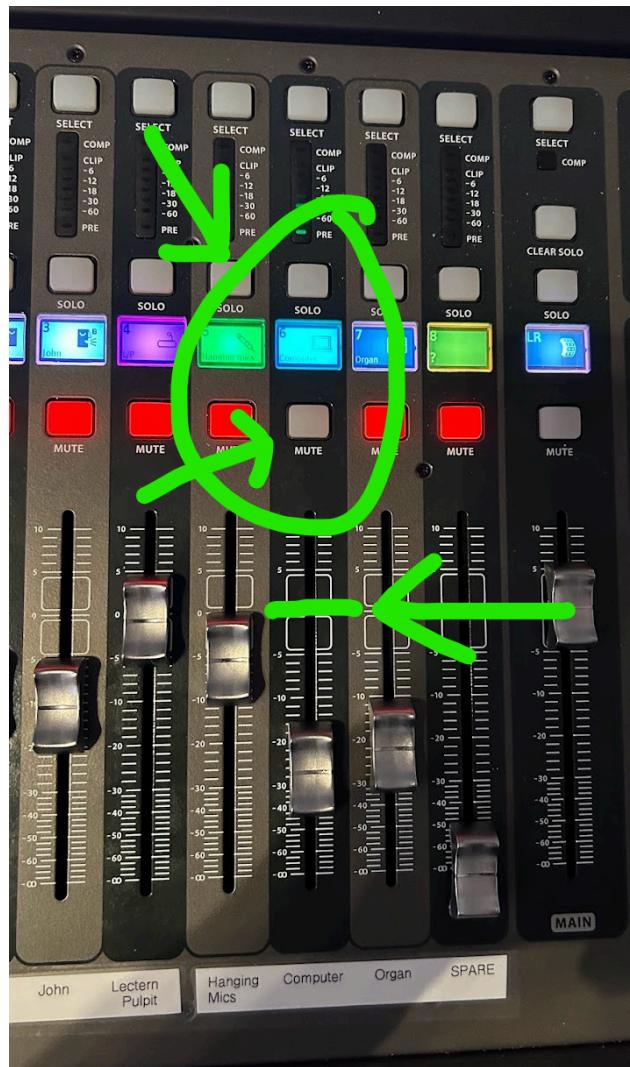
*(It should look something like this)*

3. Make sure the volume in the bottom right is set to **100%**.
4. Double check that the audio output is set to "**OUT 1-2 (BEHRINGER X-USB)**".



(go to the toolbar, Audio -> Audio Device -> OUT 1-2 (BEHRINGER X-USB))

5. Unmute the “Computer” channel on the right side of the Audio board and make sure the slider is set to “0”.



*(slider is not at the correct level in the picture above, set it to where the green line is)*

6. Press the “play button” in the bottom left corner in *VLC Media Player*.
7. **Adjust sound levels accordingly to not be too quiet/loud!**

## Shutting Down the Livestream -

---

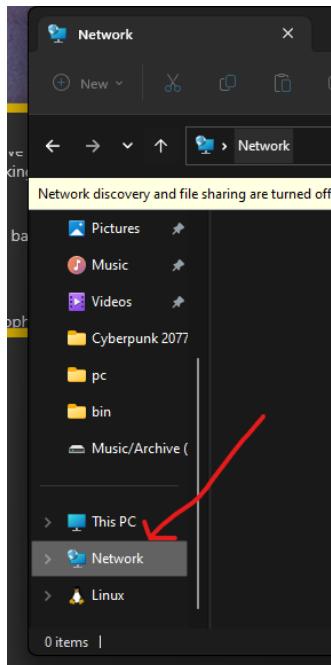
1. **Click the “Stop Streaming” and “Stop Recording” buttons.** (*same location as “Start Streaming” button*)
2. In chrome, click on **“End Stream”** in the top right of the window.
3. **Close** all programs.
4. **Restart** the computer.
5. **Turn off** all monitors.
6. **Unplug** the Camera Control Board.
7. **Unplug** the Cameras from the switch box in startup step 1.

# Troubleshooting -

---

## Slideshow not updating/Missing Slides -

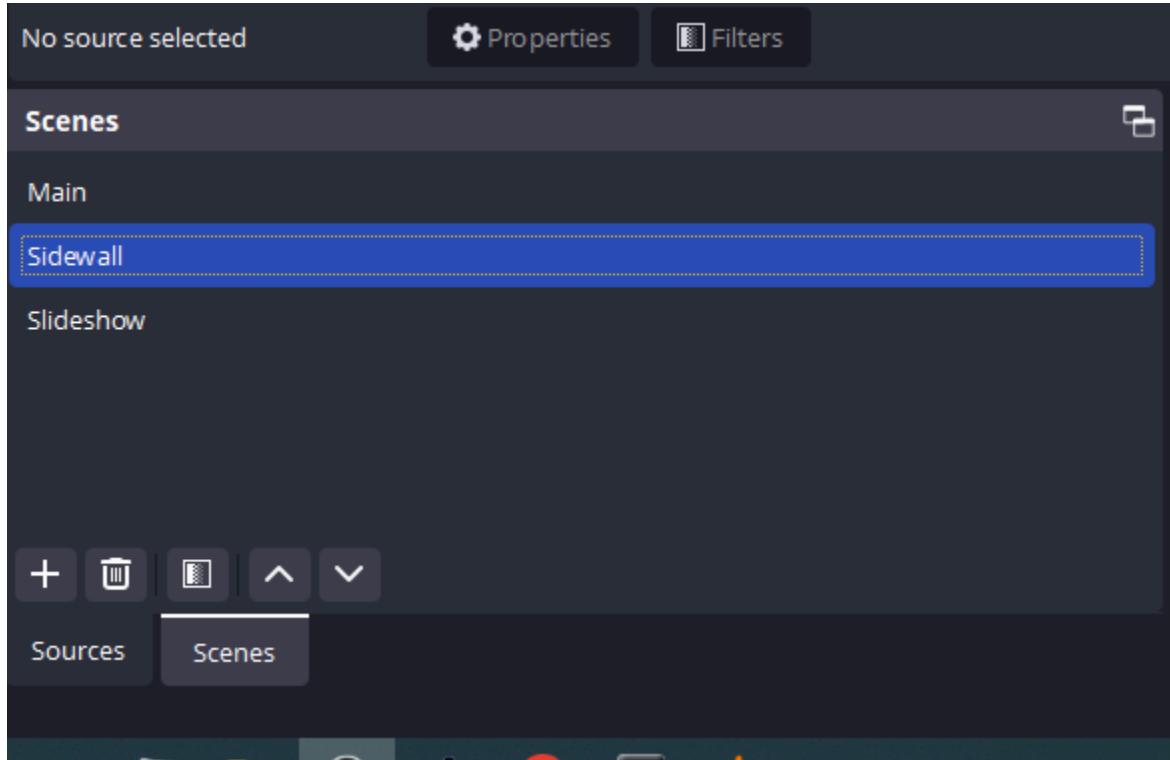
1. Open the file explorer
2. Navigate to the Network tab



3. Navigate to this directory - "*P:/Worship/Video-Powerpoints/2022/current date 2022/*"
4. Search the directories for the desired slides.
5. Open the folder on the Desktop "*RollingSlideshowDONOTDELETE*"
6. **Replace** the pre-existing ".png" files (*and music files if needed*) in the "*RollingSlideshowDONOTDELETE*" folder with the desired new slides.
7. **Close and re-open OBS** and it should be updated!

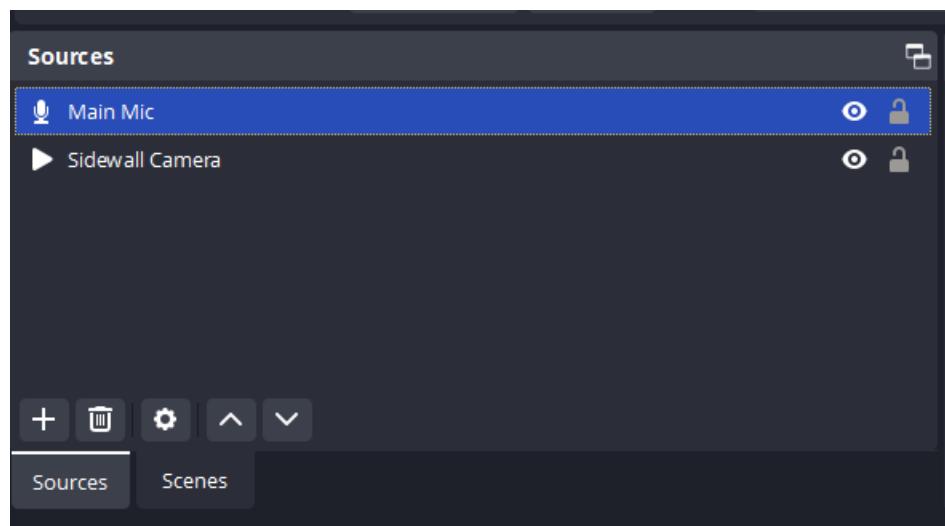
## Audio not working/no sound output -

1. Open OBS.
2. Select the Scenes tab in the bottom left panel.



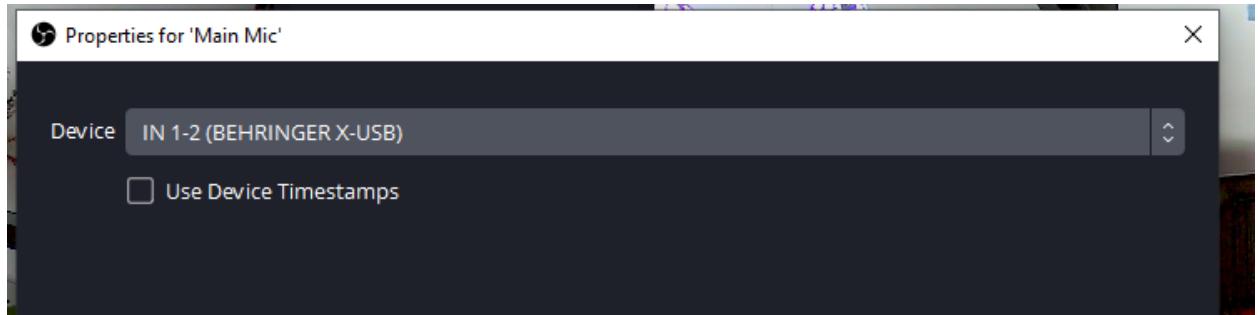
*(bottom left side of the screen. Scenes tab at the very bottom of panel)*

3. Select one of the camera sources in the Scenes tab. **Main or Sidewall**.
4. Transition to the camera source by pressing "**0**" on the number pad.
5. Re-select the same scene and switch to the Sources tab.



*(it should look like this now)*

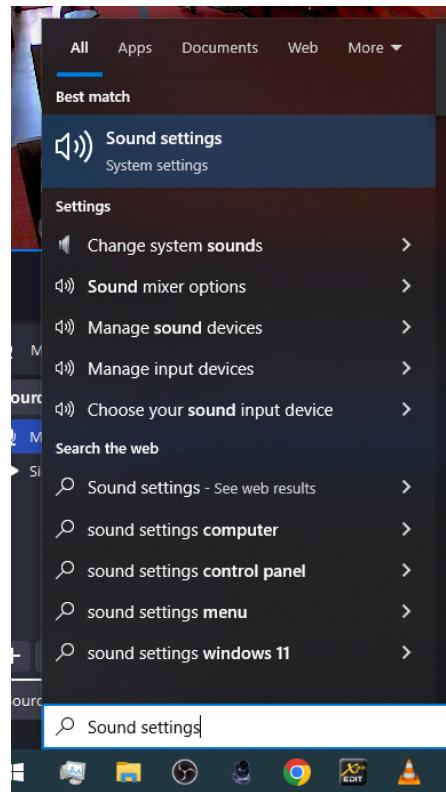
6. Double click on “**Main Mic**”.
7. Make sure “IN 1-2 (BEHRINGER X-USB)” is selected from the dropdown menu for the device.



*(it should look like this)*

### **IF IT IS STILL NOT WORKING, CONTINUE READING -**

8. Press the windows key then, type in and click on “**Sound Settings**”.

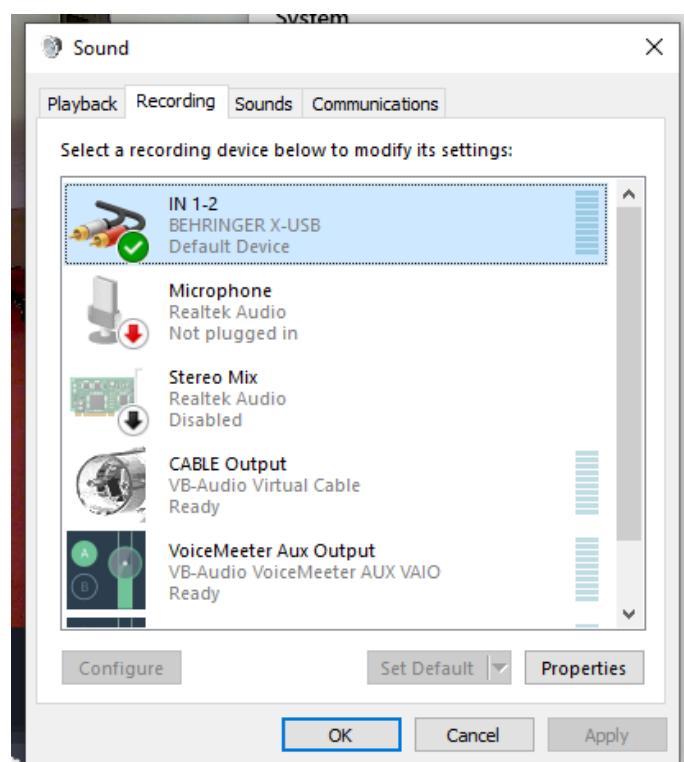


9. In the top right corner of that window, click on the small text labeled “Sound Control Panel”.

Related Settings  
Bluetooth and other devices  
**Sound Control Panel**  
Microphone privacy settings  
Ease of Access audio settings

*(the second option down from the top)*

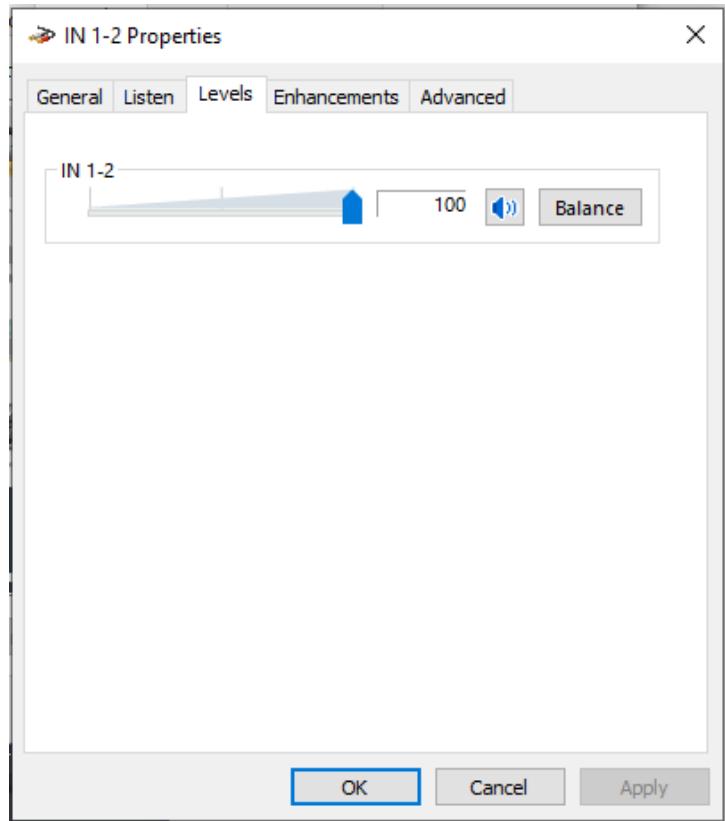
10. Switch to the “Recording” tab at the top **right click on “IN 1-2” and set it as the Default Device”.**



*(it should look like this)*

11. **Right click on “IN 1-2” and click on “Properties”.**

12. Click on the “Levels” tab at the top and make sure it is unmuted and set to 100.



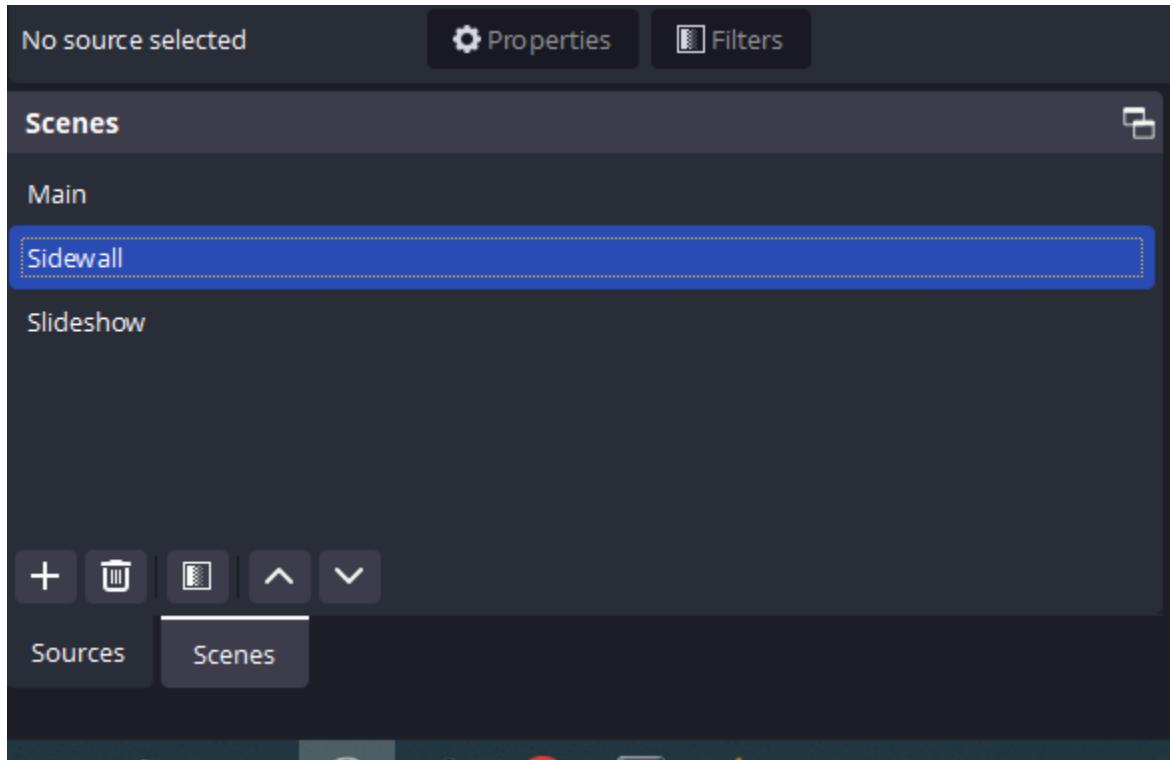
(it should look like this)

**IF “OUT 1-2 (BEHRINGER X-USB)” IS NOT APPEARING ANYWHERE ON THE PC, TRY -**

- Unplugging and replugging the USB cable that connects the Sound board to the PC.
- Restarting the PC.
- Updating/reinstalling the audio drivers for the BEHRINGER X-USB interface.
- Repeat all steps above.

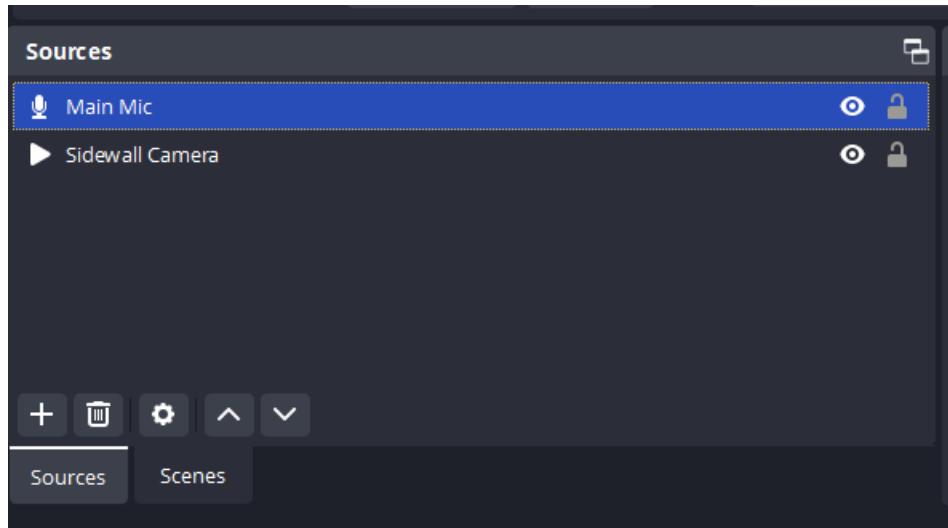
## Cameras not working/Lagging -

1. **Close and re-open OBS.**
2. **Unplug and replug** the camera cables listed in the setup portion of this guide.
3. **Close and re-open OBS.**
4. Select the **Scenes tab** in the bottom left panel of OBS.



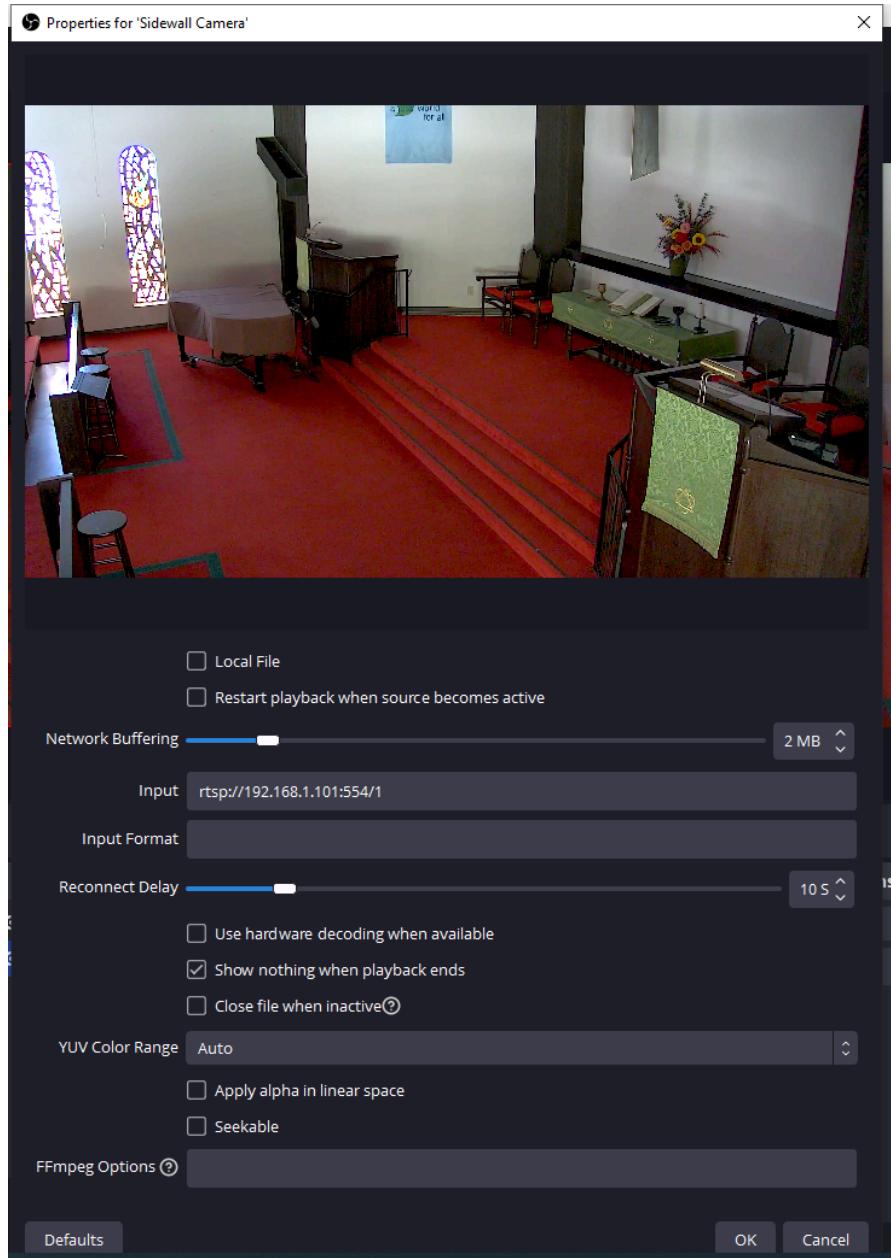
*(bottom left side of the screen. Scenes tab at the very bottom of panel)*

5. Select one of the camera sources in the Scenes tab. **Main or Sidewall**.
6. Transition to the camera source by pressing "**0**" **on the number pad**.
7. Re-select the same scene and switch to the **Sources tab**.

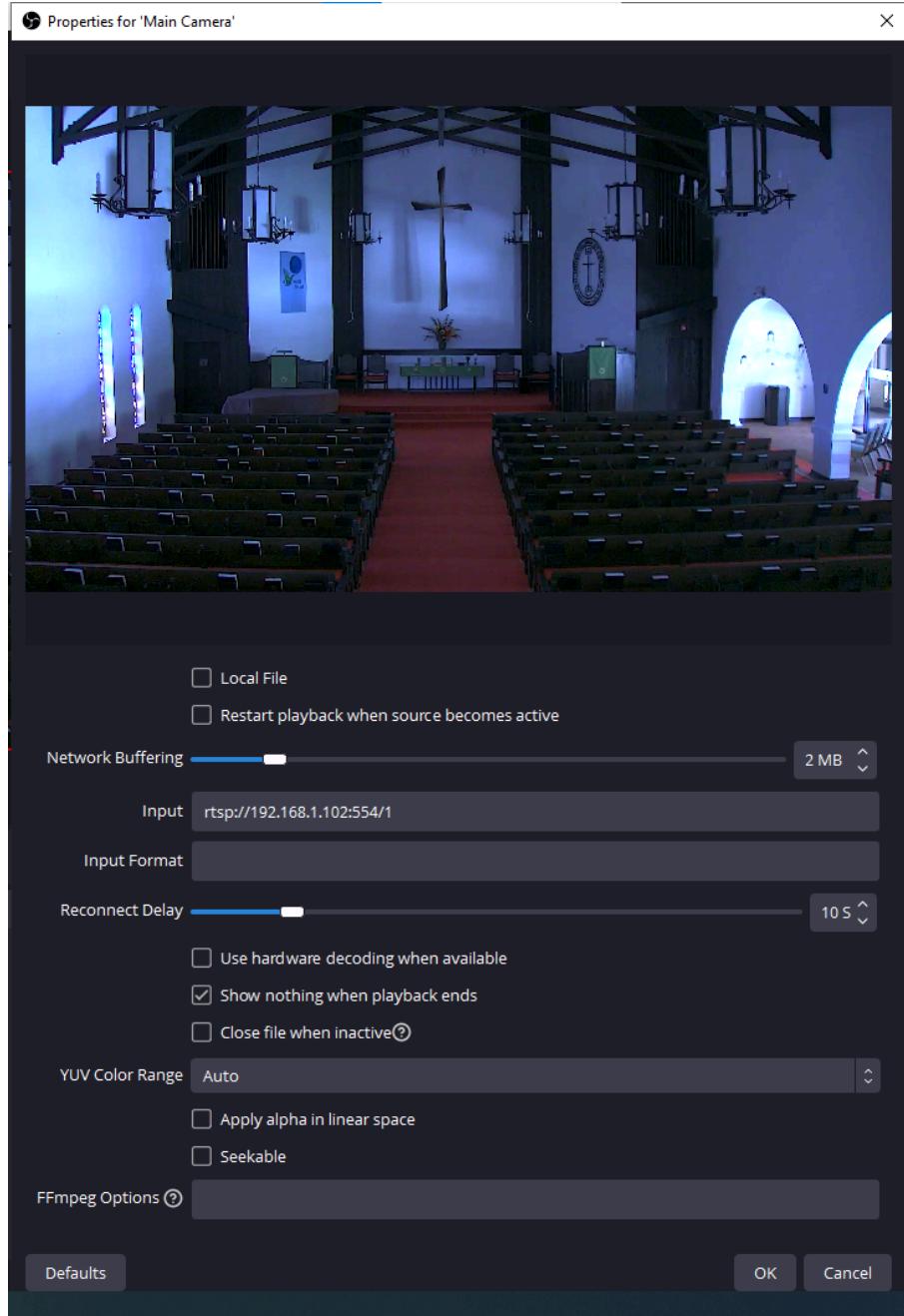


*(it should look like this now)*

8. Double click on “       Camera”. (*the only source with camera in the name, sidewall camera shown in above image*)
9. **Make sure the settings match what's shown below for each camera source -**



*(Settings for the Sidewall Camera)*



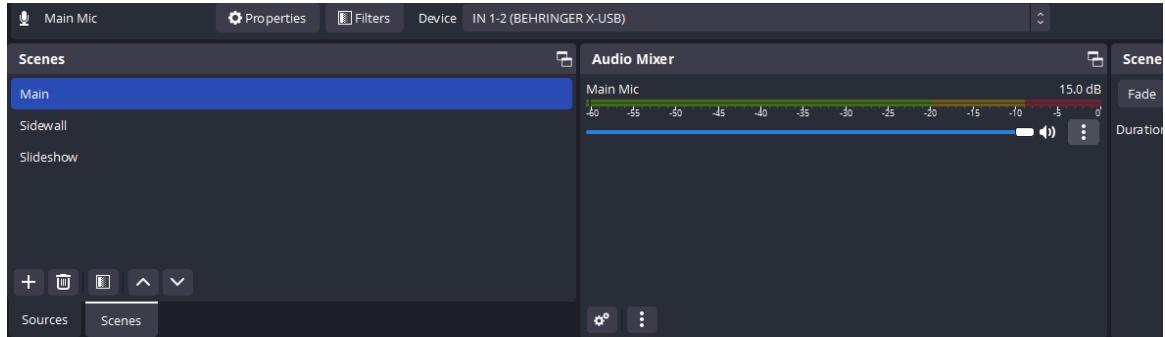
*(Settings for the Main Camera)*

**IF IT IS STILL NOT WORKING, TRY -**

- Restarting the PC.
- Checking the PC connection to the ethernet switch.
- Troubleshooting the individual camera connections.

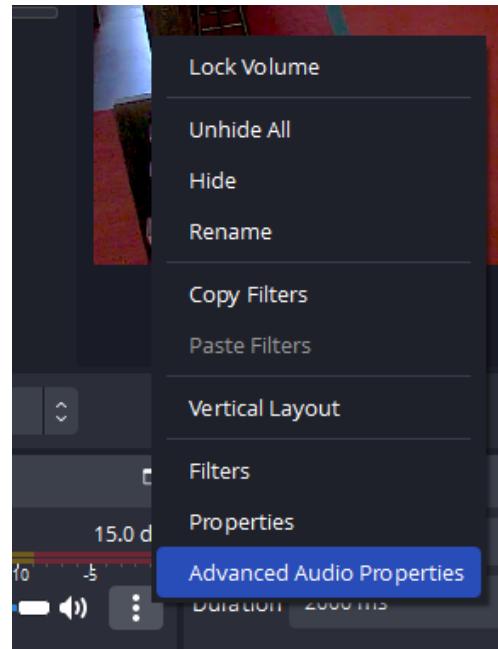
## Audio lagging/Audio not matching camera/Too quiet -

1. Find **Audio Mixer** near the bottom right side of OBS.



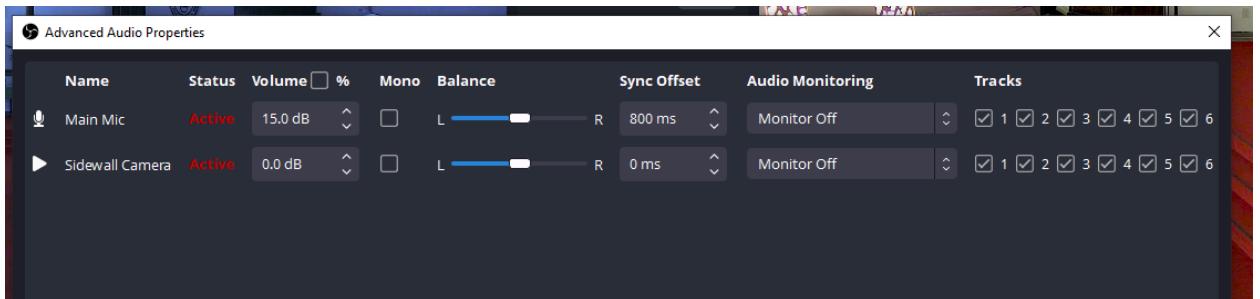
(the right panel)

2. Click on the three dots under the **Main Mic** audio channel and click on "Advanced Audio Properties".



(selected button)

3. On the **Main Mic Channel**, manually set the Volume to 00.0db.
4. On the **Main Mic Channel**, Set **Audio Monitoring** to be on.
5. **Change the Sync Offset** by plus or minus 100ms (starting at 800ms) until the audio visually matches the speaker seen through the camera previews.



(Advanced Audio Properties panel)

# Slideshow Directory Naming Scheme -

---

This section will outline how the directory containing the weekly slideshow must be named in order for the script I wrote to properly update the loft computer. If the slideshow is not updating on the stream when the loft computer turns after attempting all of the troubleshooting methods mentioned above, I recommend reading this section to make sure the directories are properly named. If the directories are not named EXACTLY how it is laid out here, the loft computer will not update automatically.

## Naming Scheme-

Each set of slideshows must be placed within this directory on the networked drive “P:\Worship\Video-Powerpoints\”

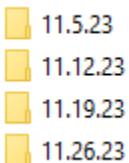
Inside of this folder must contain more folders for whatever the current year is, Like this -

PC > Public (\CACCServer2) (P:) > Worship > Video-Powerpoints >		
<input type="checkbox"/> Name	Date modified	
2023	12/27/2023 3:04 PM	
2024	8/30/2023 12:15 PM	

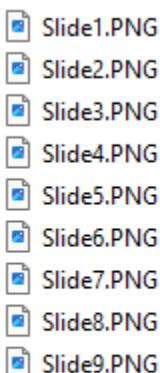
Inside each directory should have 12 total folders labeled “1-12 Month Year”, like this -

 1 January 2023	2/2/2023 10:10 AM	File folder
 2 February 2023	2/22/2023 12:42 PM	File folder
 3 March 2023	5/25/2023 1:49 PM	File folder
 4 April 2023	5/3/2023 10:22 AM	File folder
 5 May 2023	6/1/2023 9:18 AM	File folder
 6 June 2023	6/28/2023 11:26 AM	File folder
 7 July 2023	8/2/2023 11:03 AM	File folder
 8 August 2023	8/30/2023 12:32 PM	File folder
 9 September 2023	9/28/2023 12:22 PM	File folder
 10 October 2023	11/2/2023 3:04 PM	File folder
 11 November 2023	11/30/2023 12:07 PM	File folder
 12 December 2023	12/28/2023 2:41 PM	File folder

**Inside each folder for the months of the year should have around 4-5 more Subfolders for each service that will happen that month named EXACTLY like - MM.DD.YY (you don't need to include extra zeros)**



**Inside of each of these subfolders must contain the png's AND MUSIC needed for the slideshow to run during the service, like this - (it does not matter what they are named, as long as they are ordered somehow)**



(all of the files within this directory will be automatically copied over to the loft computer)

**If done properly, the directory naming scheme should look something like this  
“P:\Worship\Video-Powerpoints\2023\11 November 2023\11.19.23”**

It might be helpful to go back and look at how the older slideshow directories were laid out and named when creating new folders.