Stream Hopper

Owner's Manual

NOTE: This device/GUI will only work if you login via the 'sng_pl4ys' Twitch.tv account. Any other accounts will result in a login failure. The API calls will also only work on the 'sng_pl4ys' Twitch.tv account.

IOT DEVICE SETUP AND LOGIN INFO

Pi Login info:
Username: pi
Password: streamhopper

The IOT Devices that come with the Stream Hopper (LIFX and WEMO) have already been set up on the UTA network; however, those devices will need to be reset if they are used on a network other than the UTA network.

This can be done via the LIFX and WEMO IOS applications. The LIFX reset instructions can be found here and the WEMO instructions here.

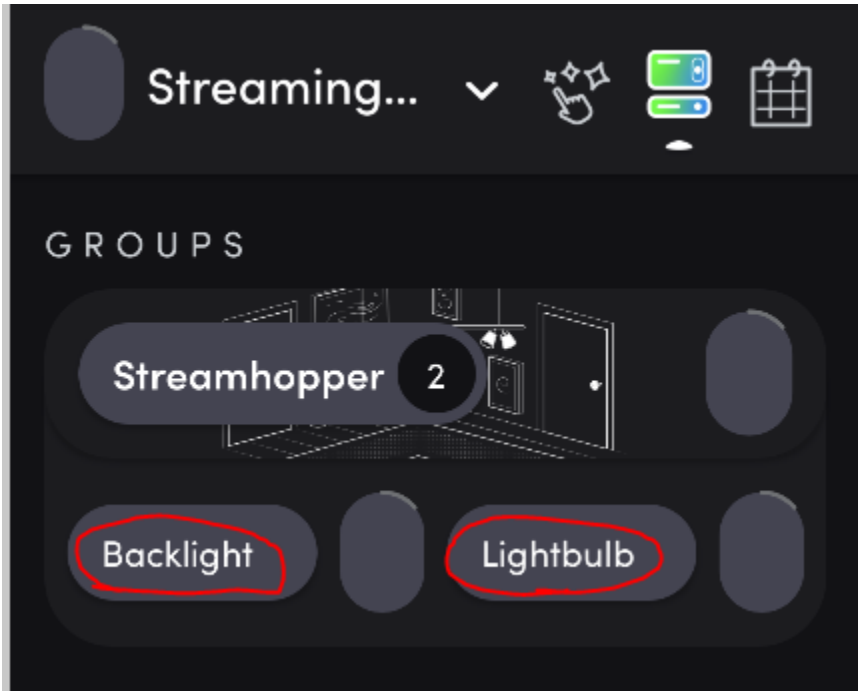
If you are using the Stream Hopper on the UTA network you can login to the respective apps using the listed login credentials. Otherwise you should reset the devices using the instructions provided and create your own LIFX and WEMO accounts.

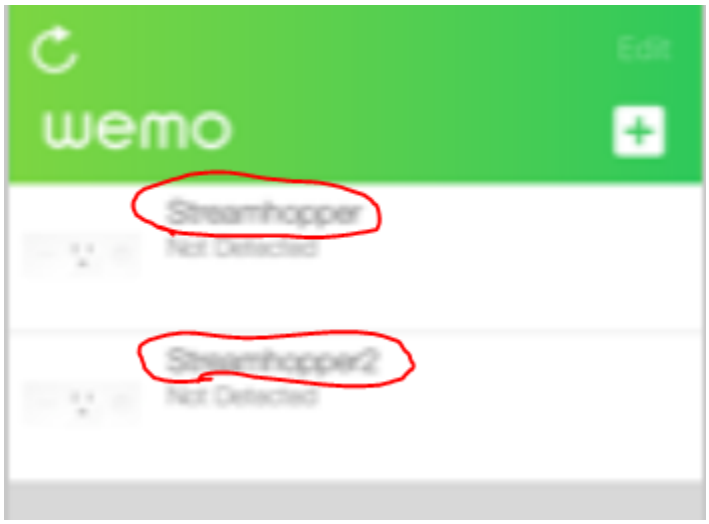
LIFX:
Username: streamhoppers@gmail.com
Password: streamhoppers1!

Wemo:
Username:streamhoppers@gmail.com
Password: streamhoppers

Gmail:
Email: streamhoppers@gmail.com
Password: streamhoppers1!

NOTE: When you name the devices in the app, make sure you remember exactly how they are named in the respective apps as this information will be used later in the Web GUI.



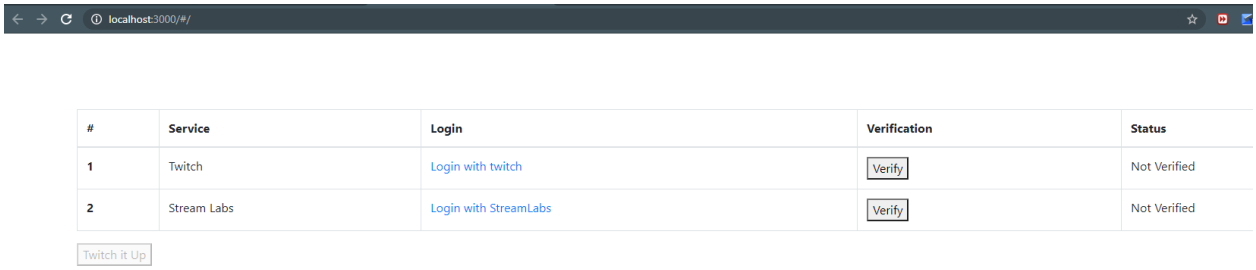


FYI

The Stream Hopper should only be run from the Raspberry Pi as the USB and GPIO interfaces will not work on any other device. The GUI can also only be accessed via the Pi as we are restricted by login verification from Twitch on other devices. All source code for the Stream Hopper is available on GitHub here however the Pi already has the source code installed at ~/stream-hopper.

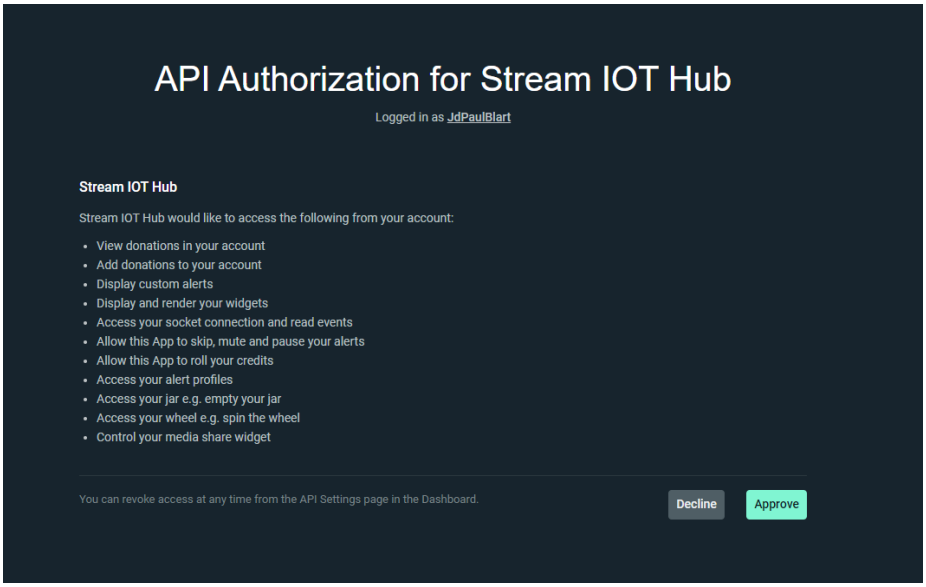
SETUP

1. Navigate to the ~/stream-hopper directory
    a. If you have just freshly installed the source code from GitHub, you will need to run the 'npm i' command in the ~/stream-hopper directory and you will need to run the 'npm i' command in the ~/stream-hopper/gui directory in order to install all the necessary dependencies. These commands only need to be run once.
2. Run the 'npm run start' command from the ~/stream-hopper directory and wait for the GUI to automatically open via Firefox
3. You will then need to login via Twitch and Streamlabs



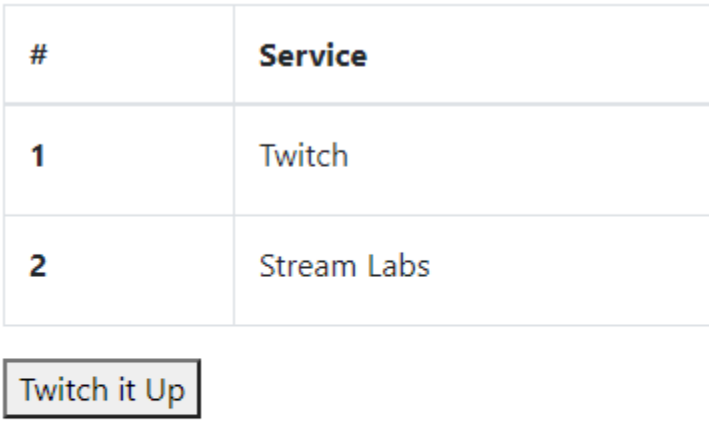
    a. Click the 'Login with Twitch' link. You will be prompted to login via Twitch. You should use the Twitch account that you want the Stream Hopper to be active on (sng_pl4ys is the only valid account). Once you have logged in and you are directed back to the homepage, Click Verify - the Status should change to 'Verified'.

b. Click the ‘Login with Streamlabs’ link, you will be prompted to login via Twitch. You should use the Twitch account that you want the Stream Hopper to be active on (sng_pl4ys is the only valid account).



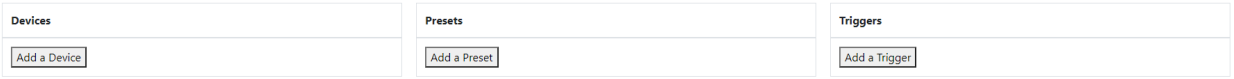
Once you login with Twitch, you will be directed to this page, Select ‘Approve’ to allow the Streamlabs API to read your account data. Once you have logged in and you are directed back to the homepage, Click Verify - the Status should change to ‘Verified’.

c. Once you have logged in and verified your Twitch and StreamLabs information in the Web GUI, the ‘Twitch it Up’ button will become clickable. Click this button to enter the GUI.



NOTE: This verification process will need to be done every time the Stream Hopper process is restarted on the Pi or if the Web GUI Tab is closed.

If everything was done correctly, you should now see the GUI, which should look like this or it will have your custom presets filled in if this is not your first time starting the Stream Hopper.

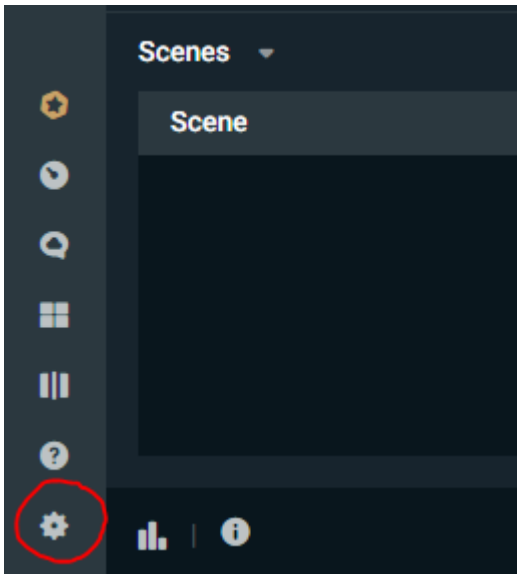


AUDIO ALERTS

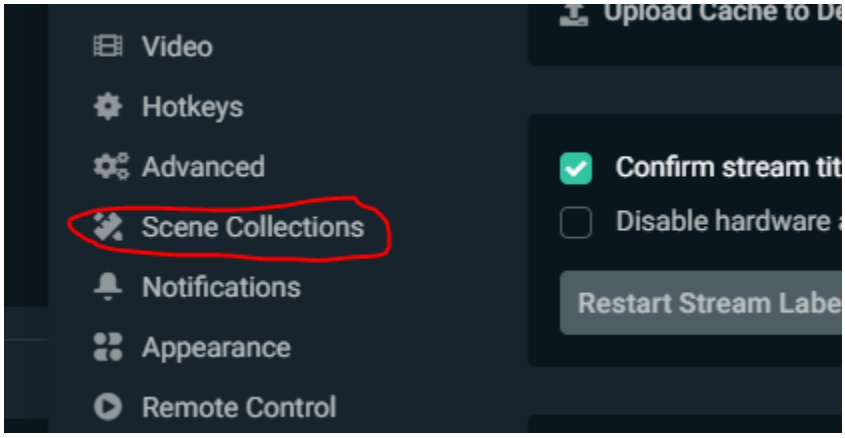
If you wish to use audio alerts you need to add the proper alert to your StreamLabs account. We have already configured the custom alert in the ~/stream-hopper/ directory in the file “donation.widget”.

To add this alert to your StreamLabs account:

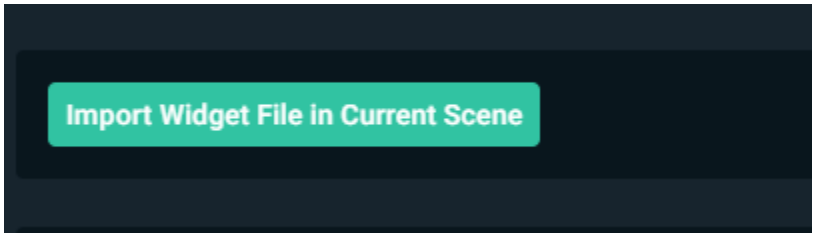
1. Open the StreamLabs application on your computer and make sure you are logged in
2. Click the Settings Gear at the bottom left of the App



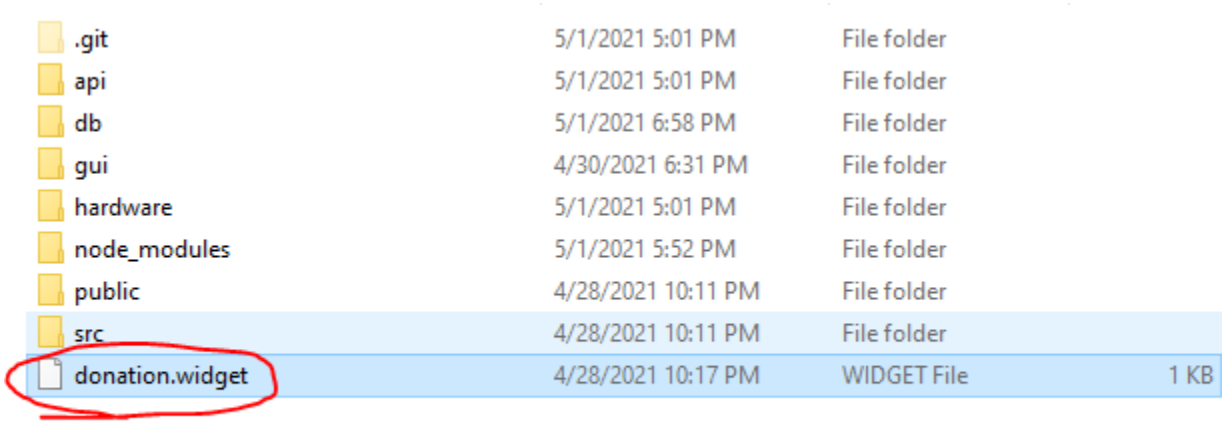
3. Click the Stream Collections Option



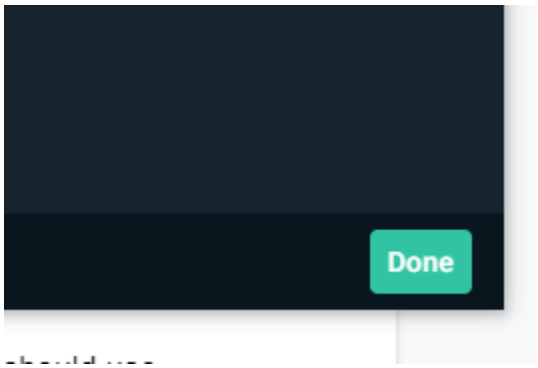
4. Click the Import Widget File in Current Scene



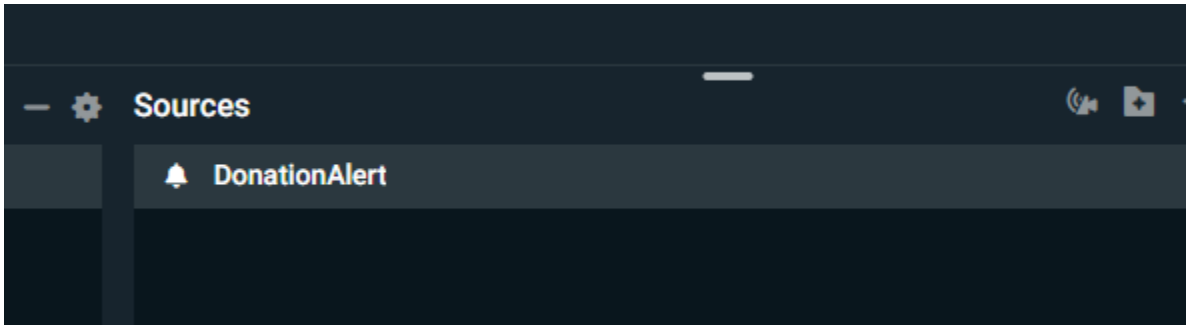
5. Select the “donation.widget” file



6. Click Done



7. You should now have a Scene called “DonationAlert” and you can now use the Audio Device. (Audio Device Configuration is explained later in detail).



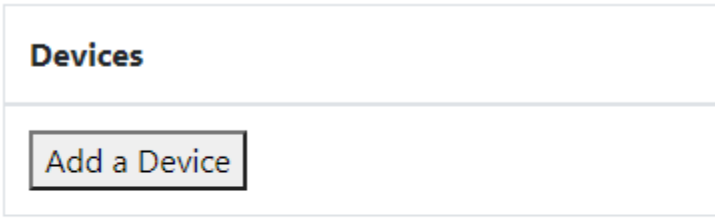
USING THE GUI

Although we have tested the GUI and are confident in its capabilities, you should use the GUI with caution as there may be uncaught bugs/quirks that were not caught due to time limitations.

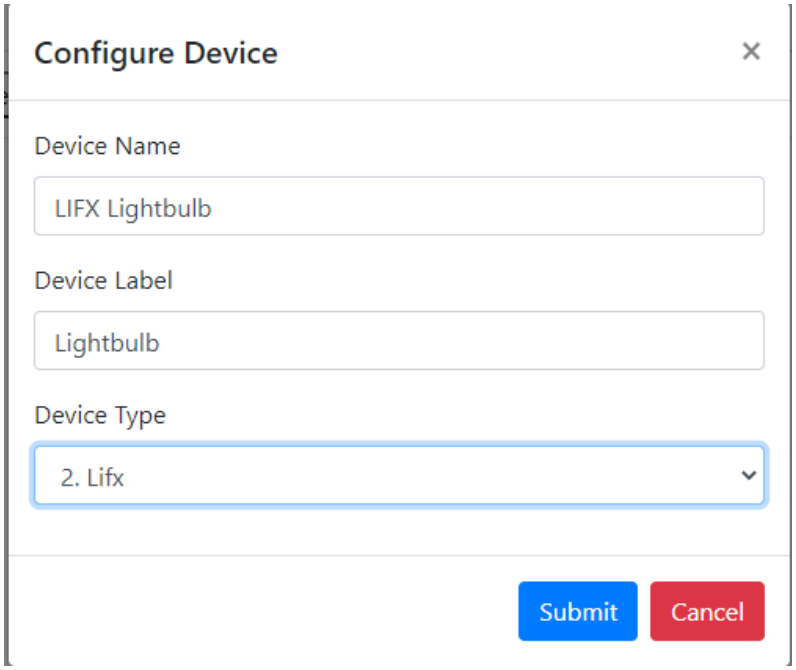
The GUI is run via Presets. Each Preset has a number of Triggers associated with it and each Trigger has a Device associated with it.

First you should add all the devices you wish to use:

a. Click add a device



b. The ‘Device Name’ Field can be anything you like. It should be identifiable as you



will need to know the device name to bind the desired device to a Trigger.

c. The Device Label is a very specific, case-sensitive string that corresponds to the desired device. These names correspond to the device name of the respective IOT devices in the ‘Home’ IOS app or the LIFX or WEMO App.

i) For the LIFX Devices:

If you wish to add the long backlight, you should have the name “Backlight” in this field.

If you wish to add the smart bulb, you should have the name “Lightbulb” in this field.

NOTE: These names can be changed in the LIFX app

ii) For the WEMO Devices:

The 2 WEMO Plugs provided should have names “Streamhopper” or “Streamhopper2” respectively, depending on which plug is being used

NOTE: These names can be changed in the WEMO app

iii) For the USB and Audio Devices:

This field is irrelevant and can be anything you want.

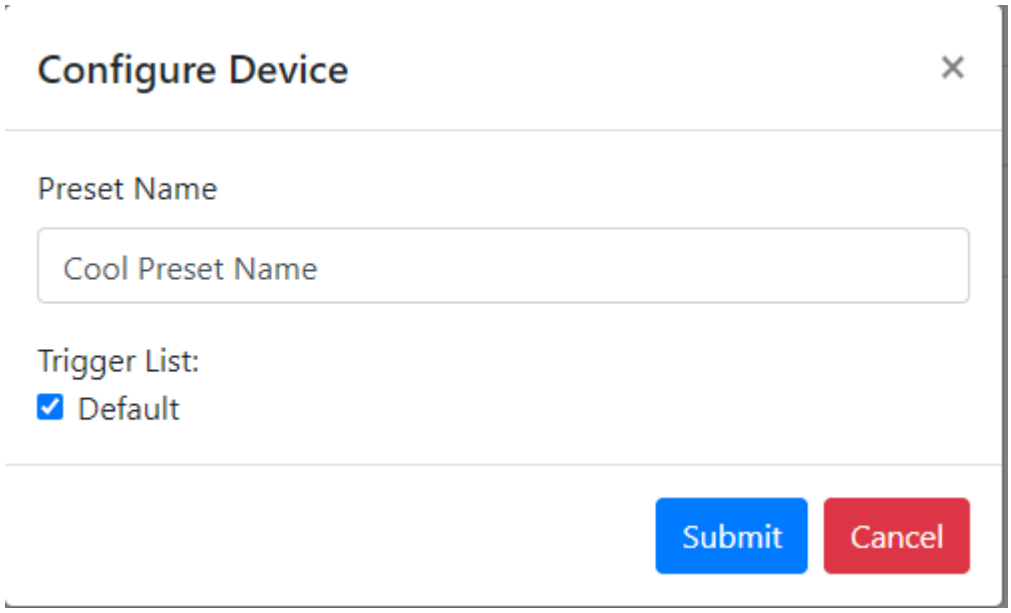
NOTE: If you wish to use a USB device, you should be aware that the on/off capability will turn off the USB ports and they will automatically turn back on after a second or two. So, it is more of a blink function instead of an on/off function. This is an issue with Linux and cannot be fixed.

iv) For the GPIO Devices:
This field must be “1, 2, or 3” depending on which port you would like to trigger. The ports are labeled, in marker, on the back of the Raspberry Pi

d. Finally, the ‘Device Type’ field should correspond to the type of device you are entering.
e. Repeat these steps and add all the desired devices. The Stream Hopper comes with LIFX, WEMO, USB, GPIO and Audio device type capability.

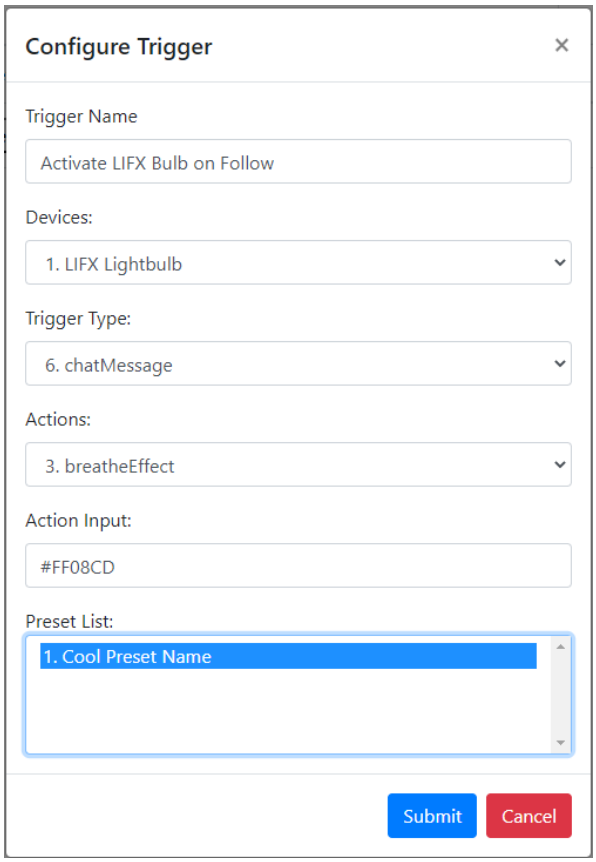
Next you should add a preset:

a. The Preset Name field should be any name you like. The default toggle button is unimplemented and is purely aesthetic :).



Finally you should add your Triggers, these triggers describe how each device will react to your desired Twitch/Streamlabs events:

a. Select the ‘Add a Trigger’ button from the Triggers section of the GUI
b. The ‘Trigger Name’ Field can be anything you like. We recommend you make it something recognizable (that describes the trigger) for later reference, like “Activate LIFX Bulb on Follow”



c. The ‘Devices’ dropdown will include all the devices you added to the devices section of the GUI. Select your desired device.

d. The ‘Trigger Type’ should be the event you would like your device to be triggered on.
NOTE: The only trigger events that were fully tested were ‘follow’ and ‘chatMessage’ as all the other events required the account to be a Twitch Affiliate or the event was a paid event (donation, subscription etc.). The other events should still work however the user should be aware that there may be lingering bugs in these events.

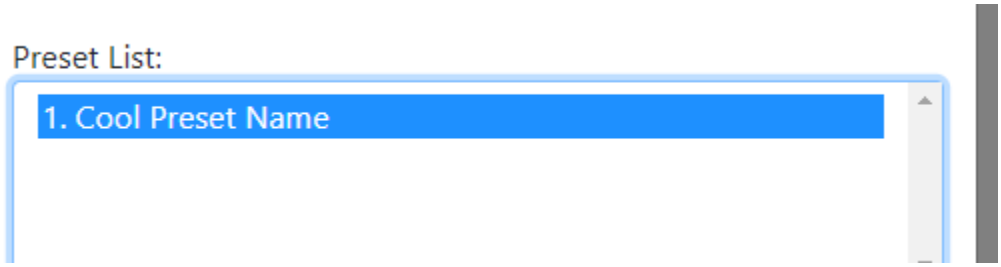
e. The ‘Actions’ field should be the action you would like the device to perform on the desired Twitch/Streamlabs event. The event names are explanatory of their function however this is not necessarily the case with the LIFX devices. The actions for the LIFX devices are explained here.

f. The ‘Action Input’ Field is another “very specific, case-sensitive string that corresponds to the desired device”. These actions are listed below based on your desired device.
i) For LIFX Devices:
This field should be a hex color code preceded by a ‘#’ i.e “#FF00FF”.
This will be the color that your LIFX device does its action in.
ii) For WEMO, USB and GPIO Devices:
This field is irrelevant and can be anything and the field should not be null.
iii) For the Audio Device:
With the playAudio ‘Actions’ enabled, this field should be the name of an audio file in the ~/stream-hopper/api/api_server/sounds directory. We have added some fun sounds however the user can add any .mp3 file they like :). An example filename would be “im-kind-of-retarded-alex-jones.mp3” as it is a file in the ~/stream-hopper/api/api_server/sounds directory.
With the playTTS ‘Actions’ enabled, if the ‘Trigger Type’ is anything except follow, the playTTS action will say the message associated with the event. E.g. the user’s message will be played by TTS (text-to-speech) if the ‘Trigger Type’ is chatMessage.
If the Trigger Type is Follow, the ‘Action Input’ will be read by TTS on the follow event. E.g “Thanks for the Follow”.

NOTE: These fields should be typed exactly as described above otherwise the device may not be triggered as desired/expected.

g. Finally, you should select the desired preset from the ‘Preset List’ field that you would like the Trigger to be associated with. You can add the Trigger to multiple

Presets by selecting multiple Presets in the ‘Preset List’ via ctrl+click or shift+click.



Once the presets have been configured, click the desired Preset you would like you activate.

The preset will be highlighted when it is active. You can only enable 1 preset at a time.

NOTE: It is a good idea to click the desired Preset everytime a change is made to the configuration of the Stream Hopper. For example, if you add another trigger, you should reselect the desired Preset, even if it is already highlighted.

We hope you enjoy the Stream Hopper and look forward to catching it in action on twitch.tv/sng_pl4ys. For any issues, email justin.erdmann2@mavs.uta.edu, I will try to answer any questions/issues you have. Good luck.