RAZER AUDIO MIXER

MASTER GUIDE

Streamline your setup and optimize your production with the **Razer Audio Mixer**—an easy-to-use, all-in-one analog mixer for broadcasting and streaming. With total control over your mix and studio-like quality, professional audio has never sounded this good or felt this simple.
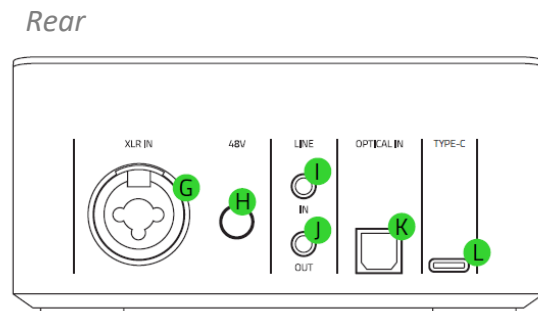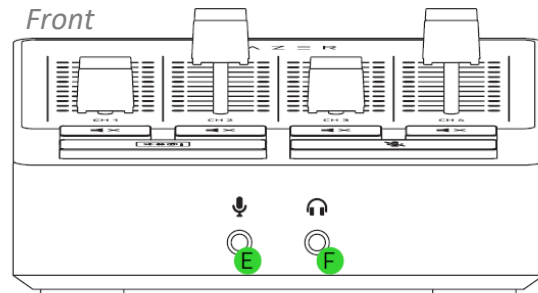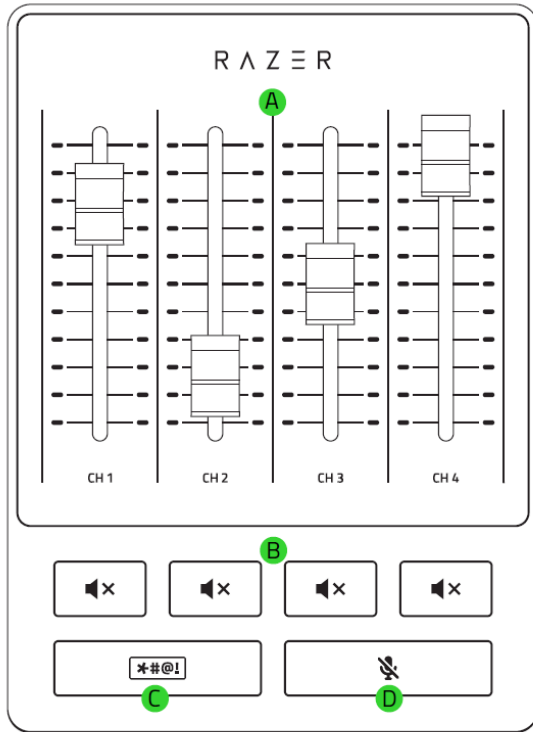
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1. WHAT'S INSIDE / WHAT'S NEEDED

WHAT'S INSIDE

- Razer Audio Mixer

Front

Rear

A. Channel volume slide faders Powered by Razer Chroma™ RGB lighting	F. Headphone port
	G. XLR mic input port
B. Channel mute buttons	H. 48V Phantom power button
C. Bleep button	I. Line In port
D. Microphone mute button	J. Line Out port
E. Microphone port	K. Optical In port
	L. Type C port

- Type C to Type A cable

- 2 x Ground loop isolators

- Important Product Information Guide

WHAT'S NEEDED

Product requirements

- PC (Windows® 10 64-bit or higher)
- Direct USB-A connection

Razer Synapse requirements

- Windows® 10 64-bit or higher
- Internet connection for software installation

2. LET'S GET YOU COVERED

You've got a great device in your hands, complete with a 1-year limited warranty coverage. Now maximize its potential and score exclusive Razer benefits by registering at razerid.razer.com

Your product's serial number can be found here.

S/N: 1021WWL040XXXXX

S/N: 1021WWL040XXXXX

Got a question? Ask the Razer Support Team at support.razer.com

3. TECHNICAL SPECIFICATIONS

ANALOG CONNECTIONS

Microphone in from one of the following sources:

- XLR balanced Jack

- 6.35 mm TRS balanced Jack

- 3.5 mm TS unbalanced Jack

- 3.5 mm TRS Line In

- 3.5 mm TRS Line Out

- 3.5 mm TRS Headphone Out

DIGITAL CONNECTIONS

- 1 x USB 2.0 (Type C)

- 1 x Optical Toslink

HARDWARE USER CONTROL

- 4 x Channel volume slide faders

- 4 x Channel mute buttons

- Microphone mute button

- Bleep button

- 48V Phantom Power Button

AUDIO FEATURES

- A/D and D/A Conversion: 24 bits @ 48kHz

- Effects: Noise Gate, Compressor, EQ, Echo Reverb, Presets, Voice Changer, Key Shifter, Vocal Fading

- Frequency Response: 10Hz to 20kHz

- Dynamic Range: >110dB

- S/N Ratio: >100dB

- THD+N: <-90dB

- Channel Crosstalk: <-90dB

CHROMA LIGHTING

- Razer Chroma RGB for all buttons (except for 48V Phantom Power Button), channel number and volume level customizable in Razer Synapse.

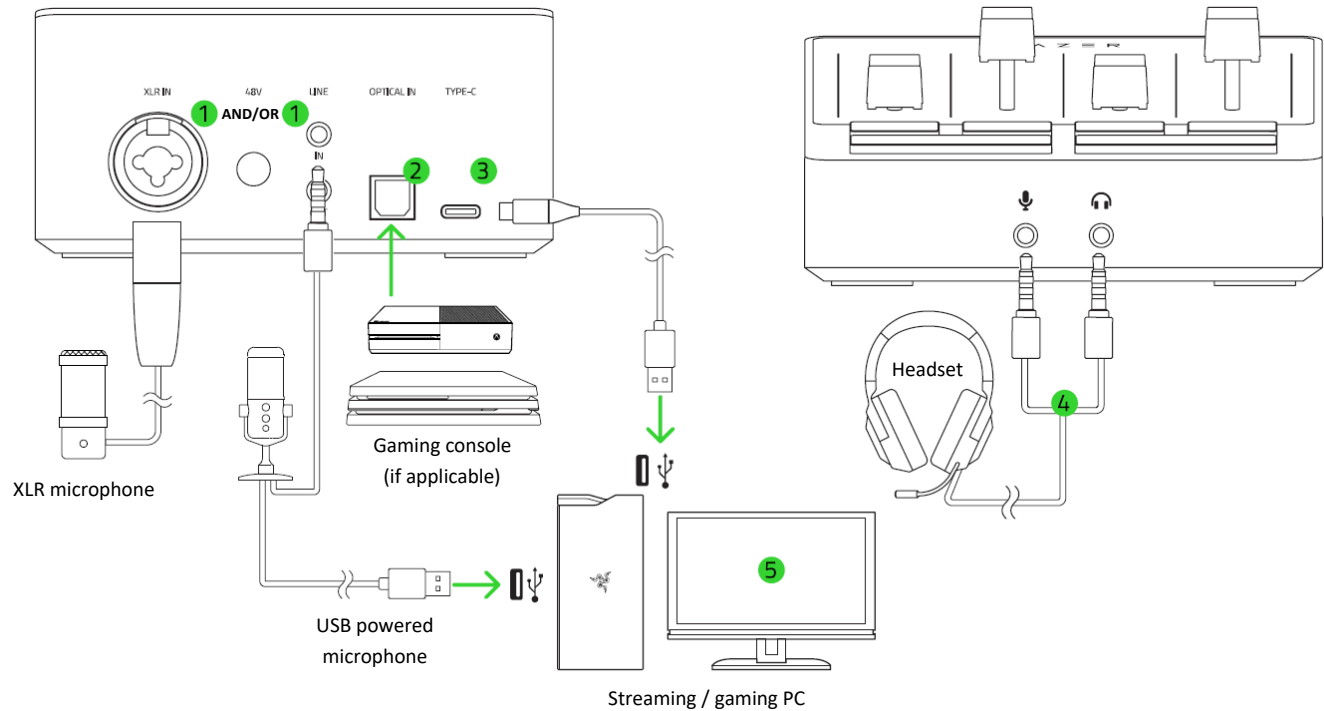**DISPLAY (LED INDICATORS)**

- Channel Volume level (11 LED Levels from 0 to 100% for each channel)

- 4 x Channel mute button

- Microphone mute

- Bleep button

- Razer wordmark logo

POWER SUPPLY/VOLTAGE

- Power Input: USB Power

- Power Consumption: 5V / 500mA

SETTING IT UP

XLR microphone

USB powered microphone

Gaming console (if applicable)

Streaming / gaming PC

Headset

1. Connect an XLR mic to the XLR mic input port AND/OR a microphone to the Line In port, depending on which is available in your setup.

   ℹ️ *Make sure that Phantom Power is off before connecting an XLR microphone into the XLR mic input port. Moreover, when using a USB-powered microphone in your setup, ensure that the microphone is connected to your PC's USB port. It's also recommended that you connect a ground loop isolator before plugging the microphone into the Line In port of the Razer Audio Mixer.*

2. Plug an optical cable from the Optical In port on your Razer Audio Mixer to your gaming console. This is applicable if you're planning to use a gaming console in your stream.

3. Connect the Razer Audio Mixer to your gaming PC using the Type A to Type C cable.

   ℹ️ *To optimize the performance of the Razer Audio Mixer, it's highly recommended that you connect it directly to a USB port on your PC. Connecting the device to a USB hub, switch or extender may affect its performance.*

4. Connect your headset to the headphone port.

   ℹ️ *If you want to use your headset's microphone, use an audio / mic splitter extension cable (if applicable), and then connect its stereo output to the headset port and its mic input to the microphone port.*

5. On your PC, right-click on the sound icon on the system tray and select **Open Sound settings.**

Open Sound settings
Open Volume mixer
Spatial sound
Troubleshoot sound problems
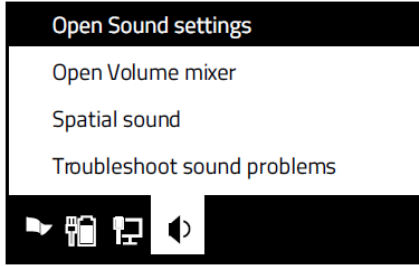
6. Depending on your connected devices, set the Razer Audio Mixer as the default **Output** and **Input** device.

For **Headphone port / XLR mic input port** connection

Sound
Choose your output device

Headphones (Razer Audio Mixer) ∨

Input
Choose your input device

Microphone (Razer Audio Mixer) ∨

For **Line in / Line out port** connection

Sound
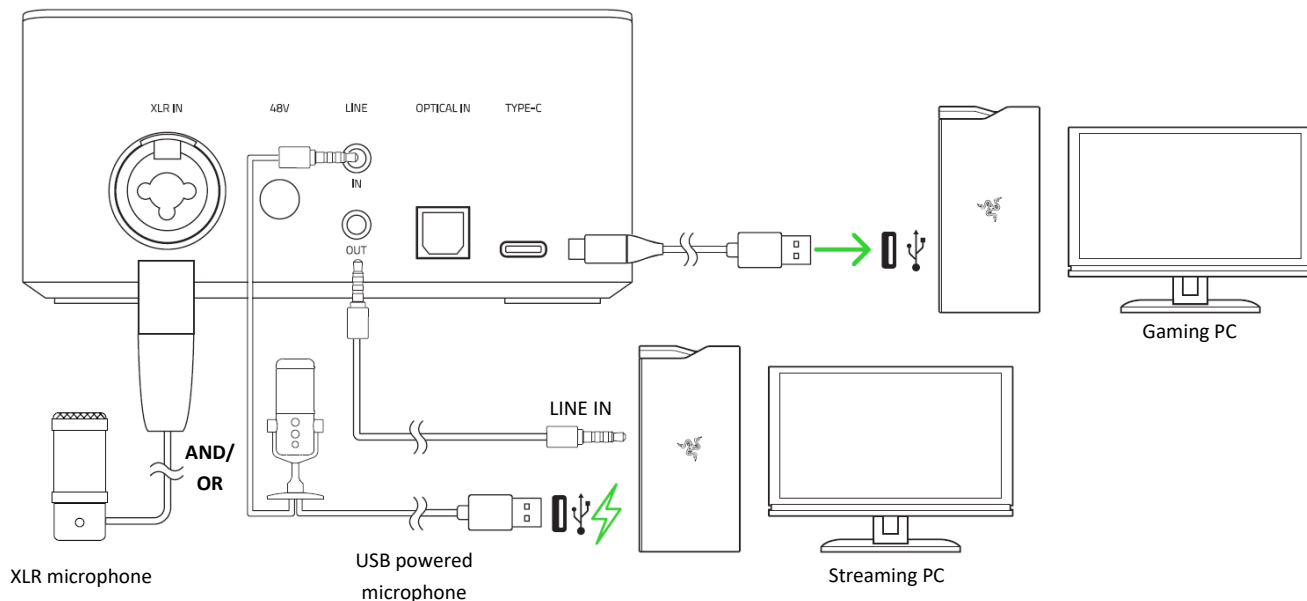Choose your output device

Line (Razer Audio Mixer) ∨

Input
Choose your input device

Line (Razer Audio Mixer) ∨

SETTING UP A DEDICATED STREAMING PC

To set up a streaming PC that will handle all of the Razer Audio Mixer's audio output, connect the Line Out port of the Razer Audio Mixer to the Line In port of your streaming PC using an aux cable.

ⓘ *It's recommended that you connect a ground loop isolator into the Line Out port of the Razer Audio Mixer before connecting an aux cable. To set which audio sources will be routed to the Line Out port, use the Razer Synapse app.*

RAZER SYNAPSE

Use the Razer Synapse app to route audio output sources, assign applications to desired audio channels, customize mic equalizer presets and features, and even personalize its lighting for an immersive streaming experience that's truly yours.

ⓘ *Install Razer Synapse when prompted or download the installer from* razer.com/synapse.

5. USING THE RAZER AUDIO MIXER

CHANNEL MUTE BUTTONS

Press any of the Channel mute buttons to mute the corresponding channel. The pressed button will light up in red to show that its corresponding channel has been muted.
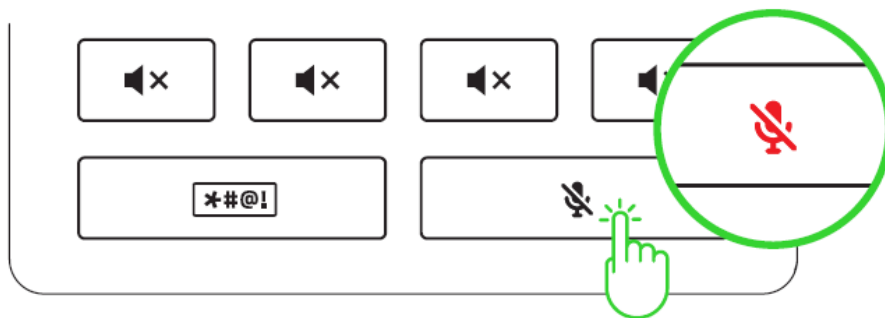
MICROPHONE MUTE BUTTON

Mute microphone

Press the microphone mute button to mute or unmute microphone input. The microphone mute button will turn red to indicate that the microphone is muted.
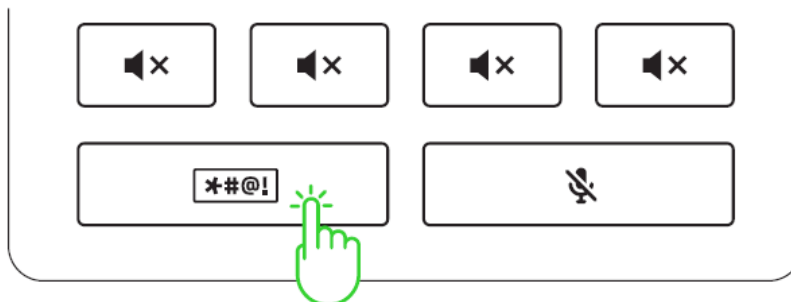
Apply echo effect on microphone

Press and hold the microphone mute button to apply an "Echo" effect on microphone input.

BLEEP BUTTON

Press and hold the Bleep button to immediately mute and censor the microphone input with a beep sound.

48V PHANTOM POWER

WARNING! Before using this feature, please check if your XLR microphone supports 48V phantom power to avoid damaging your device. Moreover, make sure to turn off this feature when not required.

Some XLR microphones may require additional external power to operate. Press the Phantom power button to activate this feature and transmit phantom power to the XLR mic input port. The Phantom power button will light up, indicating that this feature is active.

🛈 *This feature can also be enabled from Razer Synapse.*

GROUND LOOP ISOLATORS

Use a Ground Loop Isolator to eliminate ground loop problems created in your setup and prevent unwanted noise or hum on devices connected to the Line In and Line Out port.
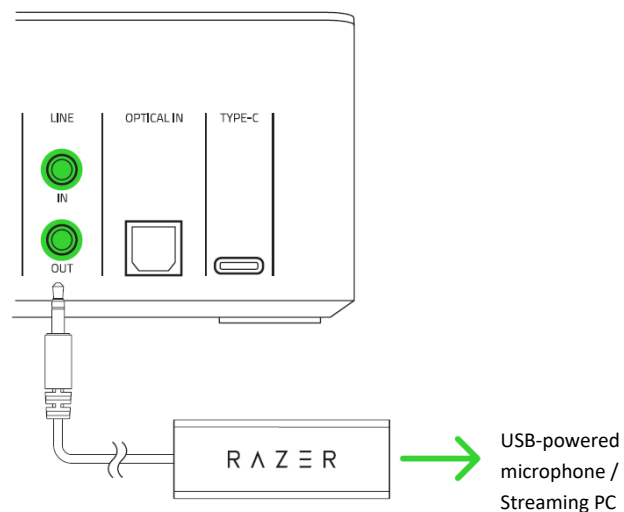
6. CONFIGURING YOUR RAZER AUDIO MIXER

ℹ️ *Internet connection is required for installation, updates, and cloud-based features. Registering for a Razer ID account is recommended but optional. All listed features are subject to change based on the current software version, connected device(s), and supported apps and software.*

SYNAPSE TAB

The Synapse tab is your default tab when you first launch Razer Synapse. This tab allows you to navigate the Dashboard subtab.
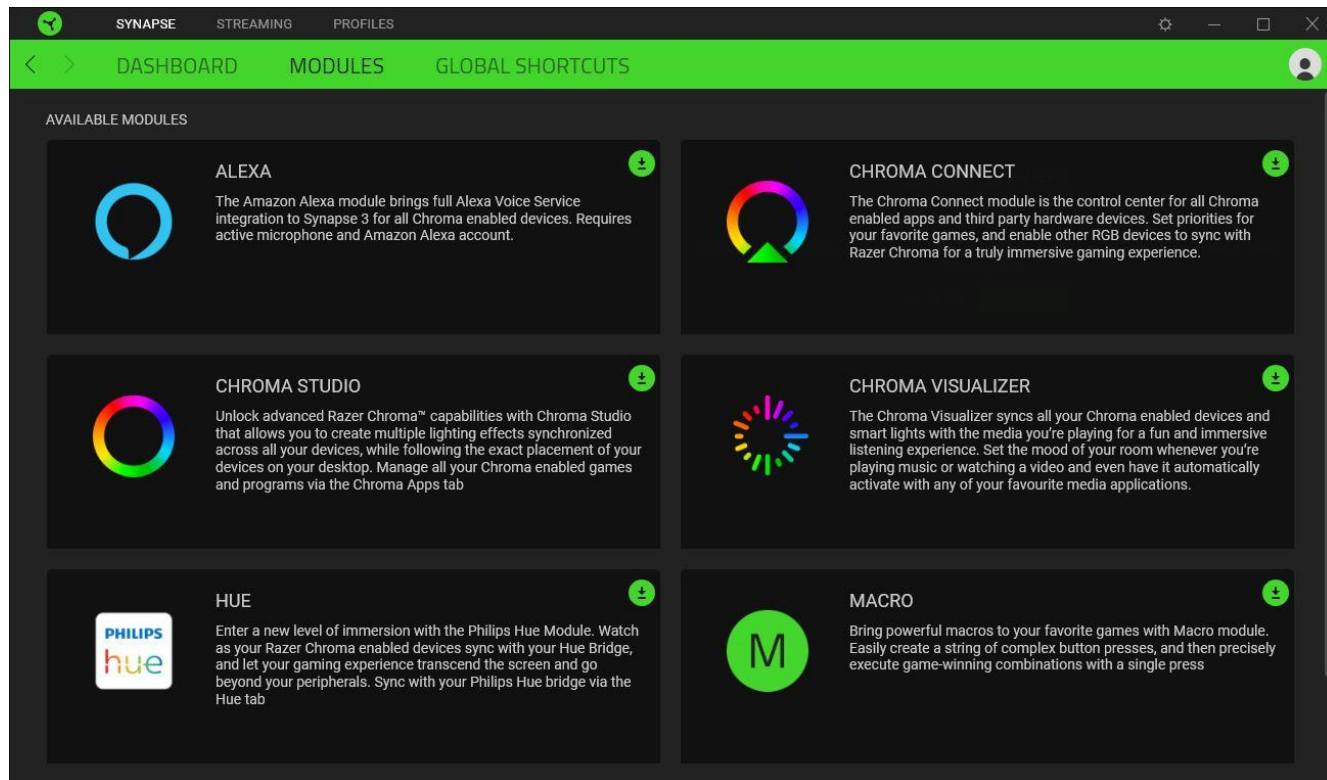
Dashboard

The Dashboard subtab is an overview of your Razer Synapse, where you can access all your Razer devices, modules, and online services.
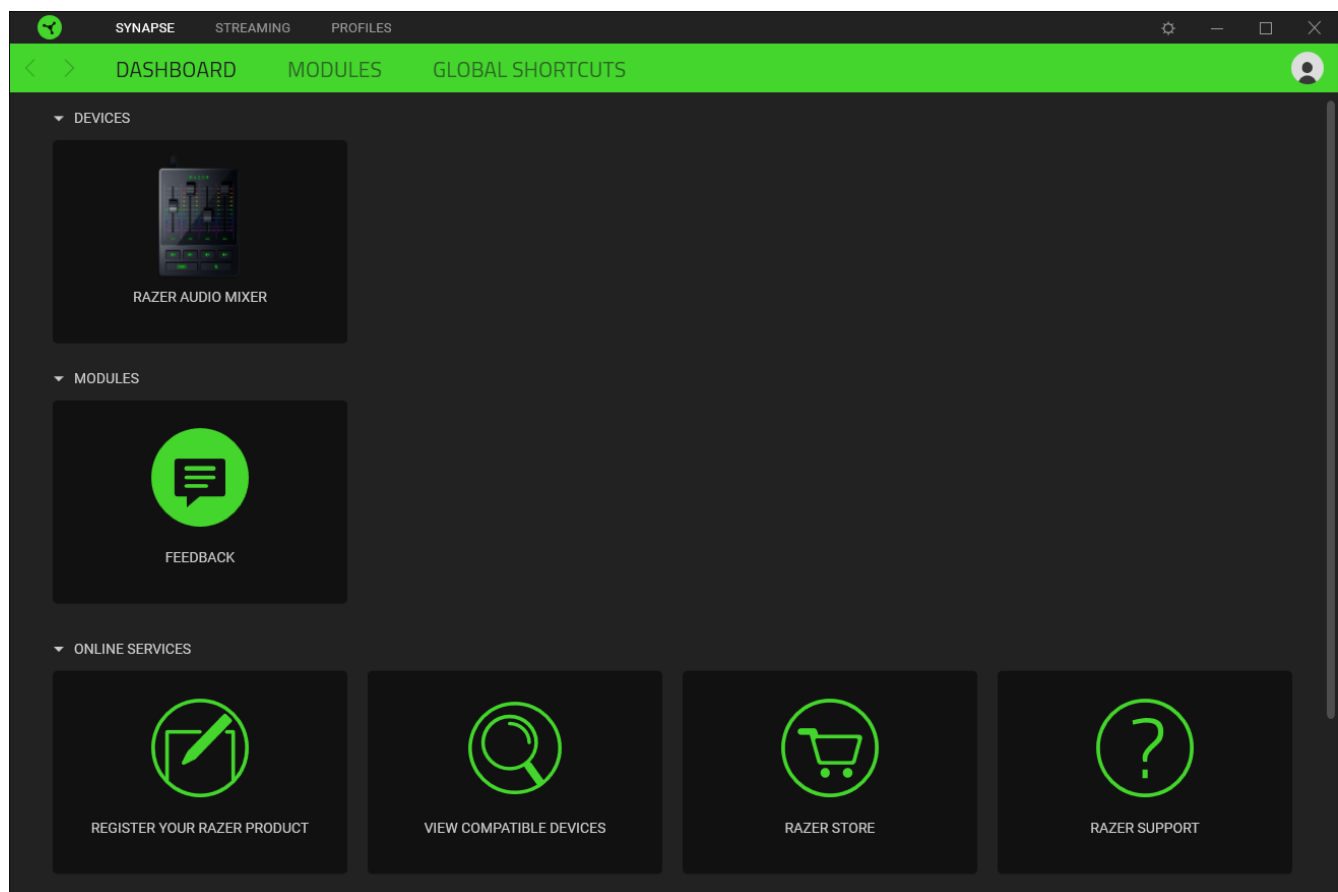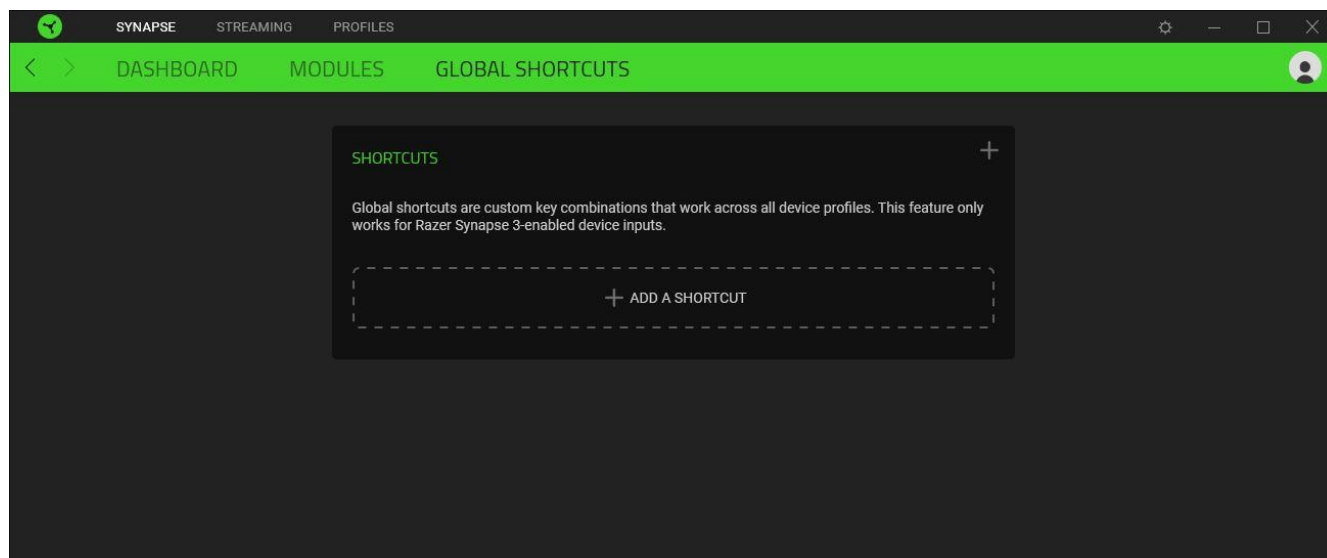
Modules

The Modules subtab displays all installed and available modules for installation.

Global Shortcuts

Bind operations or Razer Synapse functions to custom key-combinations from Razer Synapse-enabled device inputs that apply across all device profiles. Learn more about Profiles

🛈 *Only Razer Synapse-enabled device inputs will be recognized.*

STREAMING TAB

The Streaming tab is the main tab for your Razer Audio Mixer. Use this tab to personalize device lighting effects, control and route virtual channels, map button controls, customize channel mixes, and access advanced microphone features. Changes made under this tab are automatically saved to your system and cloud storage.

Customize

The Customize subtab is for setting up the various channels available for the Razer Audio Mixer when you install Razer Synapse. You can map input sources to channel faders and map functions to channel mute and mic mute buttons under this page.
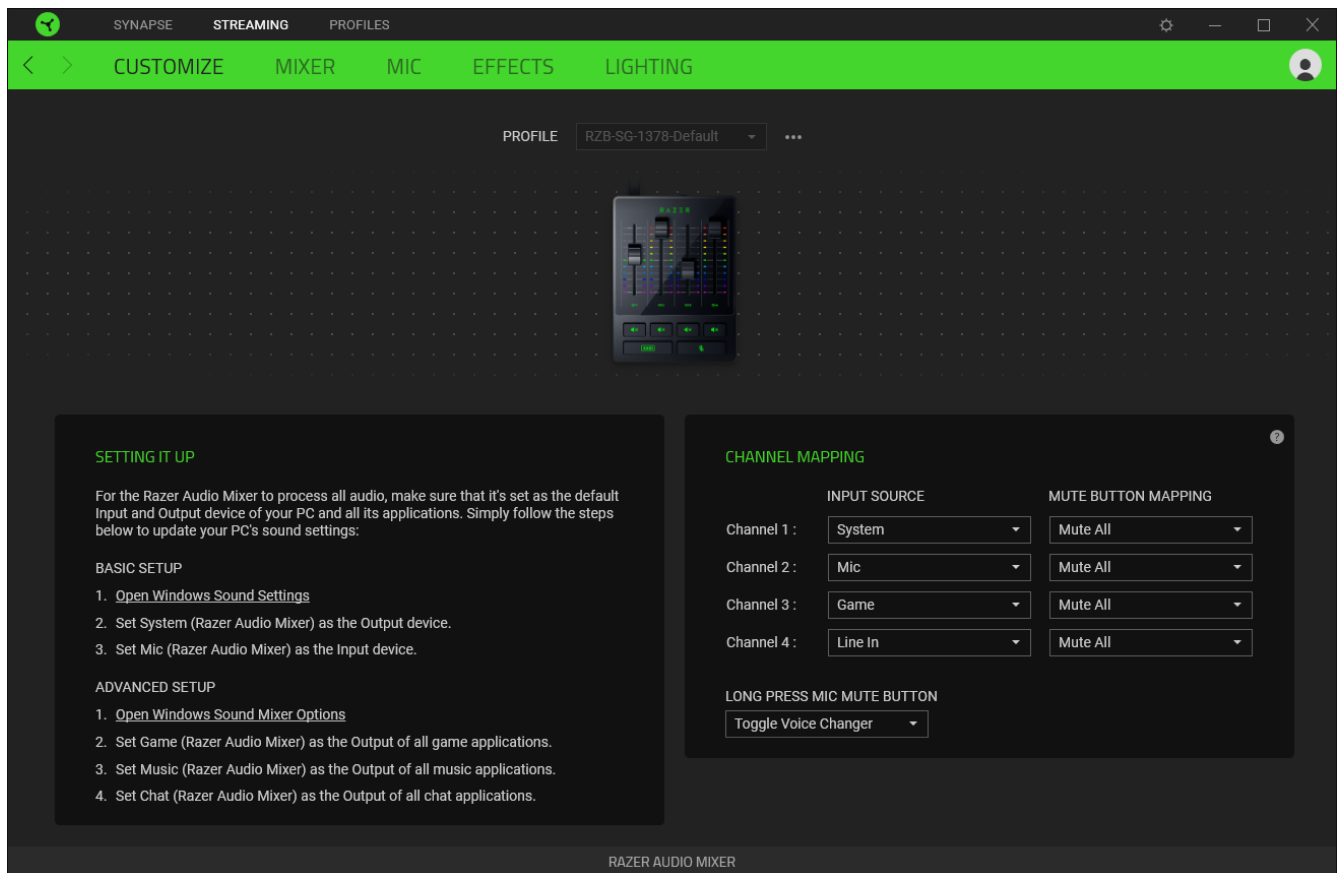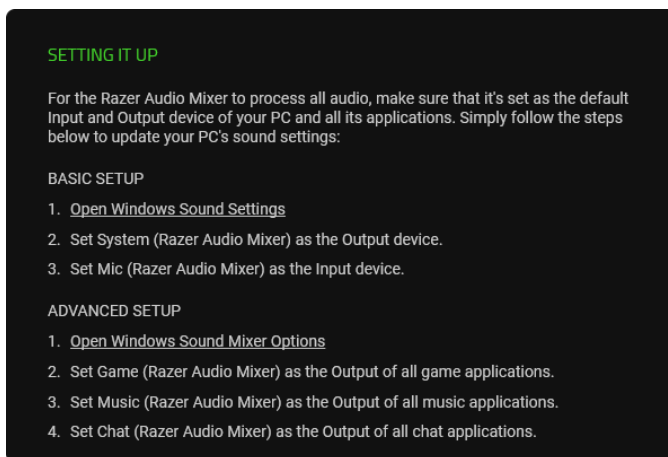

Profile

A Profile is a data storage for keeping all your Razer devices' settings. By default, the profile name is based on your system's name. To add, import, rename, duplicate, export, or delete a profile, press the profile's corresponding Miscellaneous button (●●●).

Provides basic and advanced steps and the needed shortcut links in setting up the Razer Audio Mixer on your system. Click on the **Open Windows Sound Settings** to manage your system's sound settings, such as modifying the default output and input device. You can also click on the **Open Windows Sound Mixer Options** to route specific applications to various channels.

SETTING IT UP

For the Razer Audio Mixer to process all audio, make sure that it's set as the default Input and Output device of your PC and all its applications. Simply follow the steps below to update your PC's sound settings:

BASIC SETUP

1. Open Windows Sound Settings
2. Set System (Razer Audio Mixer) as the Output device.
3. Set Mic (Razer Audio Mixer) as the Input device.

ADVANCED SETUP

1. Open Windows Sound Mixer Options
2. Set Game (Razer Audio Mixer) as the Output of all game applications.
3. Set Music (Razer Audio Mixer) as the Output of all music applications.
4. Set Chat (Razer Audio Mixer) as the Output of all chat applications.

Understanding virtual channels

The Windows OS recognizes channels as Output or Input devices. Upon installing Razer Synapse, the following channels immediately become available:

Input channels (Output device)	Output channels (Input device)
Game	Stream Mix
Music	Microphone
Chat	Voice chat
System (default)	Console
	Line-in

Assigning channels to applications

Assigning channels as your applications' input and/or output devices will allow you to control which channel(s) will be used by specific applications.

You can also use channel assignment to group applications according to the purpose (e.g., all chat applications to use Chat and Voice Chat as Output and Input device, respectively), allowing you to:

- adjust each channel individually, including all applications assigned with the corresponding channel
- set channels to channel faders, to adjust its volume through channel faders physically

To set an input and/or output channel as the output or input device on your desired application:

1. Make sure the desired application is running.

2. On Razer Synapse, go to the **Customize** subtab and then click **Open Windows Sound Mixer Options**.

3. Set the application's

   o **Output** to the preferred input channel (e.g., Spotify to Music, Skype to Chat).

   o **Input** to the preferred output channel (e.g., all applications with chat function to Voice Chat or Line-in if you want to use the Line In port connection).

4. Repeat these steps for other applications.

   IMPORTANT! Some applications may also have in-app functions which allow you to change the input and output device it will use.

Channel Mapping

Map input sources to channel faders, channel mute button functions, and a long press function to the mic mute button.
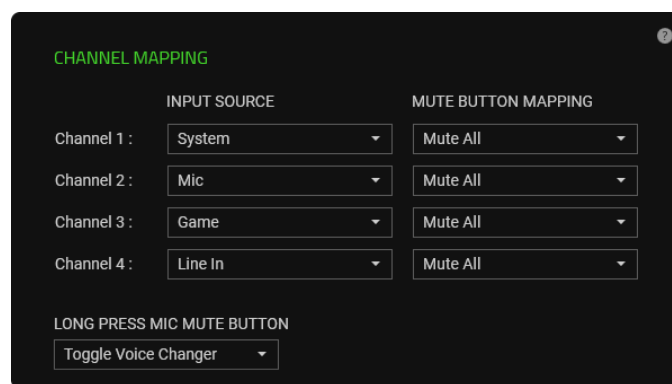
- **Source.** Assign channels to any of the channel faders on the Razer Audio Mixer. Once assigned, you'll be able to control its volume using the corresponding channel fader physically.

  🛈 *To control the volume of specific applications, make sure a channel is set as the desired app's output or input device (e.g., Spotify is using Music as an Output device). You may then select the assigned channel from the dropdown list (e.g., Channel 4 to Music).*

- **Mute button mapping.** Set which channel will be muted when you press the corresponding channel mute button.

- **Long press mic mute button.** Set a function when you press and hold the mic mute button. You can choose between muting all or specific channels, enabling/disable microphone effects, and even activating a preset of your choice.

  🛑 *By default, the long press function of the mic mute button is set to Toggle Voice Changer.*

Mixer

Use the Mixer subtab to individually mute or adjust the volume of all channels and control which channels can be heard on each channel mix.
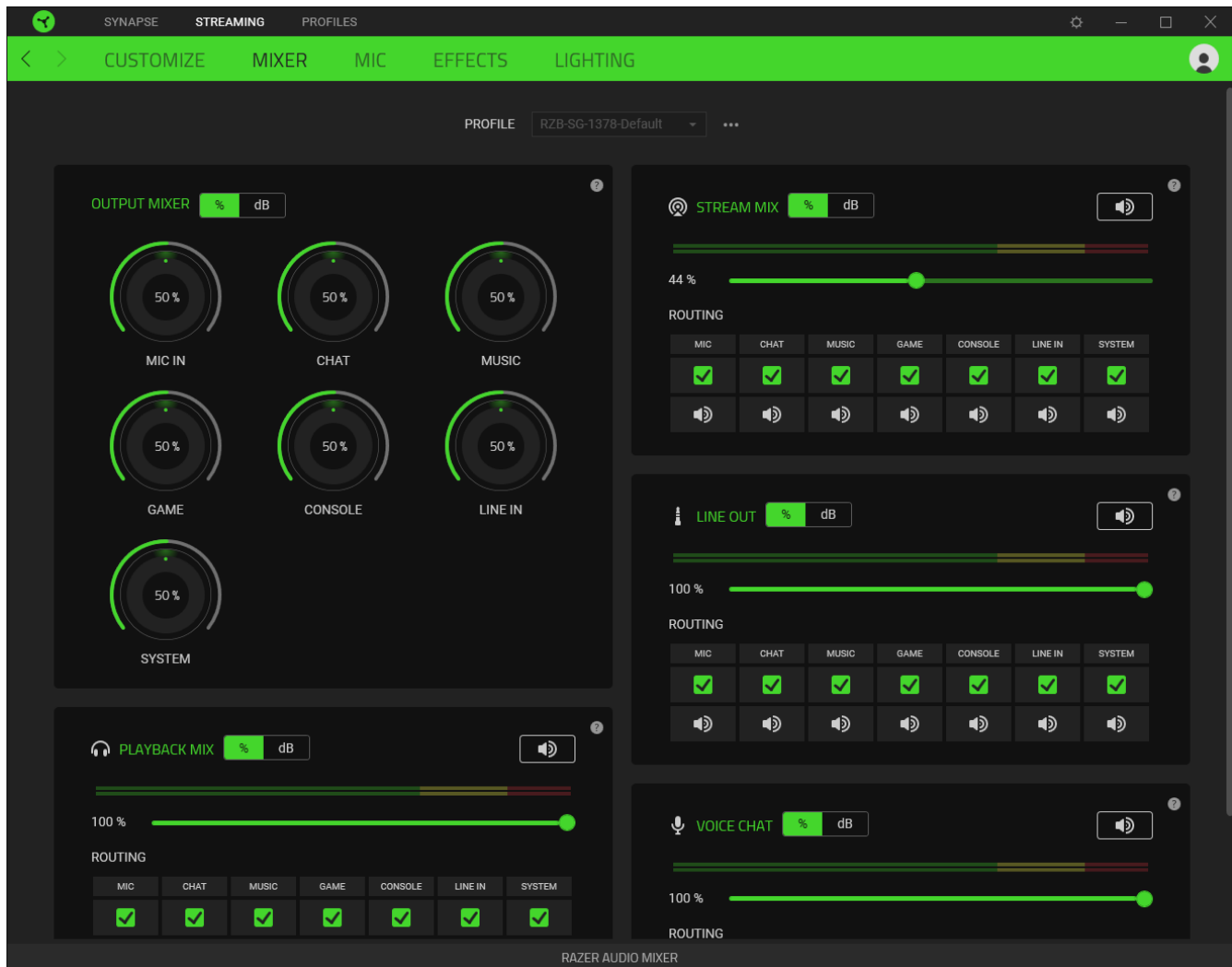
Output Mixer

Individually mute or adjust the volume of specific channels. Click on the percentage/decibel toggle to change how the Output Mixer displays volume.

Channel Mixes

A channel mix is a blend of your (preferred) channels. You can mute or adjust how loud each channel mix is and control which channels can be heard on each channel mix.

- **Playback Mix.** The channel mix you will hear on the Headphone port of the Razer Audio Mixer.

- **Stream Mix.** The channel mix for your streaming applications. Set this channel as the microphone or input device of your streaming software (e.g., OBS, Twitch, Streamlabs, etc.) to control the volume of each channel using Razer Synapse individually.

- **Line Out.** This is a clone of the Stream Mix, which you can use to route audio from your gaming PC to your dedicated streaming PC (if applicable) via the Line Out port.

- **Voice Chat.** The channel mix for all your chat applications.

The following controls are available on all channel mixes:

- **Percentage / Decibel toggle.** Change how the corresponding channel mix displays its volume.

- **Mute Mix (🔊).** Mute or unmute the corresponding mix.

- **Slider.** Adjust the volume of the corresponding mix.

- **Routing.** Select which channels are included on the corresponding mix.

Mic

Utilize the Mic subtab to configure microphone connection, set or customize a mic equalizer preset, adjust other features such as background noise suppression and microphone input modulation.
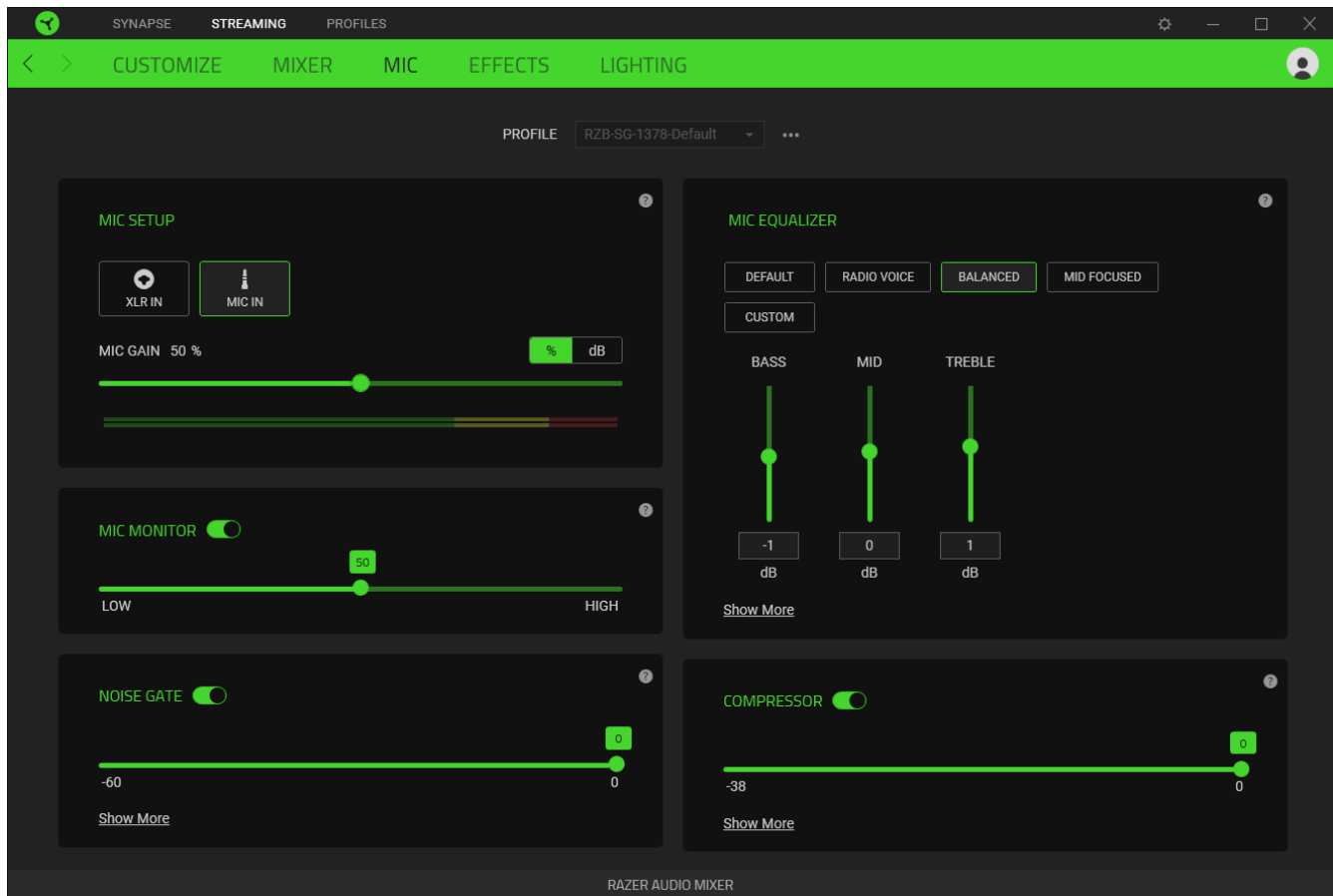
Mic setup

Set the Razer Audio Mixer to use the XLR mic input port or the microphone port for mic input and set its sensitivity when capturing sound using the mic gain slider. You can click on the percentage/decibel toggle to change how the mic gain is displayed.

Phantom Power (48V)

Available only on XLR microphone connection, enable this feature to transmit additional phantom power to your XLR microphone.

WARNING! Before enabling this feature, please check if your XLR microphone supports 48V phantom power to avoid damaging your device. Moreover, make sure to turn off this feature when not required.

Mic monitor

Turn on this feature to monitor a connected microphone's raw audio input through a headset with an additional option to increase or decrease the audio monitoring volume.

Noise gate

Control the amount of microphone input to cut out background noise and completely isolate your voice. Adjust the slider to set a threshold and reduce (or mute) any sound that registers below it.
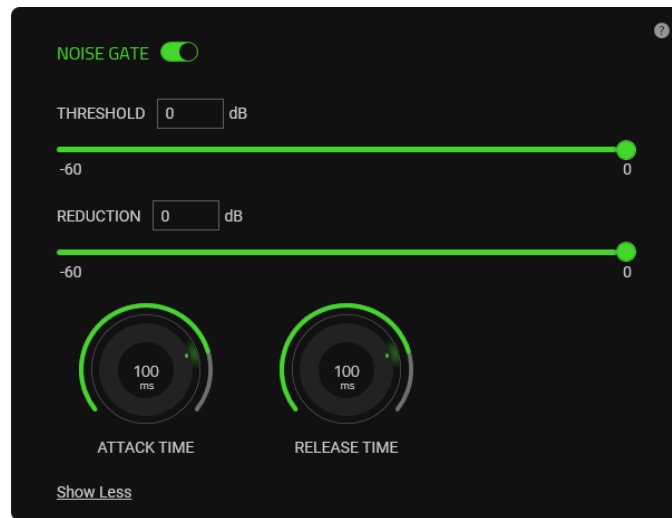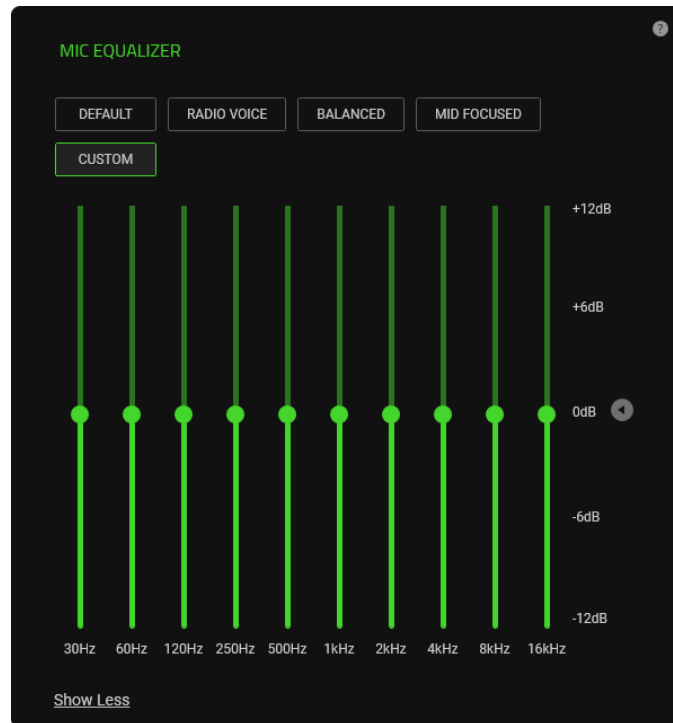

Expanding Noise Gate will allow you to tweak its properties in detail:

- **Threshold.** Determines when the Noise Gate will activate. If the sound is below the threshold, the noise gate will activate, and the sound will be reduced or muted.

- **Reduction.** Set how much sound will be reduced or muted if the microphone input registers below the threshold.

- **Attack time.** Determines how quickly the Noise Gate will activate if the mic input registers below the threshold.

- **Release time.** Sets how fast mic input will be reduced or muted.

Mic equalizer

Select any of the available mic equalizer presets which best fit your mic needs. Expanding the Mic Equalizer will allow you to manually adjust any preset in detail, automatically setting it as a Custom preset.

Compressor

Set the device to modulate the amount of microphone input and reduce its volume when it gets too loud. Adjust the slider to set a threshold and lower (or mute) any sound that registers above it.
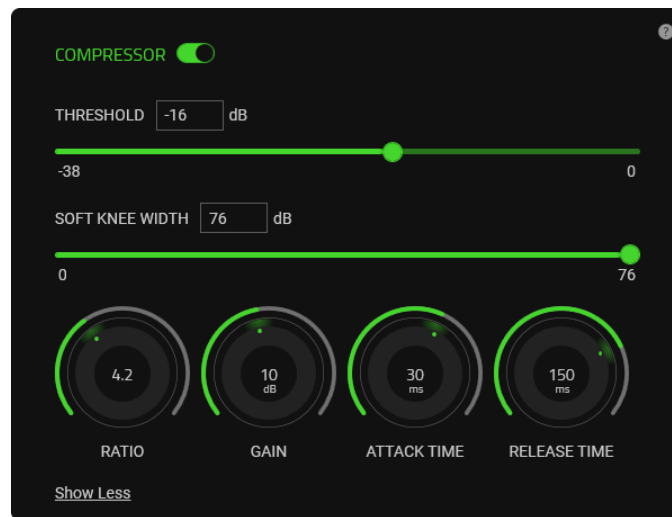

Expanding the Compressor will allow you to tweak its properties in detail:

- **Threshold.** Determines when the Compressor will engage. If the sound is above the threshold, the compressor will activate, and the sound will be reduced or muted.

- **Soft knee width** Set how noticeable the volume reduction will be.

- **Ratio.** Sets the intensity of the compression.

- **Gain.** Increases the volume of the processed output to maintain its definition even after compression.

- **Attack time.** Determines how quickly the compression will engage if the mic input registers above the threshold.

- **Release time.** Sets how fast the mic input will be compressed.

Effects

Use the Effects subtab to apply effects on the microphone or Line In input.
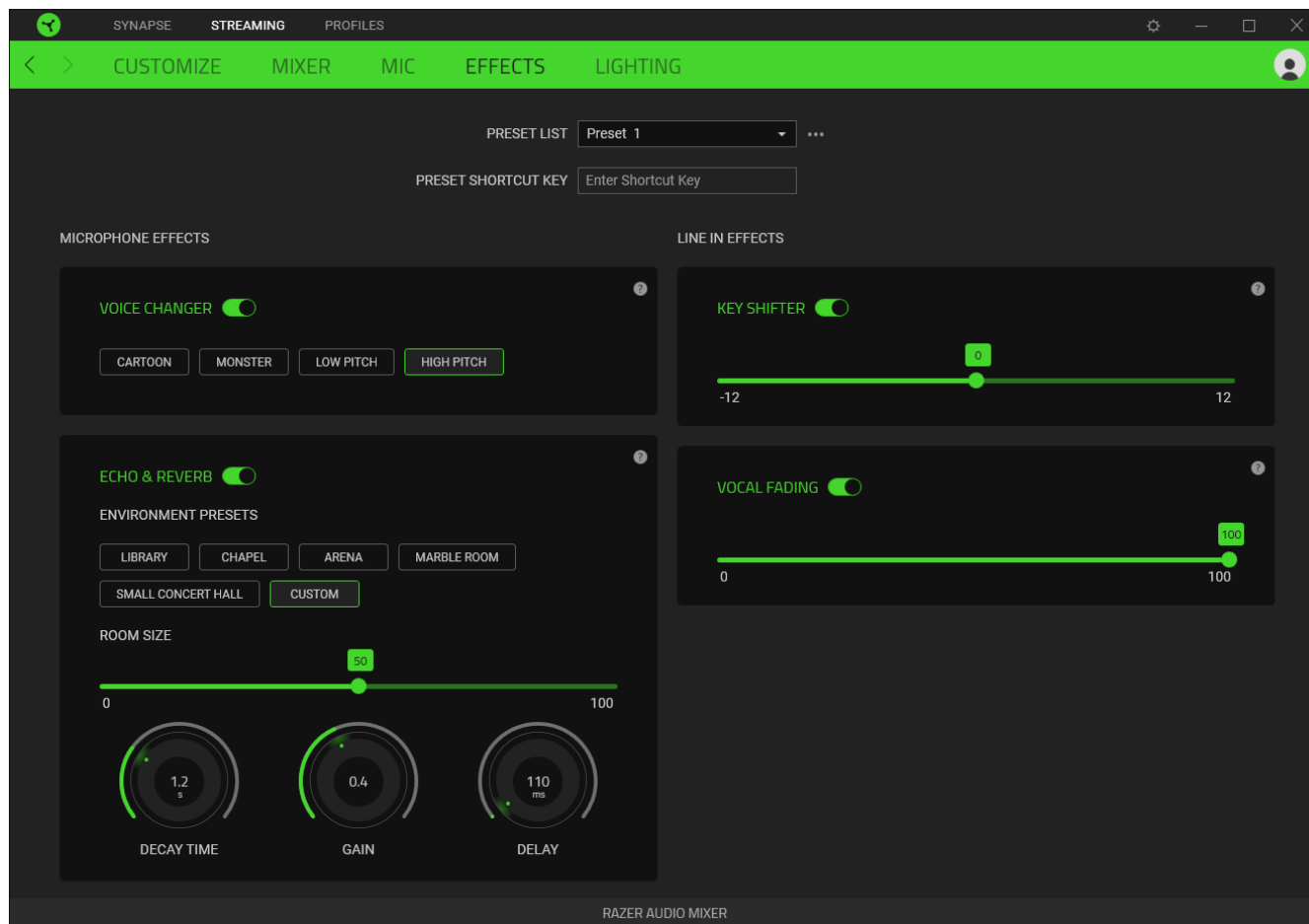
Preset list

Stores all your presets. To add, rename, duplicate, export, or delete a preset, press the preset's corresponding Miscellaneous button (•••). To assign a shortcut to any preset, click on the Preset shortcut key field and key in your preferred shortcut on the active preset.

Voice changer

Enable to apply a voice effect on the microphone in real-time using any of the voice changer presets.

Echo & Reverb

Toggle to apply a simulated environment on the microphone input using any of the Environment Presets. Customizing any preset changes the Environment Preset to Custom.

- **Room size.** Control how long the reverb will exist in the simulated environment.
- **Decay time.** Set how long the echo will be heard before it subsides.

- **Gain.** Set how loud the echo will be.
- **Delay.** Determine how quickly the echo will begin.
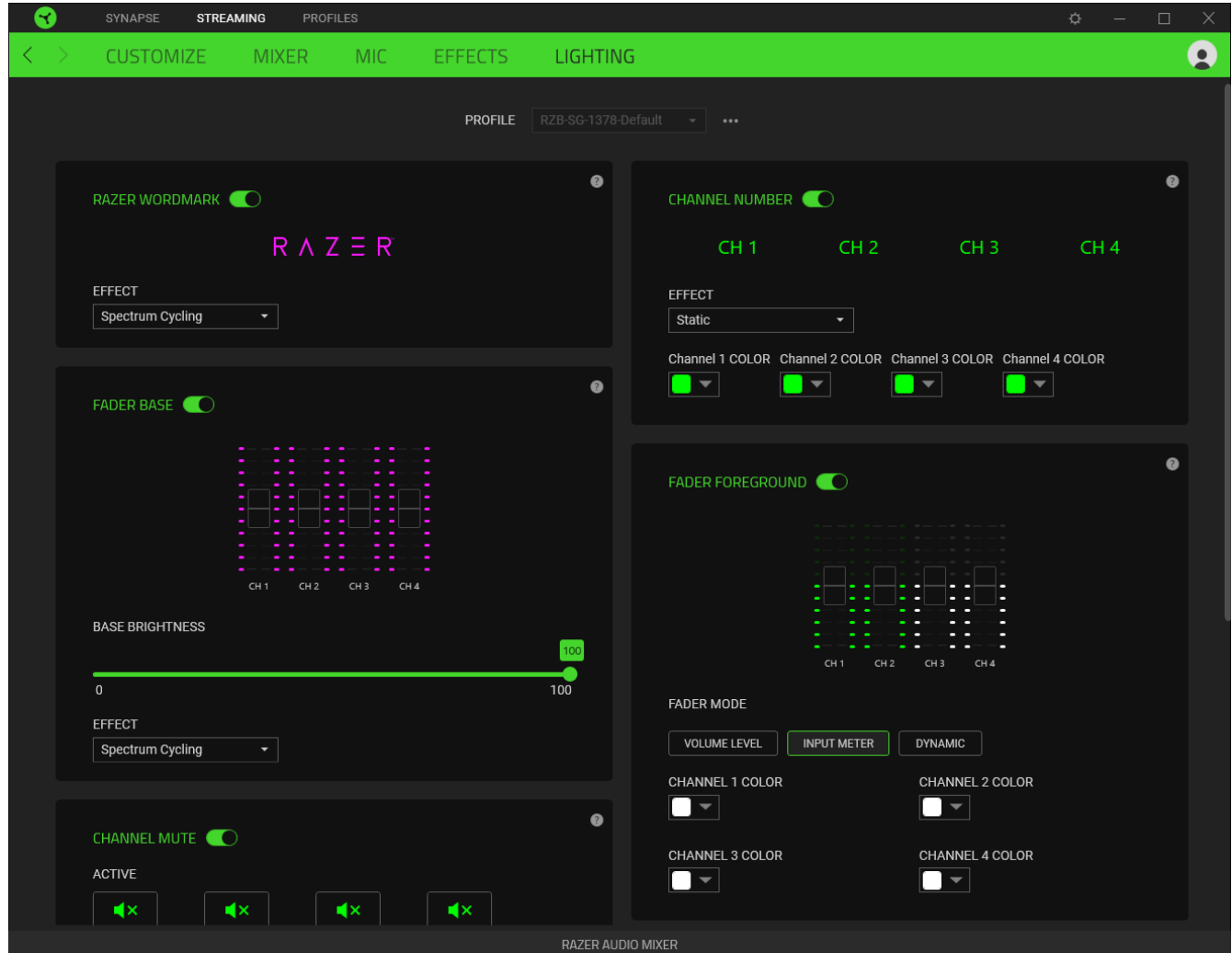
Key shifter

Turn on to adjust the pitch and tempo of any audio input on the Line In port using the slider.

Vocal fading

Enable to use the slider to isolate or minimize the volume on any voice detected on the Line In port.

Lighting

The Lighting subtab enables you to customize your Razer device's light settings.

Effects

You can apply the following lighting effects across various zones on your device:

	Name	Description	How to set up
	Breathing*	The lighting will fade in and out of the selected color(s)	Select up to 2 colors or randomize colors
	Fire*	The LEDs will light up in warm colors to mimic the motion of flames	No further customization required
	Spectrum cycling*	The lighting will cycle between 16.8 million colors indefinitely	No further customization required

|	Static	The LEDs will remain lit in the selected color	Select a color
	Wave*	The lighting will scroll in the direction selected	Select either left-to-right or right-to-left wave direction
	Wheel*	The lighting will rotate in the direction selected with a default spectrum of colors	Select either counter-clockwise or clockwise wheel direction

Only available on specific device zones.

Razer wordmark

Apply any of the available lighting effects on the Razer wordmark logo or turn off its lighting by toggling the option off.
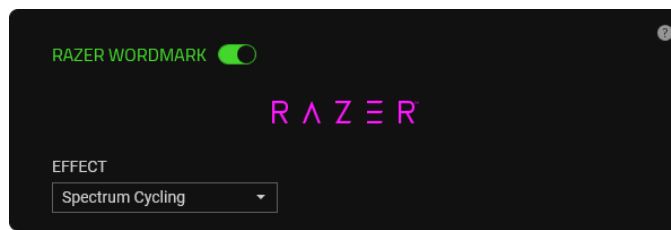

Fader base

Toggle this option to customize the base lighting of the channel fader markings. You can use the base brightness slider to increase/decrease the luminance of the base lighting and apply any of the available lighting effects for this zone.
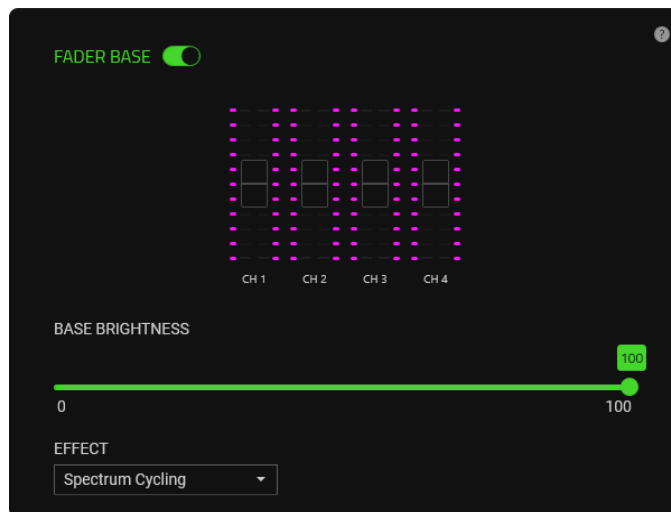
Channel mute

When enabled, you can change the color of each channel mute button when active and set a color for all channel mute buttons when muted, or disable channel mute button lighting.
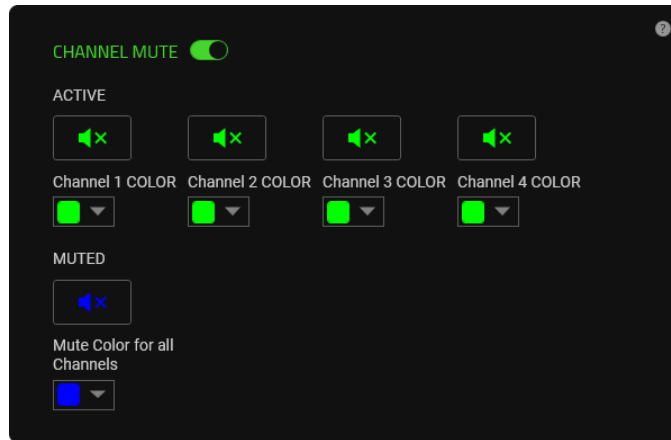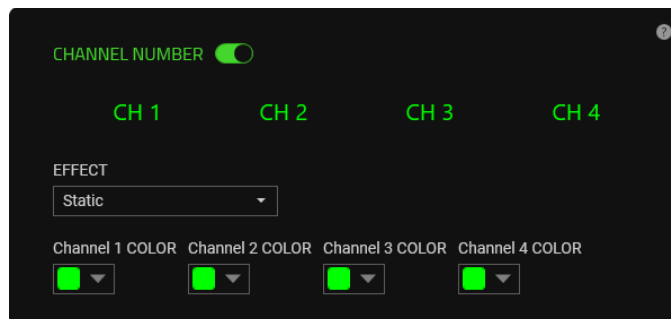

Microphone mute

Set a color on the microphone mute button when muted and not muted, or turn off its lighting by toggling the option off.
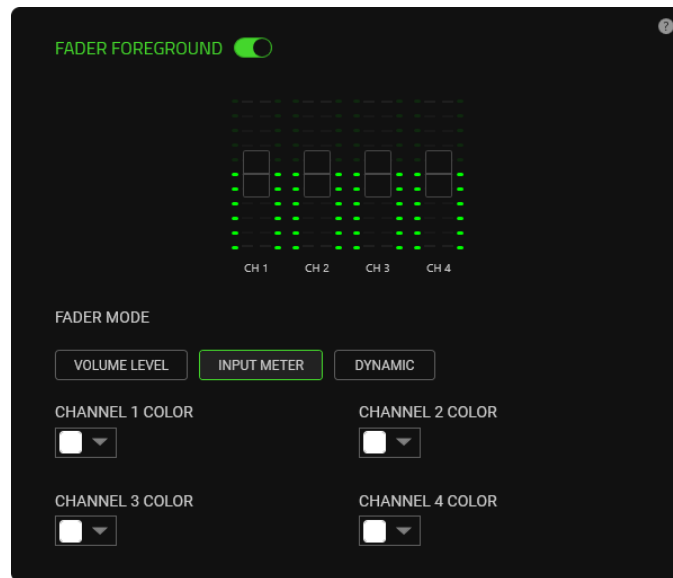

Channel number

Customize the lighting of the channel numbers on the device, or turn off its lighting by toggling the option off.

Fader foreground

Toggle this option to customize the foreground lighting of the channel faders according to fader mode.


Fader mode

Determines how the lighting effect will display on all channel faders.

- **Volume level.** The current volume of an assigned channel will be used as a foreground display of the corresponding channel fader.

- **Input meter.** The channel faders will light up according to the audio level of their assigned channel.

- **Dynamic.** The channel faders will use the input meter mode when audio plays on their assigned channel and switch to volume level mode when there's no audio.

Bleep button

Enable to change the color of the Bleep button when active or inactive. You can also use the brightness slider to adjust the luminance of the bleep button when active.
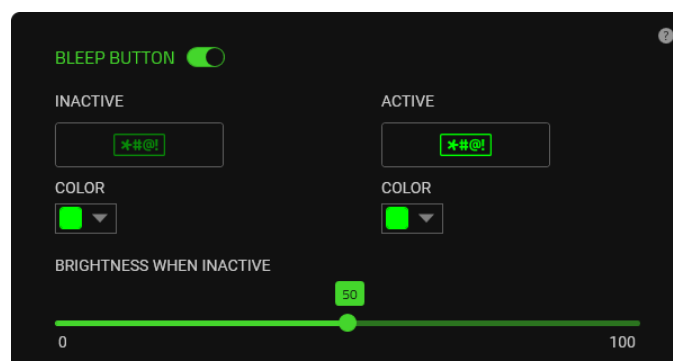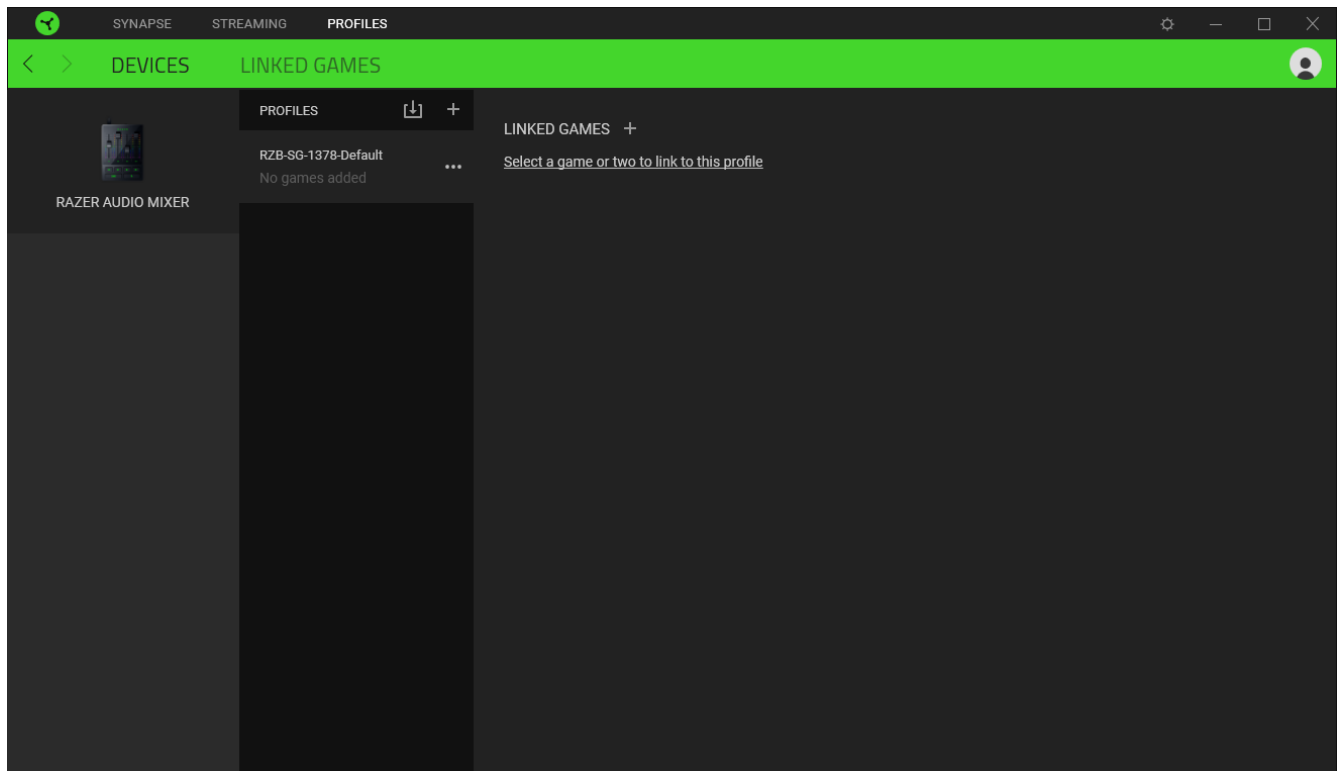
PROFILES TAB

The Profiles tab is a convenient way of managing all your profiles and linking them to your games and applications.

Devices

View which games are linked to each device's profiles or which Chroma Effect is linked to specific games using the Devices subtab.

You can import Profiles from your computer or the cloud through the import button (⬆) or create new profiles within the selected device using the add button (+). To rename, duplicate, export, or delete a profile, simply press the Miscellaneous button (•••). Each profile can be set to automatically activate when you run an application using the Linked Games option.

Linked Games

The Linked Games subtab gives you the flexibility to add games, view devices that are linked to games, or search for added games. You can also sort games based on alphabetical order, last played, or most played. Added games will still be listed here even if it is not linked to a Razer device.
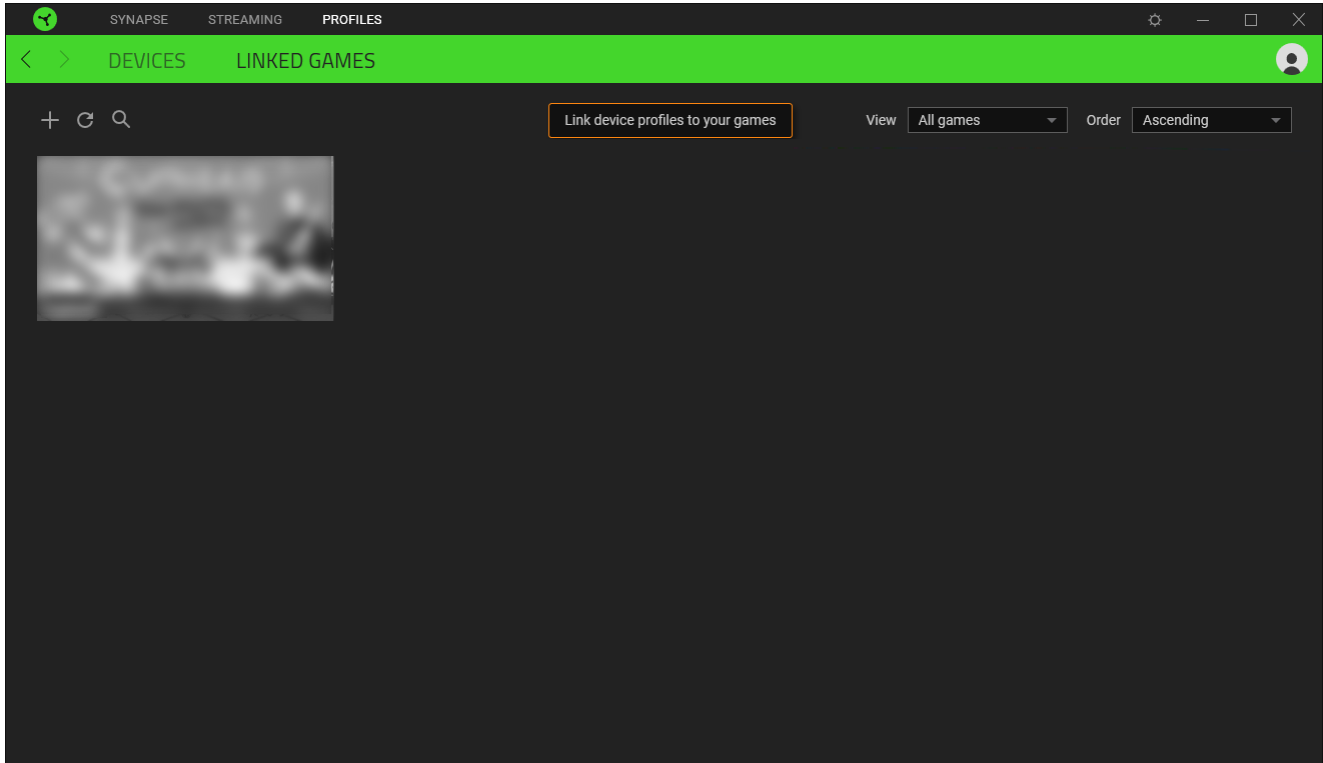
To link games to connected Razer devices or Chroma Effects, simply click on any game from the list, and then click **Select a device and its profile to launch automatically during gameplay** to select the Razer device or Chroma Effect it will link with. Once linked, you may click on the Miscellaneous button (●●●) of the corresponding Chroma Effect or device to select a specific Chroma Effect or profile.

SETTINGS WINDOW

The Settings window, accessible by clicking the (☼) button on Razer Synapse, enables you to configure the startup behavior and display language of Razer Synapse, view the master guides of each connected Razer device, or perform a factory reset on any connected Razer device.
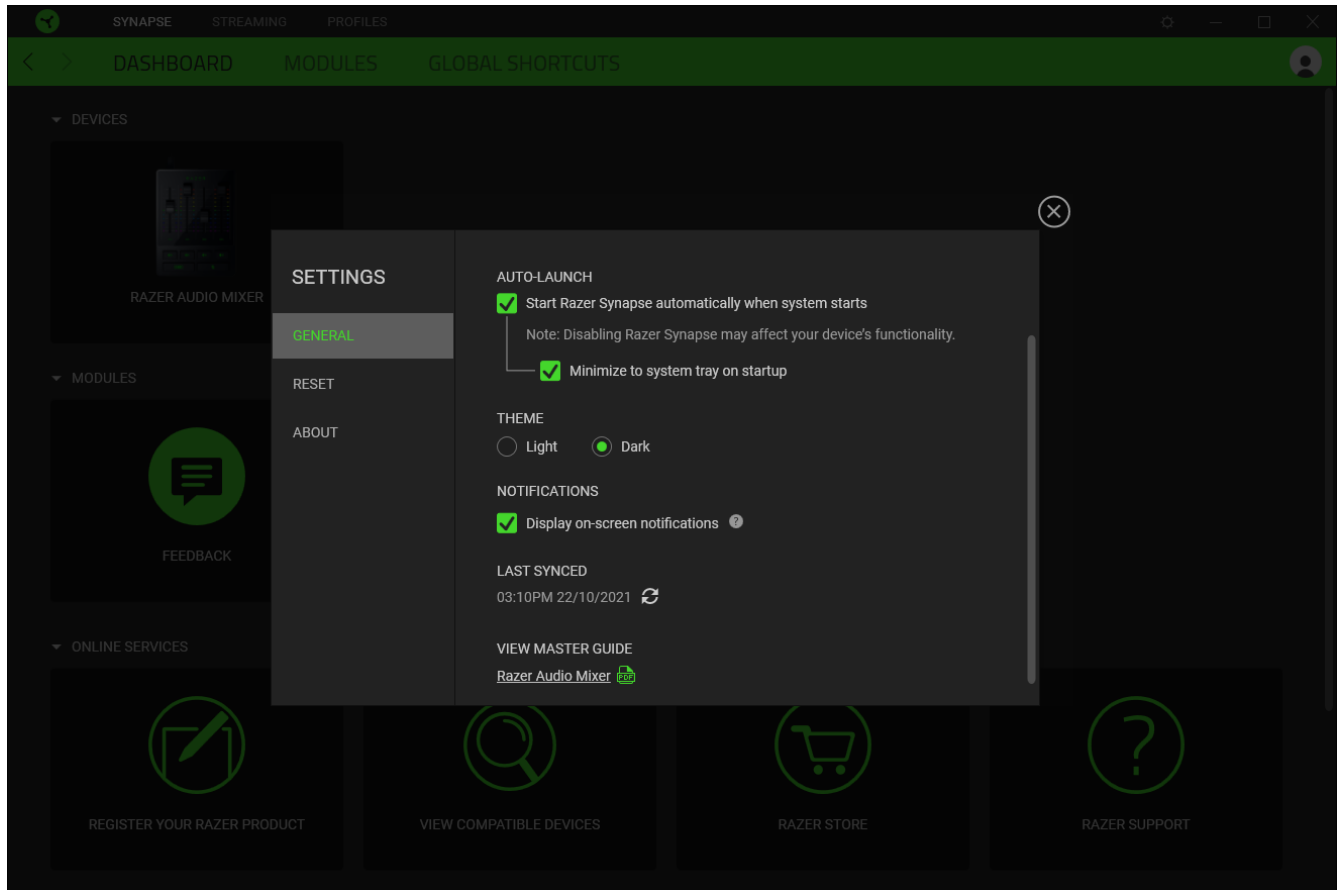
General tab

The default tab of the Settings window. The General tab enables you to change the software's display language, startup behavior, display theme, and on-screen notifications display. You may also manually sync your profiles to the cloud (↻) or view the master guide of all connected Razer devices and installed modules.

Reset tab

The Reset tab allows you to perform a factory reset on all connected Razer devices with on-board memory and/or reset Razer Synapse tutorials to acquaint yourself again with Razer Synapse's new features on its next launch.

⚠ *All profiles stored on the selected device's on-board memory will be erased when you reset a Razer device.*

About tab

The About tab displays brief software information, copyright statement and provides relevant links for its terms of use. You may also use this tab to check for software updates or as quick access to Razer's social communities.

7. SAFETY AND MAINTENANCE

SAFETY GUIDELINES

In order to achieve maximum safety while using the Razer Audio Mixer, we suggest that you adopt the following guidelines:

- Should you have trouble operating the device properly and troubleshooting does not work, unplug the device and contact the Razer hotline or go to support.razer.com for support. Do not attempt to service or fix the device yourself at any time.

- Don't take apart the device and don't attempt to operate it under abnormal current loads. Doing so will void your warranty.

- Make sure only to use the device with compatible devices. Please check the manual of your device to see if it supports the provided features of this product. Razer shall not be responsible for any damages incurred to any device when using the Razer Audio Mixer.

- Don't place any heavy items on top of the device.

- Don't use or place the device near any heat, naked flame, or other hot surfaces such as radiators, stoves, fireplaces, and candles. Nor place the device near water, moisture, or other wet surfaces

- When connecting external devices, carefully plan how the wires will be placed. Protect any connected cables from being walked on or pinched, particularly at plugs, convenience receptacles, or the point where they exit.

- When unplugging any connected devices and/or cables, always pull on their plugs or connectors. Don't forcefully tug on its cord.

- Refer all servicing to qualified service personnel. This is required when the device has been damaged in any way, such as if liquid has been spilled or objects have fallen on the device; the device has been exposed to rain or moisture, does not operate normally, or has been dropped.

- Keep the device and its components away from liquid, humidity, or moisture. Operate the device and its components only within the specific temperature range of 0°C (32°F) to 40°C (104°F). Should the temperature exceed this range, unplug and switch off the device to let the temperature stabilize to an optimal level.

MAINTENANCE AND USE

The Razer Audio Mixer requires minimum maintenance to keep it in optimum condition. Once a month, we recommend you unplug the device and clean it using a soft cloth or cotton to prevent dirt buildup. Do not use soap or harsh cleaning agents.

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