John Megacycle's 'Getting Started with Twitch Streaming' Guide

Over the last few years, Twitch has quickly become one of the most popular live streaming platforms, drawing massive crowds to the most popular names in gaming. Becoming a regular streamer takes time and effort, but can be rewarding. Whether it is meeting new friends or hoping to monetize your content, streaming can be quite a fun experience. A lot of the technical know-how can be really daunting and I wrote this guide to help you get on your way to start streaming. Now, on to the basic setup!

1> Download and Install OBS (Open Broadcaster Software)

OBS has become one of the most recognized and well developed applications for streaming (and even recording). It's incredibly versatile and even allows changes on the fly (while streaming).

https://obsproject.com

2> Create an Account(s) on your Platform of Choice

There are lots of options out there, for streaming platforms, though I'm writing this document specifically for Twitch. At this stage, it's time to create those user accounts/emails or whatever is needed. Later on, we will discuss streaming to multiple platforms at the same time, but for now, let's just work with Twitch.
(I still listed the links below for these three platforms.)

https://www.twitch.tv   - Twitch (Owned by Amazon)
https://www.youtube.com   - YouTube (Owned by Google)
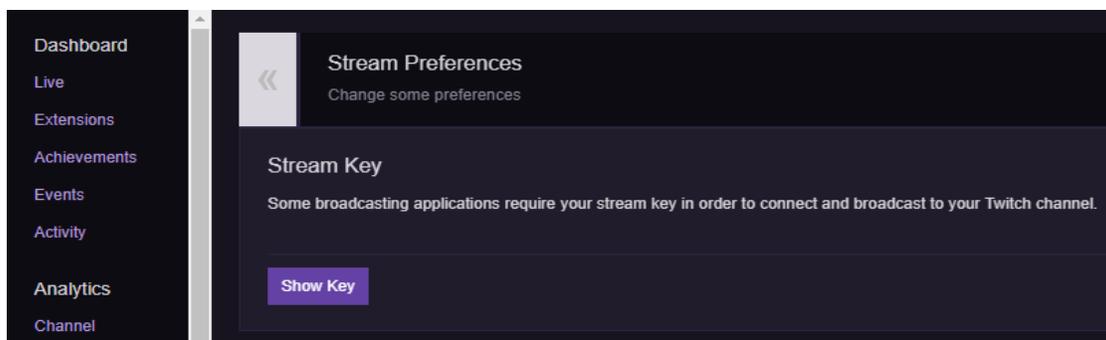https://mixer.com   - Mixer (Owned by Microsoft)

3> Getting your Stream Key

A Stream Key is a unique identifier for your channel and your data. Essentially, it allows **anyone** who has that key to stream/send content to your channel. PROTECT THIS KEY! Your Twitch Stream Key can be found on your Dashboard. Hit <Show Key> and copy it. We'll need it for the next step.

4> Hooking up OBS to your Twitch Stream

  IMPORTANT NOTE: Assuming you are running OBS in Windows, you'll always need to 'Run as Administrator'. If you don't do this, OBS can't 'see' the screen as it doesn't have the proper permissions. If you are streaming later, and the screen is black, remember this step. Simply <right mouse click> on the OBS shortcut/application and select 'Run as Administrator'.

  With OBS up and running, click on <Settings>. In the Settings menu, you'll see a bunch of options on the left, which we will come back to later. For now, click 'Stream' and select the options as you see them below:
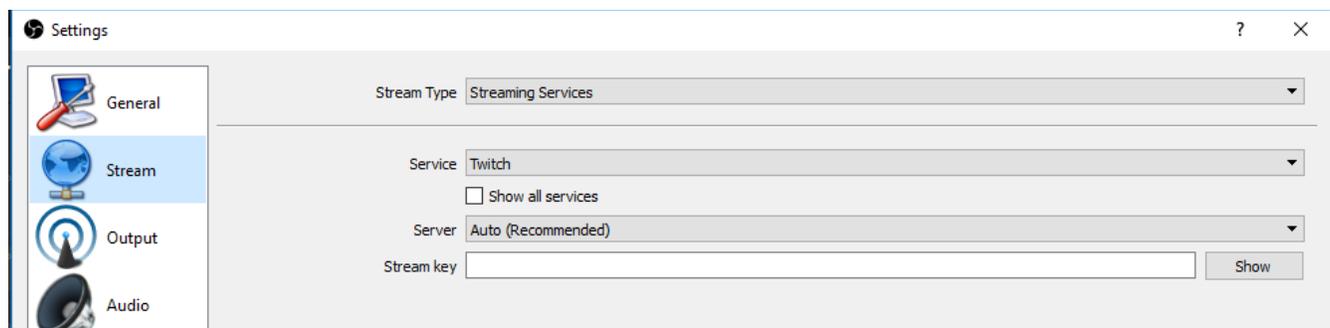
Stream Type: Streaming Services
Service: Twitch
**Server:** Auto (Recommended)
**Stream Key:** <PASTE YOUR STREAM KEY FROM STEP 3 HERE>

Click <Apply>

5> Setup Hotkeys

  Now, we have to specify what keys make OBS start/stop streaming. Under Hotkeys, you can see lots of options, but we only really care about the top two. You can make this any key you would like, but my recommendation is to make this key an uncommon one, as accidentally hitting it will stop your stream. Good ones are =, !, @, #, $ or really anything that's easy to hit, but you won't slap when switching weapons or calling up control groups.
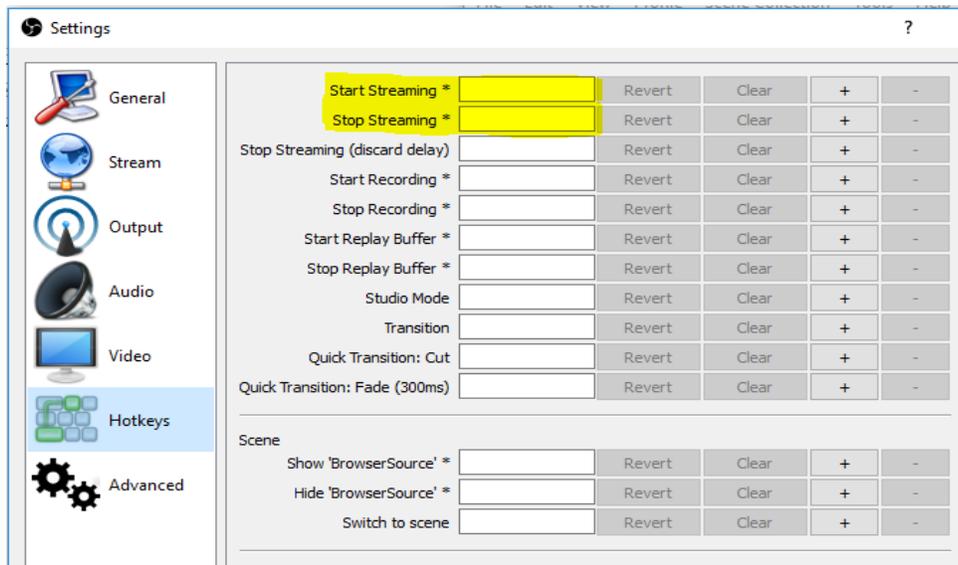
6> Creating a Scene

 OBS referrers to different groups of assets/pictures/audio/animation/gameplay as a Scene. This helps especially if you want different settings per game or per application. Click the + under Scenes and name it whatever you like. We are just leaving it as default and it should look like the below picture.
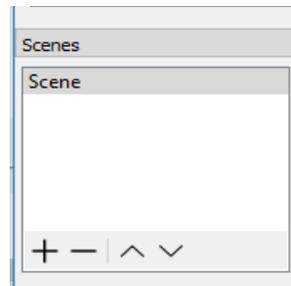
7> Creating a Source

 A Source is an element that belongs to a Scene. This is the individual asset (picture/audio/gameplay/etc) that is being displayed in the main screen. I should mention that your game should be running at this time, or OBS won't detect it and the next few steps won't quite work. There are LOTS of options when creating a source and we'll go into this in more detail in the advanced section, but for now, let's create a game capture. Accept the defaults for the name, then we can configure the properties, as seen in the below picture (on the next page).

Options will be set as:

Mode: Capture Specific Windows
Window: <THIS IS THE APPLICATION/GAME YOU ARE STREAMING>
Window Match Priority: Match Title, otherwise find window of the same executable

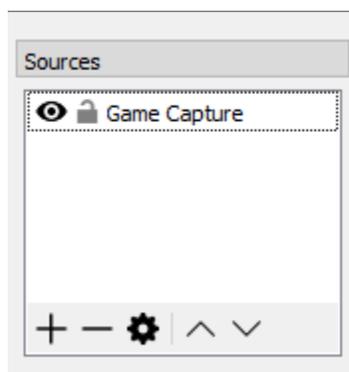**Multi-Adapter Compatibility:** Unchecked
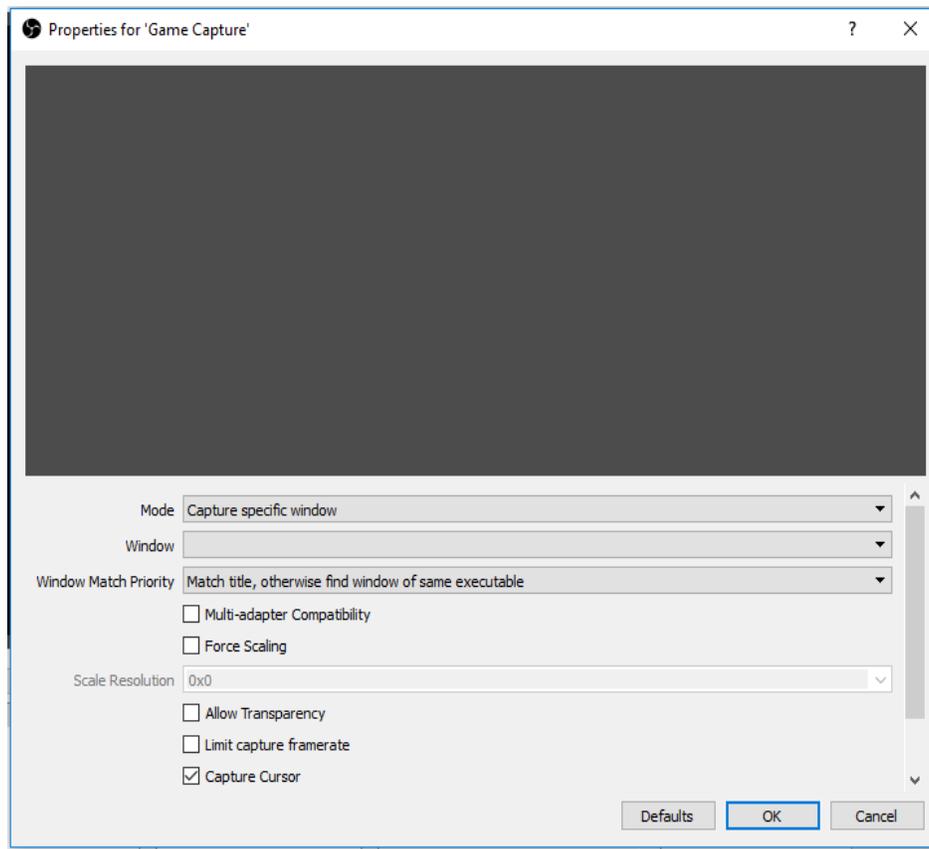**Force Scaling:** Unchecked
Allow Transparency: Unchecked
Limit Capture Framerate: Unchecked
**Capture Cursor:** Checked

Click <Accept> and it should look like this:

8> Testing the Stream

Now, with the game and OBS running, you should see your game screen in the OBS window. This means that OBS can 'see' what you are playing and is able to stream it. Here, I use OpenTTD as my example and you may notice that I had to use 'Window Capture' to get it to work, but that's not an issue. Older games may require some experimenting with different Sources to appear correctly. Next, hit the <Start Stream> button (or use the Hotkey you set earlier) and check your Twitch Channel. In a few minutes, your stream should be live!
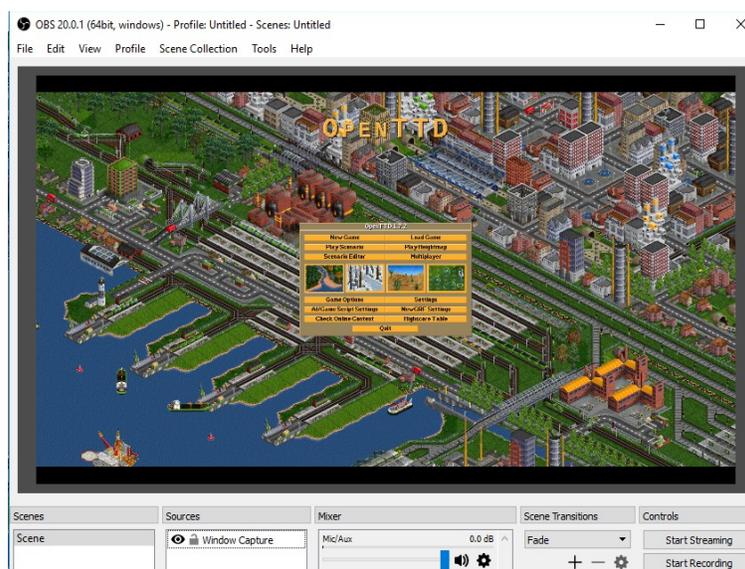
9> Tweaking and Testing

OBS is a very versatile application and there are tons of possibilities, all just requiring patience and testing to get what you want accomplished. After you are satisfied with testing your stream, click on <Stop Streaming> or your Hotkey to stop the stream. At this point, you've accomplished quite a bit and now you have a working pipeline from your home to the world worth of viewers who can stop in and say hi. :D

This was just the basic setup for OBS, Twitch and other systems and if you'd like to learn it all on your own, now is the perfect time to stop reading this guide. Add more Sources, check out online services to add notifications, add bots and start looking into overlays to customize your stream are all great beginning steps. However, if you'd like to learn from my mistakes and get things squeaky clean, the below sections are perfect for you.

Advanced Steps, Tweaks and Setup

A lot of the things that we will be messing with will be within OBS, but there is a bunch we can do outside of the application to ensure a clean and steady stream.

1> Set proper resolution/bandwidth

Checking your resolution and ensuring that you are setting this up properly in OBS really helps the quality of your stream and by checking your bandwidth, we can ensure that you can maintain a high quality video stream.

Each operating system is different, so for Windows 10, under Display, you can see the native resolution for your system (see below). For me, since I'm writing this on a cheap laptop, I have a really weird resolution. Still, for games run in full screen (unless otherwise specified) this is the 'Base' that we will specify in OBS.
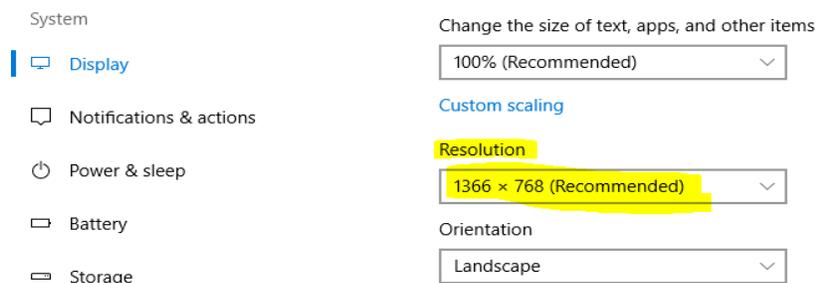
Under Settings>Video, this is where the resolution is defined.

Base (Canvas) Resolution: This is your resolution you found from before
Output (Scaled) Resolution: 16:9 format or whatever your desired output is. (**Note**: This setting should never be higher than your 'Base Resolution' and should be lowered if you don't have enough processing power, bandwidth or if you are experiencing other issues.)
Downscale Filter: Set to Lanczos, which is a solid choice and uses only slightly more processing power than bilinear. (**Note:** Downscaling is handled by the GPU (Graphics Card) and not the CPU.)
Common FPS Values: 30 (unless you have a ton of bandwidth, as setting this to 60 will increase the

amount of upload speed you require by about 40%-60%)
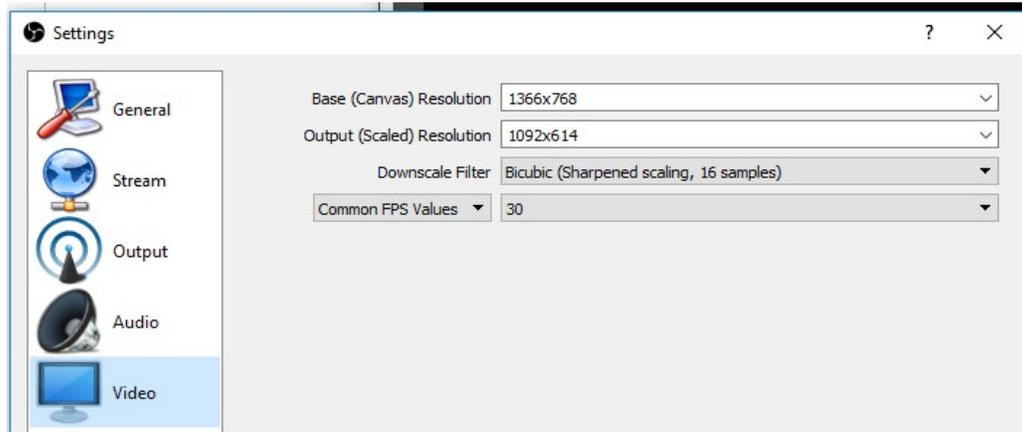
Now, let's move on to bandwidth. In this case, bandwidth is simply 'how much data can we send/receive in a set period of time' and is usually expressed as mb/s or 'Megabits per Second'. Simply Google 'Bandwidth Test' and any site can run a free and quick test of your bandwidth.

I tried www.speedtest.net and I got the below results:

There is a comprehensive list of resolutions/speeds and other consideration on this YouTube article: https://support.google.com/youtube/answer/2853702?hl=en

Knowing what we know, and using my laptop as an example, I could probably safely stream 720p (1280x720) which would be perfect for older games and that's what I would set my 'Output (Scaled) Resolution to'. Needless to say, PUBG isn't going to fly on this very well at all.

Again, maintain the 16:9 resolution, else you'll get black bars either above or below your stream. Once that's set, that takes care of what you need and should maintain a clean visual experience.

Now, for the bandwidth part. Under the Settings>Output section is where you will find your 'Video Bitrate'. This is used in tandem with the 'Upload' number that you found before. Using myself as an example, I know what my maximum is capable of, so setting it a bit lower, giving room for any hiccups or any disruptions. I could easily set this to 4000, since the range for 720p is 1500-4000 mbps, which would allow for a cleaner experience for more fast moving games. Again, this more depends on the game that you are playing. I'd play more old-school games on my laptop, so 2500 should be perfect for

me. See the below pic for my example.
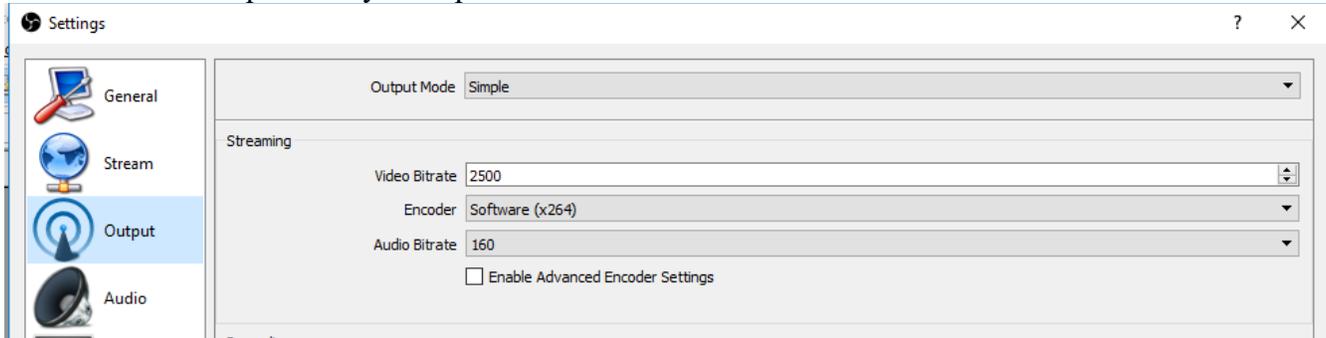
Please Note: If you stream to a service, such as YouTube, your stream is transcoded (converted) into a variety of formats, allowing viewers with less powerful connections or systems to enjoy your stream. This is **NOT** the case for Twitch! If you stream at a high bandwidth, users on cell phones may not be able to enjoy your gaming experience. Be sure to consider the service and who your target audience is.

2> Audio Filters and Noise Gates

There are a lot of things that you can do with audio in OBS. For this section, however, we are just going to stick with filters, specifically Noise Gates. A Noise Gate is a device (software or hardware) that can moderate the volume or strength of an audio signal. What this does for us is help us filter out background noises, such as a fan or someone talking in another room.

Assuming that you have already specified what OBS believes to be your Mic/Aux and Desktop Audio, the below should be what you see. **Note:** These should be defaulted by Windows so I didn't go over this part in specific. Click the gear icon next to the Mic/Aux under the Mixer.
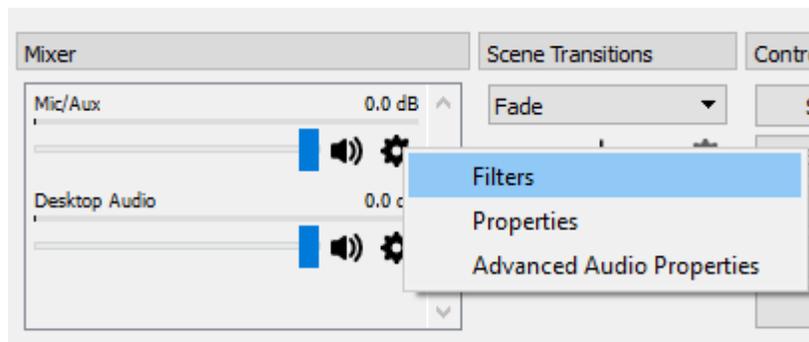
Then click under 'Audio Filters' and Add a new 'Noise Gate'.
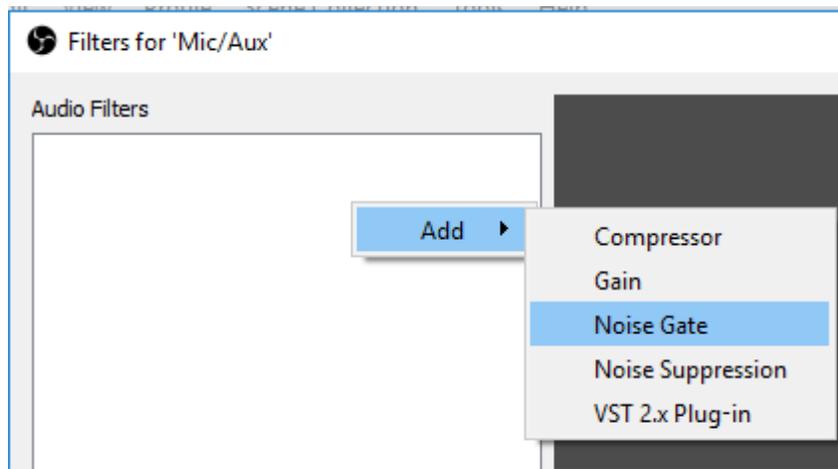
You can name the Noise Gate anything you like. I just left it default.
Simply stated, in the below picture, here is where you can customize how sensitive the gate is and when it activates. With the Open/Close Threshold you can set:
**Open Threshold:** How loud should it be before the mic pics up
Close Threshold: How quiet should it be before the mic closes

This will take much more testing from you, as there aren't any 'golden rules' except for, your Open Threshold should be higher than your Close Threshold.
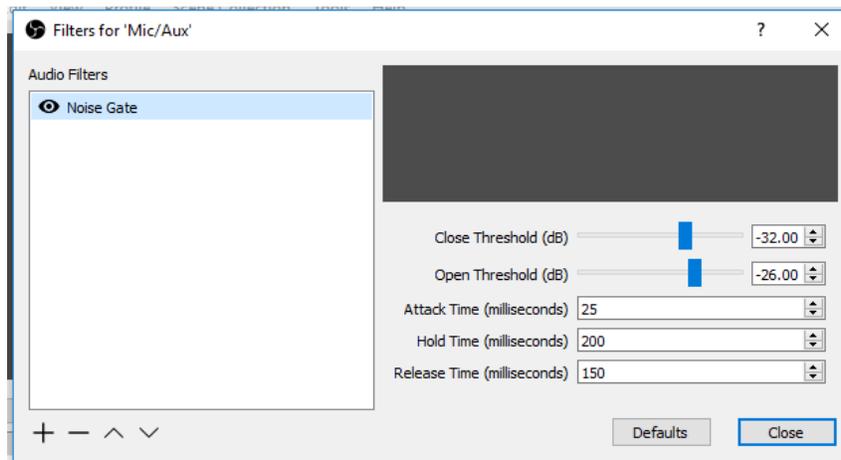

So, if it wasn't clear, start talking and testing out your volume. If you see, your Mixer on the main screen should be picking up any game/voice audio that you have Sources for. Aim for something that is comfortable, since iterations with your viewers is what makes live streaming special, you'll be talking a lot. For me, I have my mic picking up when I'm talking, but not when I'm whispering. Again, testing is what will get you the perfect settings.
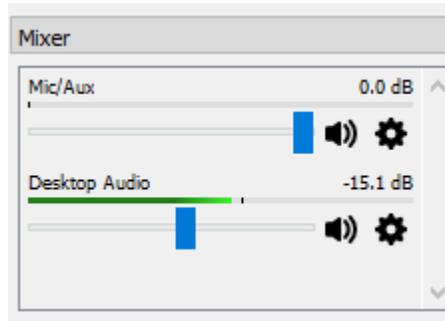
3> Multiple Sources

As mentioned before, sources are very versatile and allows for assets to be stacked on top of one another or interact with each other. As a reminder of this, I have the below picture with my logo layered on top of the game video. Priority for sources are always top-down, meaning whatever is at the top of the list will always appear on top of whatever is below it. Keep this in mind when using multiple pictures, video or anything else. Nothing is sillier than setting up notifications for new followers only to have it hidden behind your gameplay. See the below picture for my example.
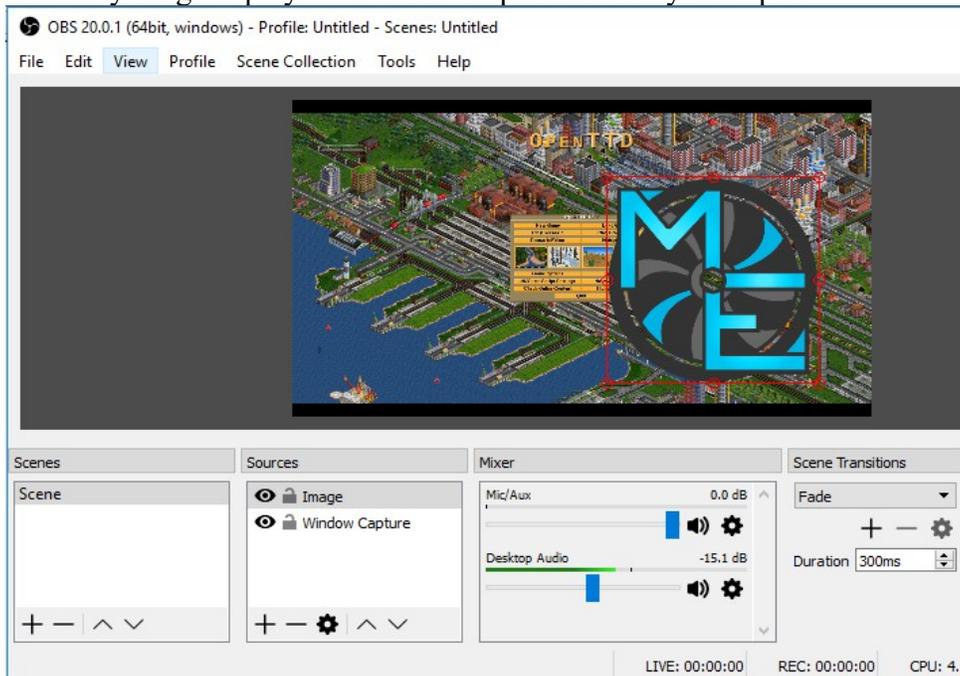
4> Notifications and Bots

First, let's talk about notifications. Simply, notifications are just alerts that appear whenever something occurs, such as a new subscriber, a new follower or a donation. There are a few sites that can do this service for you for free. I personally use https://streamlabs.com and it is very customizable. I won't go into all of the details, but on StreamLabs, you would create is a Widget>Alert Box with a gif and text of your choice and then, in OBS, link it with a 'BrowserSource' as in the picture below.
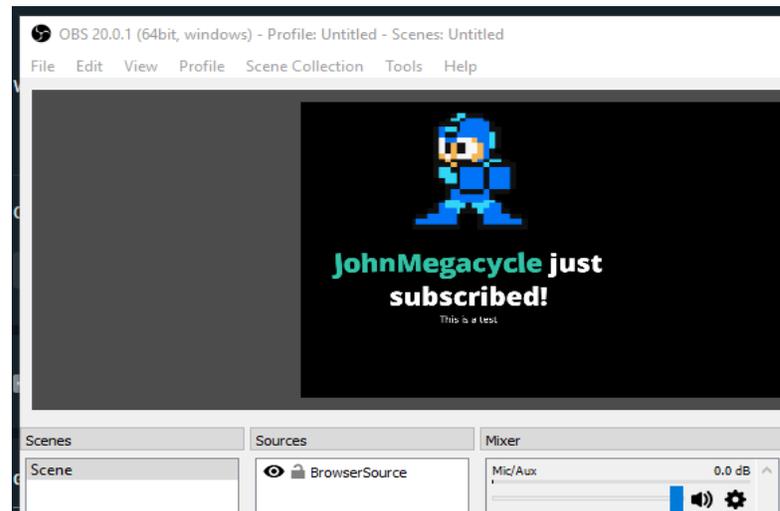
^^^ It's a gif of Mega Man dancing, but it won't show in the PDF, I'm sure... ^^

Bots can help with moderation, commands and even running advertisements for you. Think of it like a bodyguard for your stream, but also helps you keep track of things. Personally, I use Nightbot but I haven't set it up to do anything other than moderate for foul language. You can find it here and all of the documentation and steps to get it working for you and your stream: https://beta.nightbot.tv

5> Overlays

This goes back to the 'Multiple Sources' section and can really enhance how your output looks. There are tons of sites out there and after a Google search, you can get a pretty quick idea of what does into an Overlay. Personally, I don't use one at this time, so I won't be leaving any recommendations on this section, but it is still important to consider.

6> Recording

OBS is also capable of recording, which can be great it you'd like to do editing after the stream, or make a custom highlight reel. Under Settings>Output the choices and settings for recording are there. A lot of this can be matter of preference, but my settings are below. Don't forget to bind your recording to a Hotkey as well to save yourself some aggrivation.
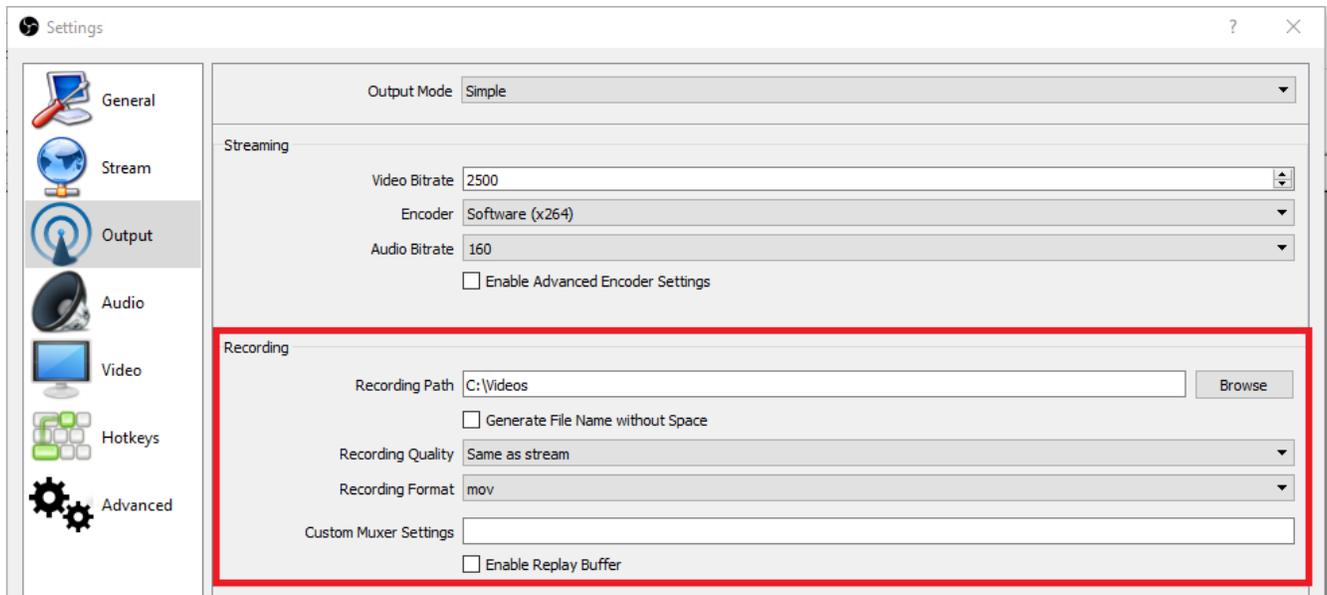
PLEASE NOTE: Feel free to set any of these as you'd like, but I'd warn you about the Recording Format. If you record in MP4, the video **MUST** complete. By that I mean that if the recording isn't properly stopped (power outage, blue screen, system freeze as common culprits) then the entire video is ruined. I'd recommend recording in MOV format instead and 'remuxing' it back to MP4 if you need to.
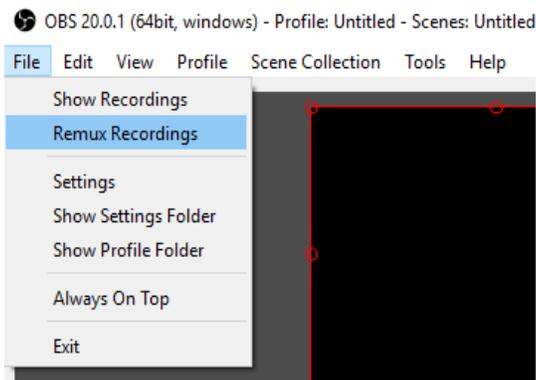
Summary

That's all I've got so far. I hope that this guide was a help to get you started in the wide world of video streaming. If you have any questions, the biggest advice I could give is 'ask around'. If you see a streamer do something cool that you would like to mimic for your own stream, ask them how it's done and dig around.

Actually, I take that back. The best advice I could give you is 'have fun'. You could have the flashiest and sleekest looking stream every created, but it won't matter if you and your fans aren't having fun. Talk to your fans on the chat feed, see what they were into and ask for feedback. Your fans will know what they are looking for and hopefully can give you helpful advice and more about what they are looking for in a premier streamer. So get out there, enjoy yourself and meet some new friends along the way. I wish you the best of luck.

- John Megacycle