Singapore Mathematics League

Screen Recording Guide

As per the SML contest rules, all participants during the Online Contest must record the screens of all devices used for the entire duration of the contest. If you use multiple screens, all of them should be recorded as well.

This guide will walk you through it.

Note: Once the contest ends, do not delete your recordings! You must hold onto them for at least one month. To verify results, we may ask to review your team's screen recordings. If requested, you must submit the screen recordings of all members within three days. Failure to do so may be treated as evidence of dishonest behaviour, which could lead to disqualification.

We understand that technical issues may cause recordings to be lost or corrupted. If this happens to you (either during or right after the contest), please contact us through our **Discord server** or via email at **smlqueries@gmail.com** immediately. Do not wait until we ask for your recordings! We will still require you to submit whatever footage you managed to capture, and may also ask for alternative proofs of work, such as your browser history for the duration of the contest. If we cannot confidently verify that you encountered a genuine technical failure, we reserve the right to make the final decision.

You're free to use any screen recording software of your choice, but we strongly recommend using Open Broadcaster Software (OBS).

OBS lets you customise your recording settings, allowing for a lower bitrate and frame rate, which reduces the file size. With the configuration that we recommend in this guide, a four-hour recording will have a file size of around **400MB (ensure that you have at least 2GB of storage before recording).**

Open Broadcaster Software (OBS)

Installation

Windows

1. **Download**: Go to the official OBS Studio download page and download the installer.
2. **Run Installer**: Once the download is complete, open the downloaded file (usually located in your Downloads folder) and double-click the installer to begin the setup process.
3. **Install**: Follow the installation wizard by clicking Next, then click Install.

macOS

1. **Download**: Go to the official OBS Studio download page and select macOS.
2. **Open Installer:** Once downloaded, open the `.dmg` file.
3. **Install**: Drag OBS Studio into the Applications folder.
4. **Grant Permission**: Go to System Settings → Privacy & Security → Screen Recording, and enable OBS Studio.

macOS (alternative)

1. **Install Homebrew**: Open a terminal and run

```
/bin/bash -c "$(curl -fsSL
https://raw.githubusercontent.com/Homebrew/install/HEAD/install.sh)"
```

2. **Install OBS**: In the terminal, run

```
brew install --cask obs
```

Linux (Ubuntu)

1. **Install OBS**: Run the following commands in your terminal.

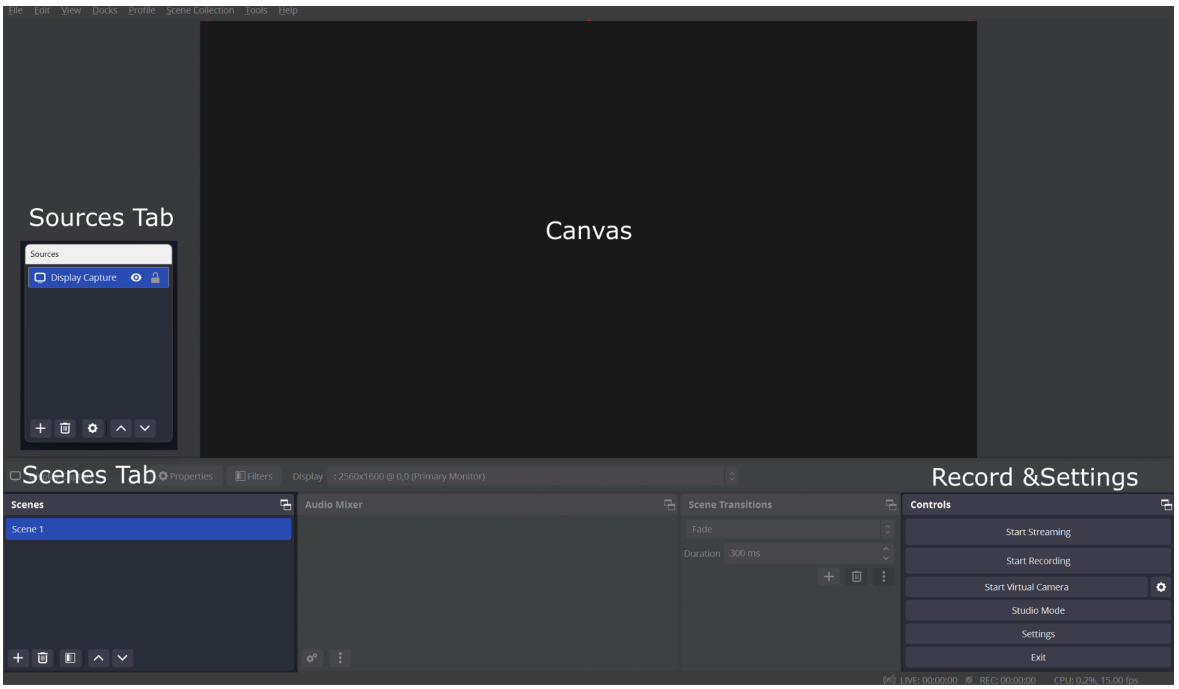
```
sudo add-apt-repository ppa:obsproject/obs-studio
sudo apt update
sudo apt install obs-studio
```

Usage

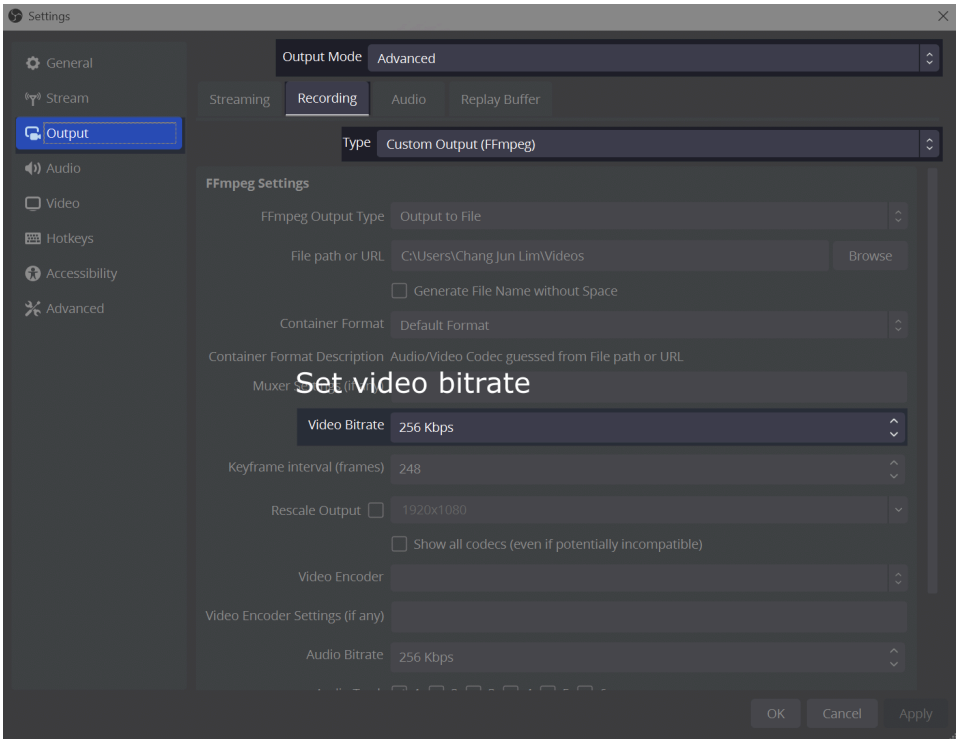
Once you have OBS installed, follow these steps to configure and start your recording.

1. **Launch**: Open OBS Studio on your computer.
2. **Create scene**: Click the '+' button in the Scenes panel and create a new scene.
3. **Add display capture**: In the Sources panel, click '+' then select Display Capture (or Screen Capture in linux), and click OK. *(Note: Use Display Capture only. Do not use other capture methods*).
4. **Add multiple display captures (for multi-screen users only):** Repeat Step 3 to add additional Display Capture sources. Arrange the sources on the canvas so that all screens are clearly visible in the recording.
5. **Settings:** Go to Settings (on macOS, click the menu bar, then OBS → Settings) and apply the following:
    - Output: Change Output Mode to Advanced. Under the Recording tab, set Type to Custom Output (FFmpeg), then set the Video Bitrate to 256 kbps.
    - Audio: Under Global Audio Devices, disable all Mic/Auxiliary Audio Inputs
    - Video: Set the FPS value to 15
    - Remember to click Apply!
6. **Start recording**: Click Start Recording in the bottom-right corner.
7. **Fit to full screen**: Right-click on Display Capture in the Sources panel, then click transform and select fit to screen.
8. **Stop recording**: Click Stop Recording when finished.
9. **Locate recording**: Go to File → Show Recordings to open the folder containing your video.

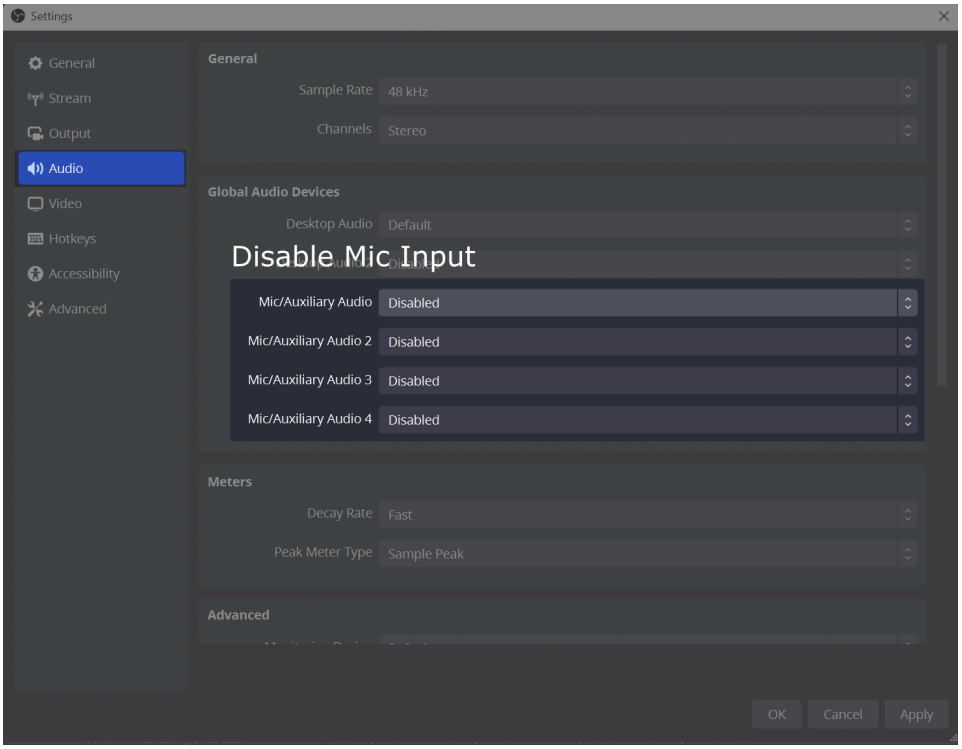
Please refer to the screenshots below for a visual guide on how to configure OBS.



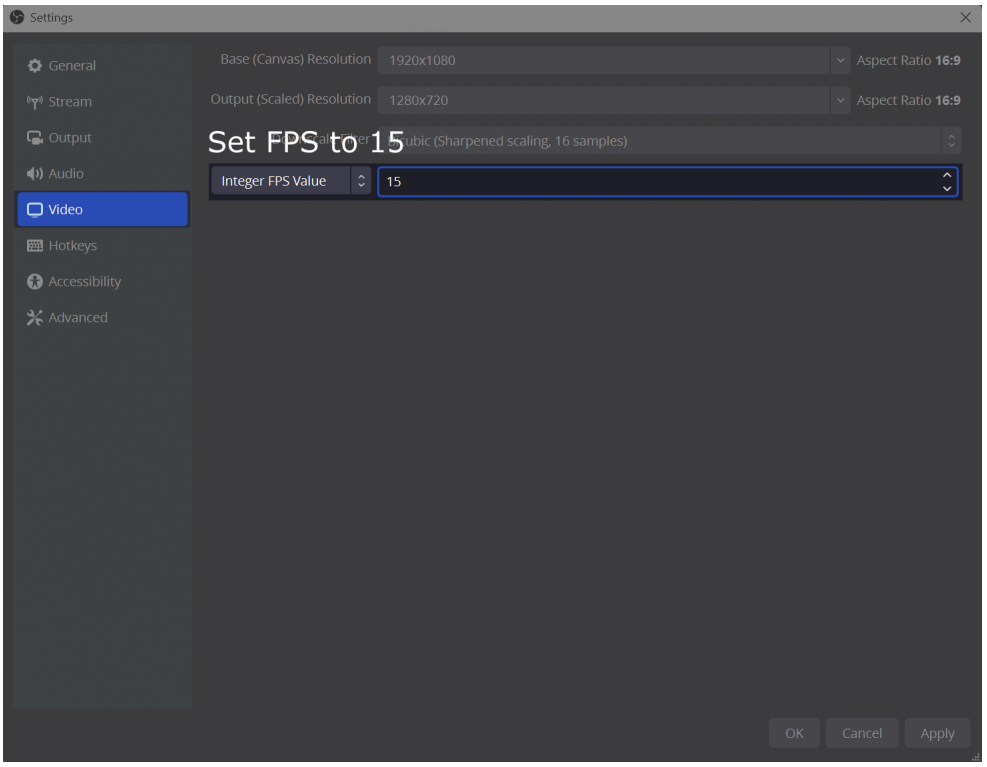
Main page of OBS Studio



Configuration for Output



Configuration for Audio



Configuration for Video