GO XLR

Revolutionary Online Broadcaster Platform with 4-Channel Mixer, Motorized Faders, Sound Board and Vocal Effects

TC HELICON

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EN Important Safety Instructions

CAUTION
RISK OF ELECTRIC SHOCK!
DO NOT OPEN!

ATTENTION
RISQUE D'ÉLECTROCUTION !
NE PAS OUVRIR !

Terminals marked with this symbol carry electrical current of sufficient magnitude to constitute risk of electric shock. Use only high-quality professional speaker cables with ¼" TS or twist-locking plugs pre-installed. All other installation or modification should be performed only by qualified personnel.

This symbol, wherever it appears, alerts you to the presence of uninsulated dangerous voltage inside the enclosure - voltage that may be sufficient to constitute a risk of shock.

This symbol, wherever it appears, alerts you to important operating and maintenance instructions in the accompanying literature. Please read the manual.

Caution
To reduce the risk of electric shock, do not remove the top cover (or the rear section). No user serviceable parts inside. Refer servicing to qualified personnel.

Caution
To reduce the risk of fire or electric shock, do not expose this appliance to rain and moisture. The apparatus shall not be exposed to dripping or splashing liquids and no objects filled with liquids, such as vases, shall be placed on the apparatus.

Caution
These service instructions are for use by qualified service personnel only. To reduce the risk of electric shock do not perform any servicing other than that contained in the operation instructions. Repairs have to be performed by qualified service personnel.

1. Read these instructions.

2. Keep these instructions.

3. Heed all warnings.

4. Follow all instructions.

5. Do not use this apparatus near water.

6. Clean only with dry cloth.

7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.

8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

11. Use only attachments/accessories specified by the manufacturer.

12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

13. Unplug this apparatus during lightning storms or when unused for long periods of time.

14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

15. The apparatus shall be connected to a MAINS socket outlet with a protective earthing connection.

16. Where the MAINS plug or an appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.

17. Correct disposal of this product: This symbol indicates that this product must not be disposed of with household waste, according to the WEEE Directive (2012/19/EU) and your national law. This product should be taken to a collection center licensed for the recycling of waste electrical and electronic equipment (EEE). The mishandling of this type of waste could have a possible negative impact on the environment and human health due to potentially hazardous substances that are generally associated with EEE. At the same time, your cooperation in the correct disposal of this product will contribute to the efficient use of natural resources. For more information about where you can take your waste equipment for recycling, please contact your local city office, or your household waste collection service.

18. Do not install in a confined space, such as a book case or similar unit.

19. Do not place naked flame sources, such as lighted candles, on the apparatus.

20. Please keep the environmental aspects of battery disposal in mind. Batteries must be disposed-of at a battery collection point.

21. Use this apparatus in tropical and/or moderate climates.

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Zhongshan Eurotec Electronics Limited
No. 10 Wanmei Road, South China Modern Chinese Medicine Park, Nanlang Town, 528451, Zhongshan City, Guangdong Province, China

1. PC Setup Guide

This section will describe how to set up a basic one-PC streaming setup.

To begin, you must first download the GO XLR app and driver.

1.1 GO XLR App

The GO XLR app is REQUIRED to operate your GO XLR.

GO XLR app key features include:

- EQ, Compress and Gate your mic
- Set up and define mixer controls
- Change button/screen colors
- Create and manage samples
- Save voice FX settings
- Direct access to product manuals
- Access to TC Helicon support

Minimum Hardware	
PC-based Hardware	-Core 2 DUO CPU
	-Ethernet port
	-1 GB RAM

Recommended Operating Systems	
Windows*w	-Windows 7, 32-bit or 64-bit
	-Windows 8, 32-bit or 64 bit
	-Windows 10, 32-bit or 64-bit

*Windows is either a registered trademark or trademark of Microsoft Corporation in the United States and/or other countries.

1.2 Download the app

1. Download the GO XLR app:
   a) Go to the GO XLR product page at tc-helicon.com/products/goxlr.
   b) Click on the Downloads tab.
   c) Click on the download icon for the latest version of the GO XLR app.
   d) Follow the onscreen installation instructions.
2. You may be asked to reboot your computer.
3. Connect the GO XLR USB cable to your computer when app installation is complete.
4. Power up GO XLR.
5. Dominate the Interwebs!

1.3 Power Up

To begin working with the GO XLR app, the GO XLR unit should be connected to your computer and powered up with these basic connection steps:

1. Connect the include USB cable to the USB jack on the rear panel of XLR GO.

2. Connect the other end of the USB cable to your computer.
3. Plug the power supply connector into the DC IN power jack on the back panel of GO XLR.

1.4 Single PC Setup   4

The most basic livestreaming setup you can use with GO XLR is a one-PC setup withy the following devices and connections:

- Your PC computer
- GO XLR
- Power
- Headphones
- USB
- XLR microphone

1.5 Dual PC Setup

A dual PC setup uses two computers:

- a gaming computer
- a streaming computer

We recommend you connect GO XLR to your gaming computer, and then use the LINE IN and LINE OUT jacks on the GO XLR rear panel to communicate with your streaming computer.

1.6 Why is a dual-PC setup special?

First, understand that all audio processing is done inside GO XLR, and you end up with a USB audio stream called "Broadcast Mix." This Broadcast Mix would normally go through a one-PC setup directly to OBS, XSplit or whatever livestreaming service you plan to use.

However, with a dual-PC setup, you need to get that Broadcast Mix audio out of GO XLR and into your streaming computer.

To accomplish this re-channeling of the Broadcast Mix to your streaming PC, you will need two 3.5 mm stereo cables:

1. Run the first cable from the LINE OUT jack on GO XLR to the LINE IN jack on your streaming computer.

2. Run the second cable from the LINE OUT on your streaming computer to the LINE IN jack on the rear panel of GO XLR. This second connection will allow you to route in all streaming alerts or other audio from your streaming computer back into GO XLR so you can hear them over your headphones.

1.7 Basic Audio Connections

The following connections will work for a single-PC setup, and they can be adapted for a dual-PC setup if you also use the LINE IN and LINE OUT jacks to connect to your streaming computer.

To get started, follow these steps:

1. Plug one end of your XLR microphone cable into your microphone.

2. Connect the other end of your XLR cable into the XLR jack on the back panel of GO XLR.

3. Connect any auxiliary audio devices to the LINE IN 3.5 mm jack on the back panel. Auxiliary audio devices could include your phone, a tablet computer, and so on. For a dual-PC setup, the LINE IN jack will be used to route streaming alerts and other audio from your streaming computer back into GO XLR.

4. If your microphone does not have an XLR connection, you can connect the microphone to the MIC input with the pink ring immediately to the right of the LINE IN jack. This MIC connection can also work with the Blue Yeti* microphone.

NOTE: If you intend to use the popular Blue Yeti* microphone, which has its own built-in headphone output, you should run that built-in headphone output into the GO XLR's MIC input. For Blue Yeti mics powered via USB, plug the USB connector directly into your computer for power, but do not select the Blue Yeti as an audio source on the computer. Instead, the Blue Yeti's headphone output will be the audio source for mixing inside GO XLR.

5. Plug your headphones into the PHONES output.

Pro Tip: You may also run your headphone cable underneath GO XLR by using the cable channel designed into the underside of the unit, so that you do not have to wrap your headphone cable around the GO XLR mixer.

Cable channel

6. Plug a 3.5 mm stereo cable into the LINE OUT jack if you wish to route a stereo copy of your livestream out to other devices. In a dual-PC setup, you will want to connect the LINE OUT jack on GO XLR to the LINE IN jack on your streaming PC.

7. If you will be gaming on a Playstation[†] or Xbox[‡], plug these gaming consoles into the OPTICAL output on the rear panel.


* Yeti is a registered trademark of Blue Microphones.

† PlayStation is a registered trademark or trademark of Sony Interactive Entertainment Inc. SONY is a registered trademark of Sony Corporation.

‡ Xbox is either a registered trademark or trademark of Microsoft Corporation in the United States and/or other countries.

2. Connection Diagram

Studio Vocal Mic

External Audio Device
(if applicable)

Stream
broadcast

Stream alerts

Gaming Headset with Mic

Gaming Console

Dedicated Streaming
Computer (if applicable)

Gaming/Streaming
Computer

Audio out to GO XLR
via headphone output

Power via
USB (no audio)

Blue Yeti Microphone

Computer
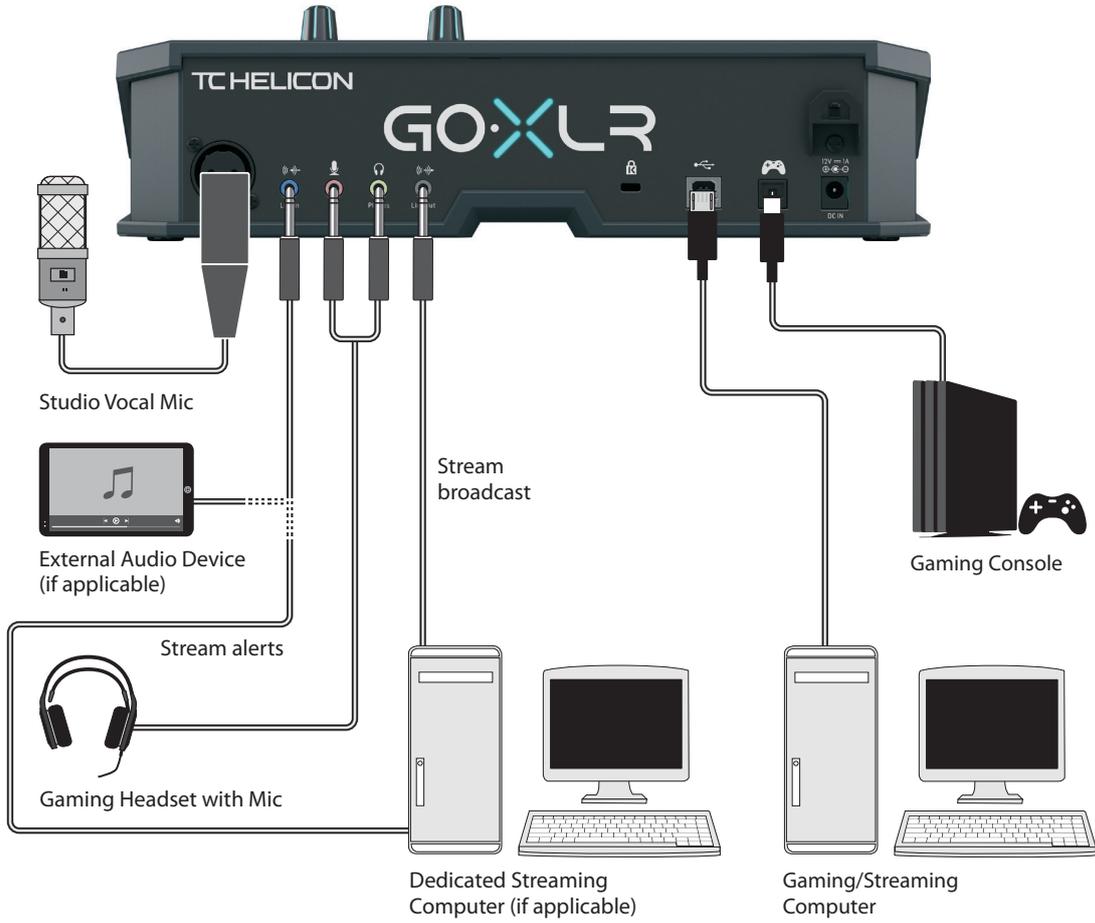
Blue Yeti Mic Recommended Connection

3. Setting Up Your Mic

Once you have your microphone connected to GO XLR, you will need to go into the GO XLR app and set up the input levels and processing for your microphone.

3.1 Setting the Input Level

After plugging your microphone into GO XLR, you will first need to set the input level by following these instructions:

1.   Go to the System tab in the lower half of the GO XLR app window.

2.   Under Settings, click on Mic Setup. The system will launch a dialogue box.
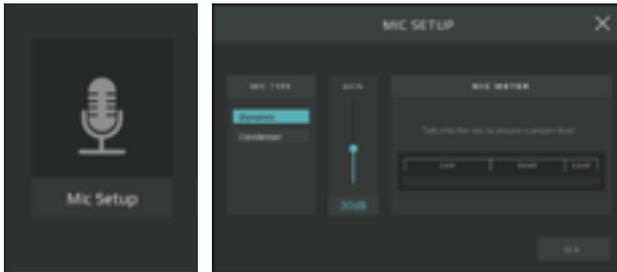
3.   Choose between Dynamic and Condenser settings. If your microphone is a condenser mic, you will need to use the Condenser setting so that GO XLR transmits the "phantom power" required to run the microphone.
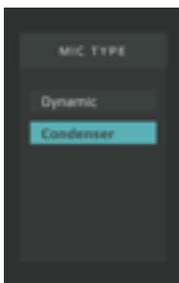
4.   While talking into the microphone at a regular level, watch the level in the Mic Meter.
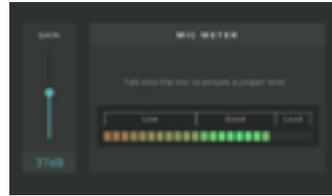
5.   Adjust the Gain control until the signal peaks in the Good portion of the meter, with occasional peaks in the Loud range. If the level peaks in the Low range, increase the gain. If the meter peaks too consistently in the Loud range, reduce the gain.
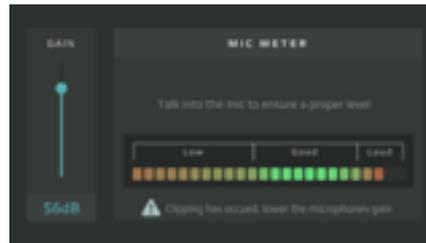
6.   Once you have an acceptable signal level, click on OK to exit.
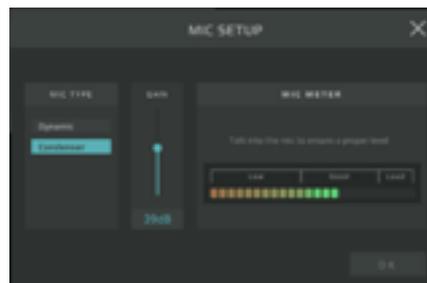
3.2 Setting Microphone Processing

Once you have set an acceptable level for your microphone, now it's time add some equalization, compression, gating, and if necessary, de-essing. These processing effects will help you find that "pro" sound for your vocals.

To add basic processing to your mic signal, follow these instructions:

1.   Go to the Mic tab in the lower half of the GO XLR app's screen.
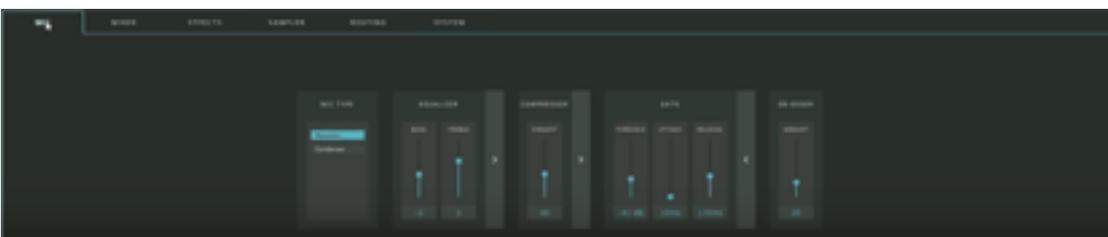
2. Raise or lower the Bass and Treble controls in the Equalizer section to adjust the basic equalization of your vocal. Raise the Bass control to add thickness, or reduce the control to thin out your vocal sound. Raise the Treble control to add brightness, or reduce the control to remove a harsh or tinny sound.

3. Adjust the Compression setting until your vocal sound has the desired evenness.

4. Adjust the Gate setting if you wish to screen out ambient background noise in your room. The right Gate setting will open up quickly and smoothly to let your voice through and then close down when you stop speaking, without stuttering or abrupt cutoffs.

5. Adjust the De-Esser to control "S" sounds in your vocal. The right setting will sound natural, without trebly harshness or sounding muffled.

3.3 Descriptions and Advanced Processing Settings

The Equalizer, Compressor and Gate effects in the Mic tab can each be expanded to show additional settings and parameters for finer control of your sound.

Click on the arrow to the right of each window to expand the windows and expose the additional controls.

3.3.1 Equalizer

Equalizer with expanded controls

In the Equalizer, the expanded controls go beyond the basic Bass and Treble adjustment with multiple controls laid out like a graphic equalizer. Each control focuses on a specific band of frequencies, which can be handy, for example, if you need to find and reduce the frequency band containing an unpleasant room resonance in your microphone sound.

3.3.2 Compressor

Compressor with expanded controls

Compressors even out sounds by reducing the loud portions and increasing the quiet parts, i.e., they "squish" or compress the sound into a more narrow dynamic range. Compression is extremely important to voice professionals, such as radio DJs and voiceover artists, so your livestream broadcast will sound more professional.

The expanded Compressor controls include these functions:

- **Threshold**—This parameter controls the signal level at which the compressor begins to work. If you want to manually control the Threshold, speak into the mic while slowly lowering the Threshold slider from the top 0 dB setting, until you find an acceptable level. A high Threshold setting will only affect the highest signal peaks, while a lower ratio will apply compression to a greater proportion of the signal.

- **Ratio**—The Ratio controls the intensity of the compression effect. Higher ratios will produce a more intense effect, while lower ratios will be gentler.

- **Attack**—The Attack parameter controls how quickly the compressor reacts to signals that go over the Threshold setting.

- **Release**—This parameter determines how quickly the compressor lets go of the signal.

- **Make-Up Gain**—This control is important because by reducing the loudest parts of the signal, compression makes the overall signal seem more quiet, even though you haven't changed the volume. By increasing the gain on the way out of the compressor, you can restore the original perceived volume.

Make-Up Gain control

NOTE: Be careful about how much Make-Up Gain you apply. Too much Make-Up Gain can distort your microphone signal.

3.3.3 Gate

Gate with expanded controls

A noise gate filters out background noise by switching the signal off when the level drops below a pre-determined threshold, usually at a point just above the ambient "noise floor" in the space where you are running the microphone. Similarly, the noise gate opens back up again when the signal increases and exceeds the set threshold.

The expanded Gate controls have the following advance parameters available for adjustment:

- **Threshold**—The Threshold setting controls the audio level at which the Gate is triggered to close or open. A good Threshold level will be just above the level of ambient noise in the space around your microphone, but low enough that your voice will easily trigger the Gate to open again.

- **Attack**—The Attack setting controls how quickly the Gate opens after the sound coming into the mic exceeds the Threshold level. A good Attack setting will open the Gate quickly enough that it does not cut off the first sounds out of your mouth.

- **Release**—The Release parameter controls how quickly the Gate closes. A fast release abruptly cuts off the sound, while a slower setting more smoothly "fades" the closing of the gate.

3.3.4 De-Esser

De-Esser

The De-Esser in GO XLR does not have expanded functions, but we should take a moment to describe how a de-esser works and why de-essing is a common process in the audio world.

The De-Esser, true to its name, removes excessive "S" sounds or "sibilance" from vocals. A vocal with too much sibilance will sound harsh and have a trebly "edge" that can be unpleasant or distracting, so a de-esser is programmed to look for those trebly "S" sounds and reduce their prominence in the sound.

However, if the de-essing filter is applied too heavily, your voice can have an unnatural, lisping sort of sound, so you will need to find a setting that works for you and your voice.

4. Understanding Audio Channels

Instead of showing up in your computer's operating system as a single device with multiple inputs and outputs, GO XLR shows up in your computer as several different audio sub-devices dedicated to different elements of your overall livestream.

4.1 Sound>Playback Tab

These different sub-devices will each appear separately in your PC's Sound>Playback tab:
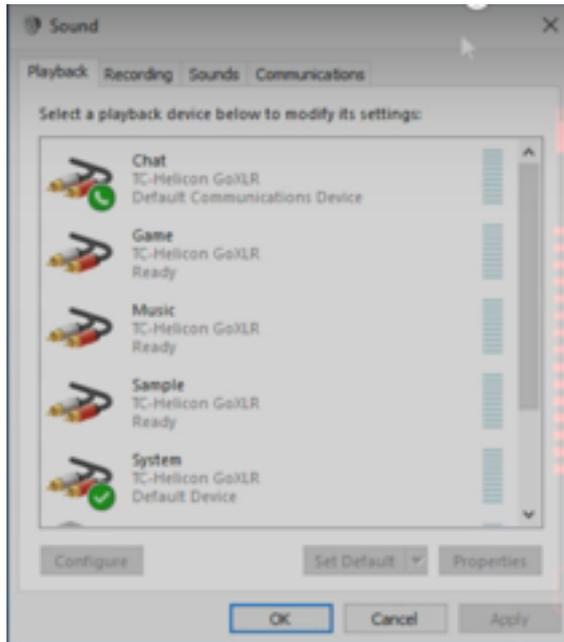
Sound>Playback tab

These Playback sub-devices carry the following types of audio information:

- **Chat**—voice chat audio from services such as Discord or Skype
- **Game**—audio from your videogame, such as explosions, special effects sounds, or alert noises that originate inside the game
- **Music**—audio from music applications running on your computer, such as Spotify, Windows Media Player or iTunes
- **Sample**—audio that has been sampled in GO XLR plays back into your stream over this channel
- **System**—this channel serves as a catch-all for when perhaps you have a particular video game that won't allow you to choose a specific output device

4.2 Setup tips

To set up your audio devices in the Sound>Playback tab, use the right-click option on your mouse to take the following assignments:

- set up the System channel as your overall Default Device
- set the Chat channel as your Default Communications Device

Once assigned, the system will add a green check mark and text label to mark each of these devices:
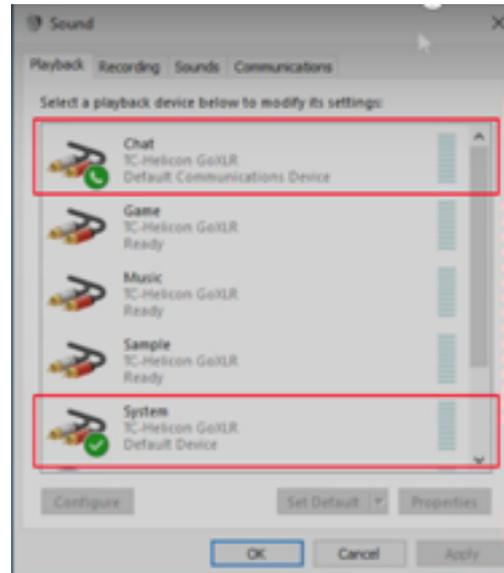
Sound>Playback tab with assigned devices

4.3 Sound>Recording Tab

Similar sub-devices also appear in the system Sound>Recording tab in order to make your livestream audio available for recording.

These Recording sub-devices carry the following types of audio:

- **Broadcast Stream Mix**—the final stereo mix that contains audio from all sub-devices combined into a single stream
- **Chat Mic**—audio from your personal chat mic (chosen as the Default Device via the right-click function)
- **Sample**—sampled audio from GO XLR plays back and can be recorded using this sub-device
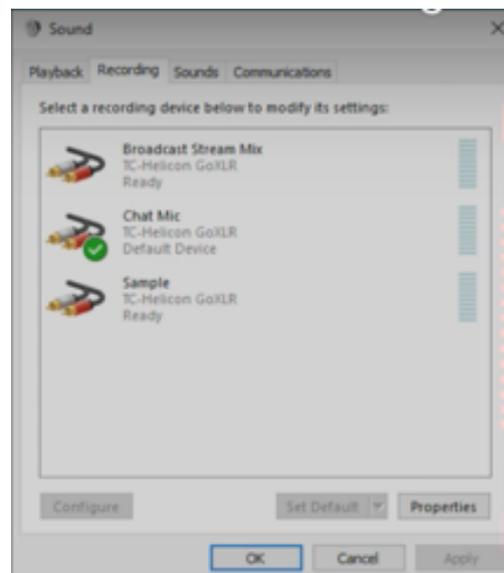
Sound>Recording tab with assigned devices

4.4 Audio devices and GO XLR

Once each of these sub-devices has been set up and assigned to a GO XLR slider, each slider on GO XLR can independently control its assigned audio device. Each slider may then be used to adjust that device's volume within the final livestream stereo mix.

To further illustrate this separate-and-mix concept, if you feel that your Chat audio is too loud, you simply reach out to the assigned slider on your GO XLR and move the slider downward to decrease the Chat volume relative to the Game, Music or Sample audio.

If the Chat audio is too quiet, you can reach out and move the Chat slider up to increase the Chat volume (or you may also grab the Game, Music and Sample sliders and move those sliders downward to decrease those sub-devices' volume relative to the Chat audio).

4.5 Enabling Surround Sound

A virtualized surround sound can be enabled on the Game and System channels in the Windows Sound panel, and this surround sound algorithm should work fine on most stereo headsets.

To enable surround sound for GO XLR, follow these steps:

1. Open the Windows Sound control panel.
2. Right-click on the audio device you want to use with surround sound.
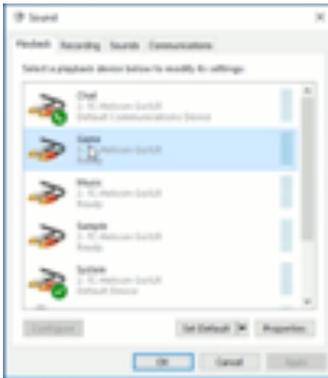
3. Choose the Properties option from the pop-up menu.
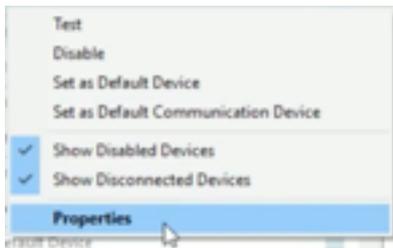
4. Go to the "Spatial sound" tab.
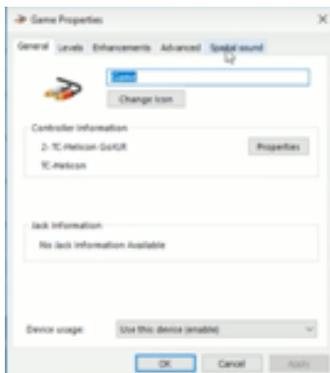
5. Select "Windows Sonic for Headphones" from the pulldown menu to turn on the 7.1 virtual surround sound function.
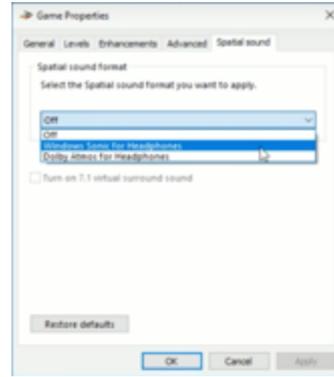
6. In your game, also make sure to turn on the game's 7.1 surround sound option, if available.

Once activated, audio from your game will be mixed down to a virtualized version of surround sound on your headphones.

If you have purchased the "Dolby Atmos for Headphones" function for Windows, you may also select the Dolby algorithm, and the audio will similarly be mixed down to a virtualized surround sound for your headphones.
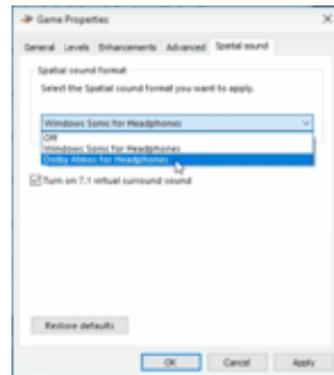
4.6 De-Select the PC's Internal "Listen" Option

To avoid an unintentional doubling of your audio, you will need to go into Windows under the Sound>Recording tab and make sure that the Windows "Listen to this device" option is switched off for your designated Default Device.

The "Listen to this device" option is the internal method by which Windows allows you to monitor audio, but the processing latency inside your PC is slower than GO XLR's internal audio processing, and so this slight delay inside the PC can create an unintentional doubling of the audio.

To de-select "Listen to this device," follow these steps:

1. Open the Windows Sound control panel.
2. Click on the Recording tab.
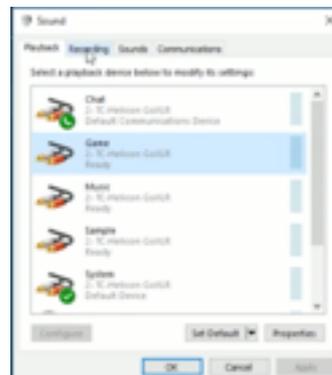
3. Right-click on your designated Default Device.
4. Choose the Properties option from the pop-up menu.
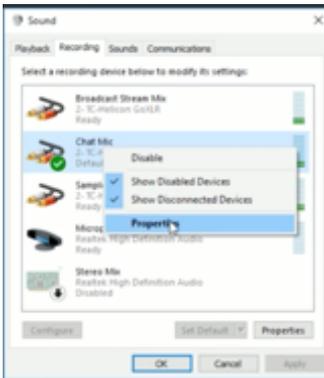
5. Choose the "Listen" tab in the Properties pop-up window.
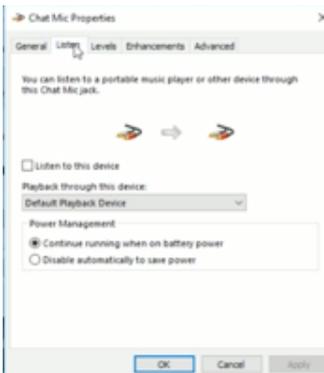
6. Find the "Listen to this device" option.
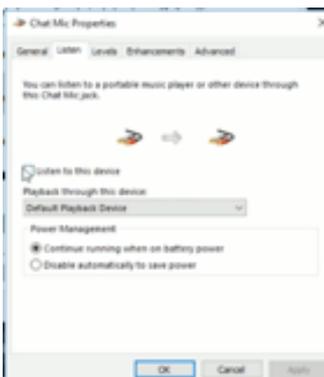
7. Make sure "Listen to this device" is UN-CHECKED.

5. App Basics

Be aware that all audio processing happens in the GO XLR unit itself. The GO XLR unit's processing and settings may be coordinated and controlled from your computer via the GO XLR app, but all audio is manipulated in GO XLR and therefore does not take up processing headroom in your computer.

5.1 The GO XLR App Interface

The GO XLR App's interface breaks down into three main areas: Profile/Sample/Preset Management, Live View Area, and Processing Tabs.

GO XLR App interface

5.2 Profile/Sample/Preset Management

The Profile/Sample/Preset Management area in the upper left area of the app interface contains these tabs:

- **Profile Tab**—Located in the top-left corner, this area is where you can create profiles that store all the settings you need for particular tasks. For example, by clicking on a profile, you can instantly load all of the routing, level and processing settings you need, as well as any customized color schemes and samples.
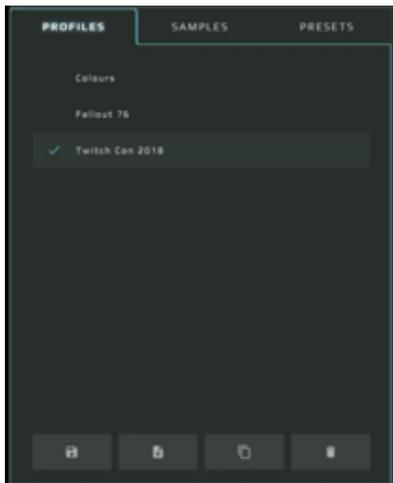
- **Samples Tab**—This tab is where you manage samples. Any samples you have recorded "in the box" will live in this tab, and all sample will appear time-stamped and dated, so you know when you created a sample. These dated samples can be re-named later. This tab also has a file management option so you can look through other folders and locations to find and pull in samples created elsewhere.
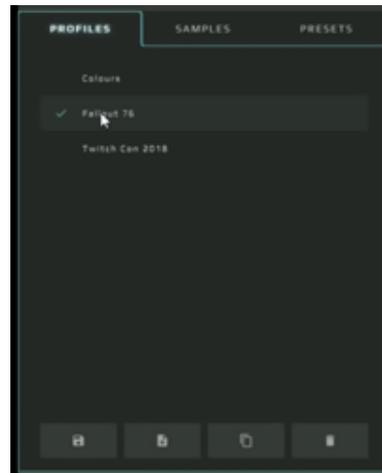
- **Presets Tab**—This area handles presets for your vocal effects section. You can create and save new presets here and then load them up into GO XLR when desired. Presets can also be dragged and dropped inside the app.
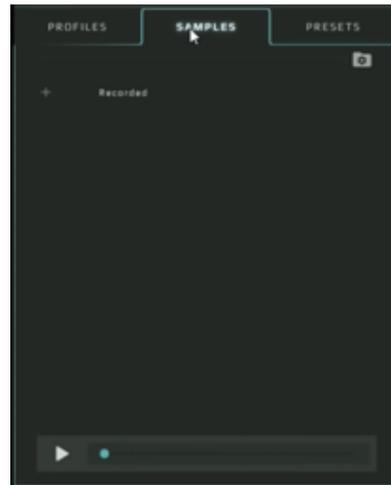
5.3 Live View

The Live View is the GO XLR app's onscreen representation of the GO XLR panel. This digital version of the mixer panel changes to reflect any control changes you may make on the hardware, such as moving a slider, turning a knob or pressing a button.

Live View in the GO XLR app

By clicking on individual sliders or other controls in Live View, you can go in and change settings and processing for that control in the Control Tabs section.

5.4 Control Tabs

The Control Tabs live in the lower half of the GO XLR app screen and contain these sections:

- **Mic**—Select settings to suit your mic, such Dynamic or Condenser (which activates Phantom Power to run the mic), as well as EQ, compression, gating and a de-esser.

- **Mixer**—View settings for the Mixer section, including fader assignments, muting options and mix levels for all active devices, not just devices assigned to the hardware faders. In the Lighting sub-section, you can also customize the various LED colors for related controls on the hardware panel.

- **Effects**—Shows effects and settings assigned to the knobs and buttons in the Effects section, as well as color customization for these controls.

- **Sampler**—Shows settings and sample assignments for each button in the Sampler section, as well as controls for color customization. The Samples tab in the upper left will automatically open when you open this section. You can use this section to record, manipulate and assign samples to your desired controls.

- **Routing**—Display a grid showing your inputs and outputs, so you can control where your audio goes in detail.

- **System**—This is where you go to set up folders, set up mic gain, watch tutorials, look for software updates, and so on.

6. Navigating the Mixer Tab

The Mixer Tab is where you assign devices to the four hardware faders, designate what will appear on the slider screens and work with the Mute buttons.

Mixer tab

The Mixer Tab has two main sub-sections, the Settings tab and the Lighting tab.

- **Settings**—This sub-section shows fader assignments and labels, options for how the Mute buttons function, as well as a mixer section showing levels for all audio devices, including devices not assigned to a hardware fader.

- **Lighting**—The Lighting sub-section controls color, text and icon settings for the fader screens, as well as LED colors and arrangement for the fader LEDs. You can also assign custom colors to the Mute buttons so you can know at a glance whether a channel is open or muted. (For more about the Lighting functions, see XXX on pg.X.)

6.1 Assigning Audio Devices to Faders

To assign and set up each of the four faders in the Mixer section, follow these steps:

1. Activate a fader by clicking on that fader in the Live View panel in the upper right of the app window, or go to the Faders window in the Mixer tab and click on Channel 1, Channel 2, and so on. If you choose to click on a fader in Live View, that fader's settings will automatically appear in the Mixer tab below

2. Go to the Input box list to choose a device for this fader, such as Mic, Chat, Music and so on. This device assignment will then appear as a text label on the matching fader screen, and the selected fader will control the mix level for that particular device.

3. Click on the next Channel and repeat Steps 1-3.
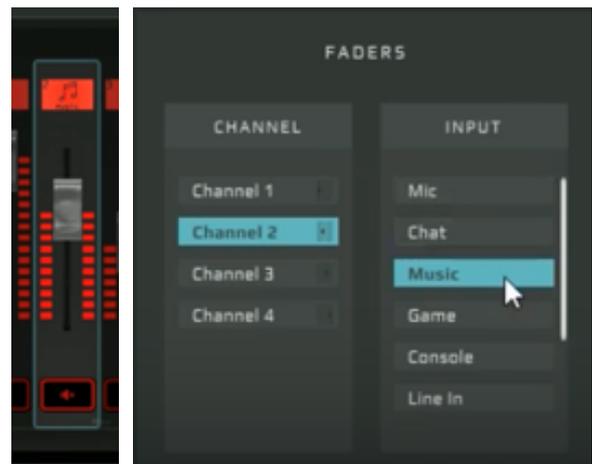
4. Continue until you have assigned audio devices to all four available channels.

Pro Tip: When you set up a mix, we recommend you set your primary Mic level first, and then balance levels for all other devices versus the Mic level. This way, you can always hear yourself clearly in the broadcast stream.

6.2 Setting Mix Levels for Additional Devices

Even though you only have four hardware faders, you may have additional devices that also need to be mixed into your livestream.

To control and mix these additional devices, go to the Mixer box next to the Mute box. In the Mixer box, you will find virtual faders for every available device, assigned and unassigned, including the devices already assigned to the hardware faders.

Mixer sub-section of Mixer tab

Un-assigned devices will each have a virtual fader in this section, and this is where you control the mix levels for these other devices. For example, if you have not assigned the Sample device to a hardware fader, but you need to adjust how loud your samples are in the mix, you can go to this section, click on the Sample virtual fader, and make adjustments.

Pro Tip: Use the four hardware faders for important devices that will require frequent, real-time level adjustments, so that those devices are always ready and available for quick adjustment.

7. Setting Up GO XLR for Voice Chat

Now let's set up GO XLR for your voice chat program.

The following examples use Discord, but this setup should work similarly in Skype, Mumble, Vent and other chat services.

7.1 Setup Recommendations

For Discord, follow these setup instructions (and adapt for other chat services as needed):

1. Go to the User Settings menu in Discord.
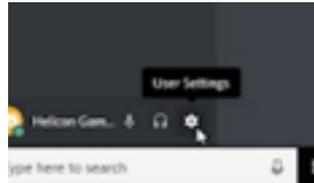
2. Click on Voice & Video to open the settings window.
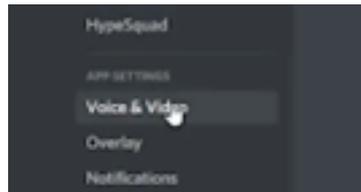
3. Go to Input Device under Voice Settings and choose "Chat Mic (2- TC-Helicon GoXLR)" from the pulldown menu.
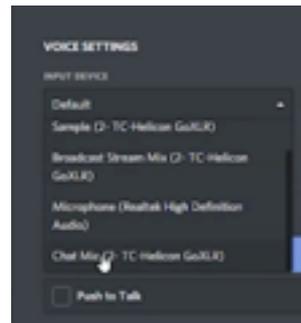
4. Go to Output Device and choose "Chat Mic (2- TC-Helicon GoXLR)" from the pulldown menu.
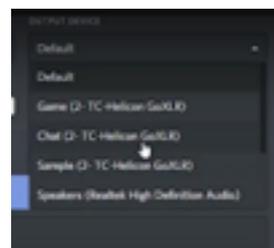

5. Set the Input Volume to 100%.
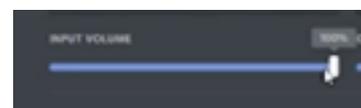
EN

6. Set the Output Volume to 100%, which is located a little over halfway toward the right end of the Output Volume slider. Avoid going beyond 100% to avoid an unwanted volume boost.
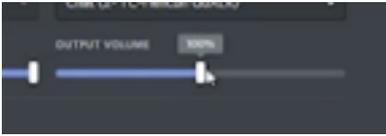
7. Under Input Mode, you may select either "Voice Activity" or "Push to Talk," depending on your preferences.
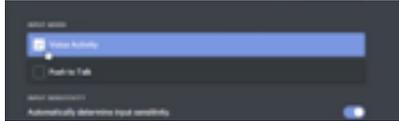
8. "Automatically determine input sensitivity" may be left on.
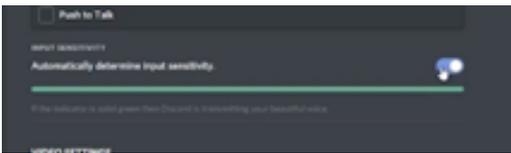
9. In the Advanced options for Discord, you should switch OFF the following items:

- Echo Cancellation
- Noise Suppression
- Automatic Gain Control
- Attenuation (the "When I speak" and "When others speak" options should be switched off)
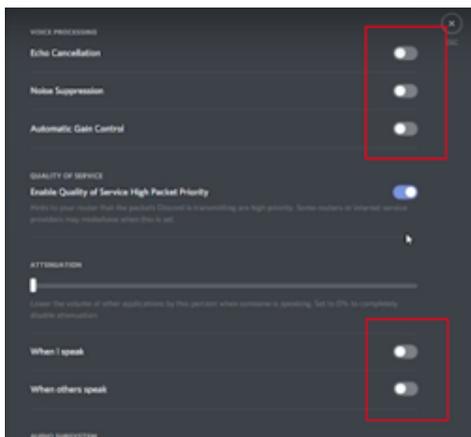
10. Switch on "Enable Quality of Service High Packet Priority."

11. Switch on "Show a warning when Discord is not detecting audio from your mic."

When you set up Discord or other chat programs properly, when you go to GO XLR your chat service will be assigned to a fader and labeled as "Chat."

GO XLR Chat fader

From this designated Chat fader, you may now raise or lower the volume of people talking on Discord versus your own voice on the GO XLR Mic channel. People on Discord will still hear your Mic audio at full level, no matter your own monitoring level.

8. Assigning Apps without an Output to a Fader

In the "Understanding Audio Channels" chapter on pg.X, we described how to assign audio devices in your PC's operating system to channel faders on GO XLR. This assignment method works well when your video game has the ability to choose an existing GO XLR audio input.

For example, the Hardware window for this game has a built-in option to choose a "Sound Output" device:

Game dialog with Sound Output option

In this example, you would select "Game (TC-Helicon GoXLR)" from the pulldown menu, and then assign the Game device to a fader using the method in the "Understanding Audio Channels" section on pg. X.

However, many games do not have the built-in option to select an audio device. Similarly, some audio streaming applications such as Spotify, also do not have an option to select a GO XLR audio input device.

Game dialog without option for choosing a sound device

8.1 Audio Device Workaround Inside Windows

As an example, let's change Spotify from its default assignment to GO XLR's System fader, and then re-assign Spotify to the Music fader.

Go to your PC and follow these steps:

1. Right-click on the speaker icon in the Windows Taskbar.
2. Select "Open Sound Settings" from the pop-up menu to open the Windows Sound panel.
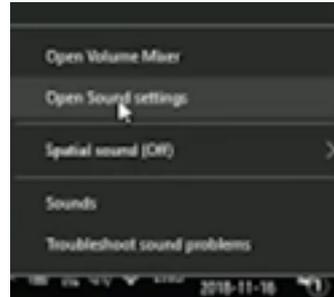
3. Scroll down and click on "Other sound options" to open a new "App volume and device preferences" dialog. The new dialog will list every program and app on your computer that is currently running and playing audio, along with a series of pulldown menus for Input and Output selection.
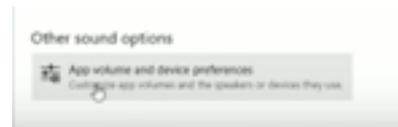
4. Scroll down to the section for Spotify.

5. Select "Music (2- TC-Helicon GoXLR)" from the Output pulldown menu for Spotify.
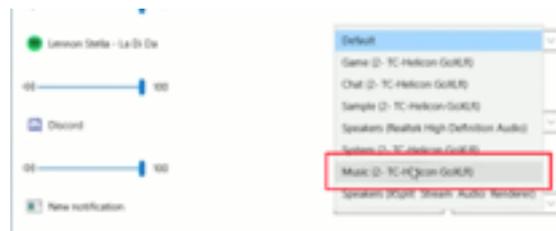
Once you have selected the new Output device, when you go to GO XLR, you will find that Spotify audio has been re-assigned to the Music fader, where the

Spotify audio level can now be adjusted and mixed separately.

Checking the Music fader

You may repeat this process for any game or even for your web browsers.

8.2 Re-Assigning Youtube Audio in Chrome

As an additional example, let's also assign audio from a YouTube video to the Music fader (which YouTube will now share with Spotify).

1. Open Chrome and go to youtube.com.
2. Select a video and begin playback.
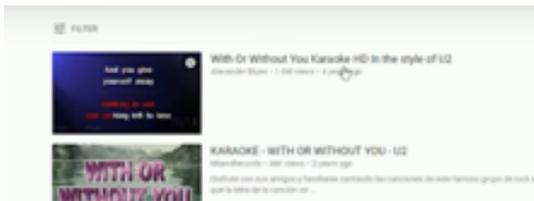
3. Right-click on the speaker icon in the Windows Taskbar.
4. Select "Open Sound Settings" from the pop-up menu to open the Windows Sound panel.
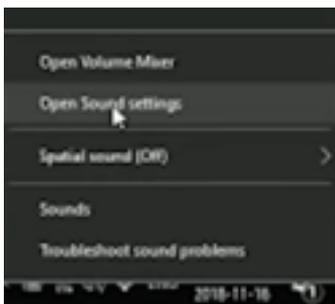
5. Scroll down and click on "Other sound options" to re-open the "App volume and device preferences" dialog.
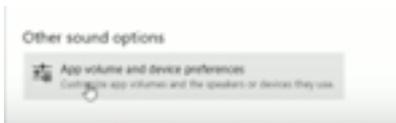
6. Your Chrome tab should now be visible in the list of programs running audio. (If you do not see your Chrome tab listed, go back and momentarily play some audio from the YouTube video in the Chrome tab. This quick playback should cause Windows to detect your Chrome tab and place it in the list.)

7. Select "Music (2- TC-Helicon GoXLR)" from the Output pulldown menu for your Chrome tab.
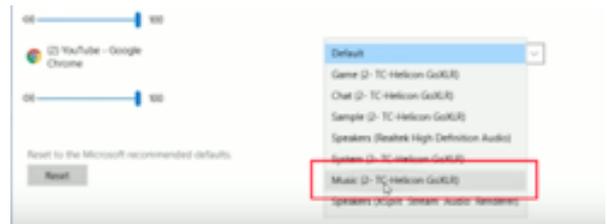
8. Re-start playback on the YouTube video and check the "Music" fader to confirm that audio from your Chrome tab has been properly re-assigned.

Now, when you go back to GO XLR, you should find that your YouTube video in Chrome is now playing audio on the Music fader along with Spotify.

Pro Tip: Windows will sometimes revert back to the default System assignment, even though you have individual programs properly assigned to the Music fader. To fix this problem, go to the pulldown for your programs (Chrome, Spotify, etc.) and temporarily re-assign to another Output. Then, move the Output assignment back to "Music (2- TC-Helicon GoXLR)" and Windows should then re-detect the program and fix the audio assignment.

9. Setting Up GO XLR with XSplit /OBS

This section will show you how to set up audio for OBS (Open Broadcaster Software) and XSplit.

Both programs are very similar, so these instructions for XSplit should also work for OBS.

9.1 Setup Recommendations

Open up XSplit and follow these setup instructions:

1.   Click on the Tools pulldown menu and select "Settings" to open the Settings window.
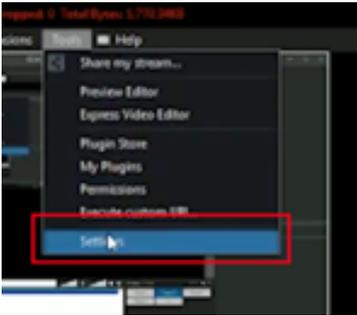

2.   Go to the Audio tab in the Settings window.
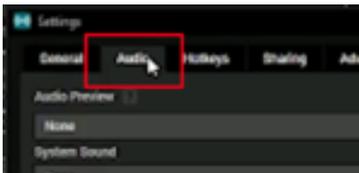
3.   Set "System Sound" to "None" by using the pulldown menu. You will not want any other audio streams going in to XSplit.
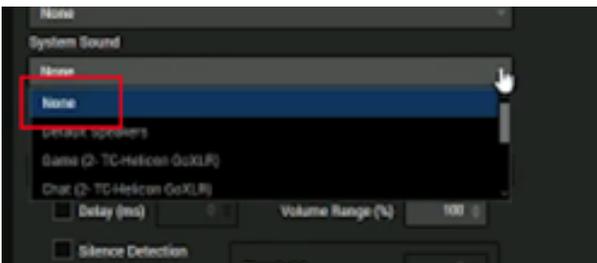
4.   Set "Microphone" to "Broadcast Stream Mix" by using the pulldown menu. Choosing "Broadcast Stream Mix" will ensure that all audio going into XSplit has been processed and mixed in GO XLR exactly how you want it.

5.   Click "OK" to exit the Settings window.
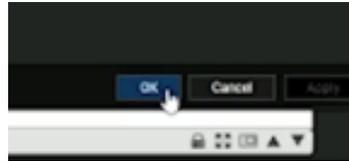
6.   Set your livestream audio to 100% by maximizing the level bars next to the XSplit microphone icon. Your GO XLR audio should now play into XSplit without any clipping or distortion


9.2 Advanced: Audio Delay for Video Playback Sync

Sometimes, your livestream audio in XSplit and OBS will need to be delayed by a few milliseconds to remain in sync with your video. Video in your XSplit/OBS livestream will often need some time to encode, and this small delay can cause your audio to fall out of sync with the video.

The XSplit "Delay (ms)" function (called "Offset" in OBS) can be used to fix this synchronization problem by delaying the audio ever so slightly so that the audio can re-sync with the video.

To deploy the Delay function for audio sync, follow these instructions:

1.   Record a short video of yourself clapping and then play the video back over XSplit. The slight delay for video encoding should cause the sound of the clap to fall out of sync and happen a split second before you see the clap on video.

2.   Click on the Tools pulldown menu and select "Settings" to open the Settings window.
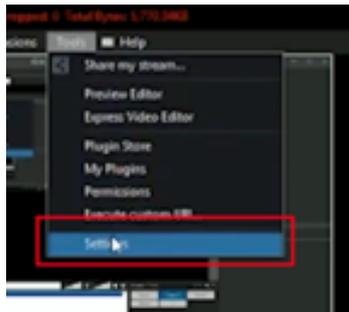

3.   Go to the Audio tab in the Settings window.
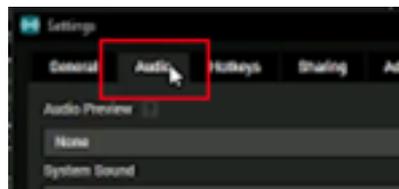
4. Select "Delay (ms)" by clicking on the selection box.
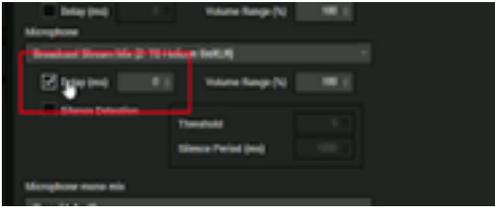
5. Use the selector box immediately to the right to add several milliseconds of delay to the audio stream. Begin with about 10 ms of audio delay and gradually add more delay as needed.
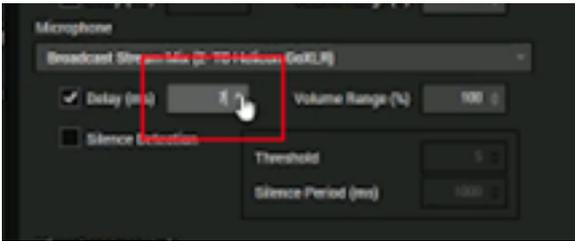
6. Check against the video playback to see if the audio of the clap is beginning to come back into sync with the visual of the clap. You can also try adding 300-400 milliseconds of delay, to the point where the clap audio arrives after the visual clap, and then back off to see if you can find the sync "sweet spot."

7. Keep adjusting the delay as needed until you are satisfied that the audio-video sync feels just right.

8. Press OK to exit.
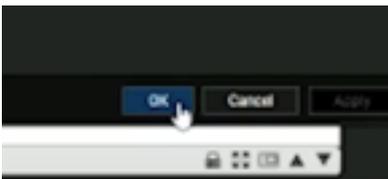
Once you dial in the right amount of audio delay, your livestreams on XSplit and OBS should now be perfectly synced.

10. Sampler Basics

The GO XLR sampler has three banks of samples (A, B and C). Each bank can contain up to four samples (one for each of the Sample Pads on the GO XLR unit).

The GO XLR sampler is both a live sampler and sound board, which means that you can record a sample in real time and play it back whenever you want. Or, you can go out and grab a pre-made sample and assign this external sample to one of GO XLR's sample pads for playback.

GO XLR also includes a sound-leveling algorithm that will take different samples with different volume levels—some loud, some quiet—and process those samples so that they have the same apparent loudness to your ear. This way, you can avoid nasty surprises, such as a sample that is too loud bursting through your mix.

NOTE: Multiple samples can be triggered for playback at the same time.

10.1 Capturing a Sample

To capture a sample with GO XLR's sample pads using your microphone, follow these steps:

1. Press a sample pad and hold.
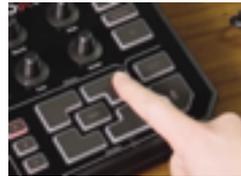
2. Speak into the microphone.

3. Release the sample pad.

4. Press the sample pad again to confirm you have captured an audio sample.

The waveform for the captured sample will appear in the Waveform window in the GO XLR app.

10.2 Working with the Sampler Tab

The Sampler tab can be found in the Control Tabs section located in the bottom half of the GO XLR app window on your computer.

Within the Sampler tab, the Settings window shows controls for the sample banks on the left, along with playback options.

The Sampler section to the right shows the filename and waveform for the currently-selected Sample Pad, along with some basic editing tools so you can trim the length of the sample as needed.

When you go to the Bank>Button section and click on any of the Sample Pads listed, the Waveform window will change to display the audio waveform for that Sample Pad.
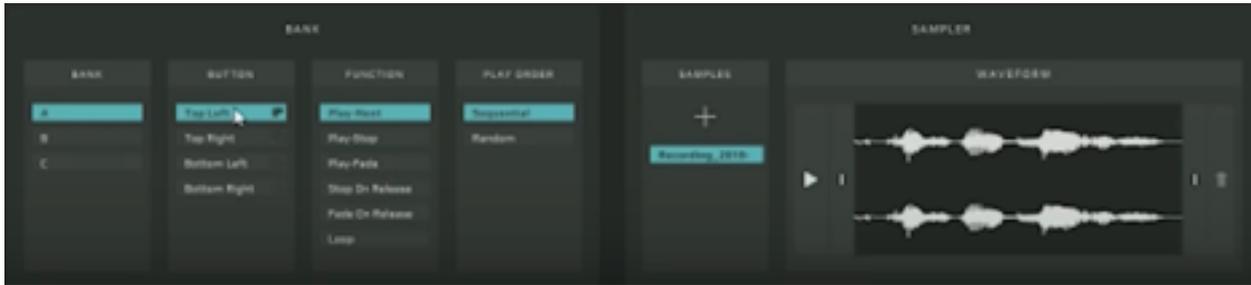

Sampler tab with sample waveform shown

NOTE: You can sample your voice through your vocal effects setup, so however your voice sounds in your headphones at that moment will be captured in the sample.

10.3 Editing a Sample

Once you have used a Sample Pad to capture a sample, you can then edit the sample for length by using the editing bars on the left and right sides of the waveform.

1. Sample some audio by pressing-and-holding one of the four Sample Pads.

2. Make sure this Sample Pad is selected under Bank>Button in the GO XLR app so that the sample's waveform appears in the Waveform window on the right.
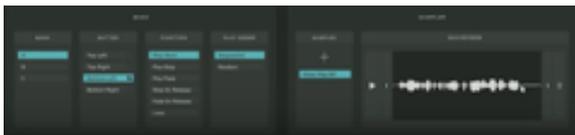
3. To edit the sample's beginning, click on the left-hand editing bar immediately to the left of the sample waveform.

4. Drag the editing bar rightward until you find the right beginning point for sample playback.
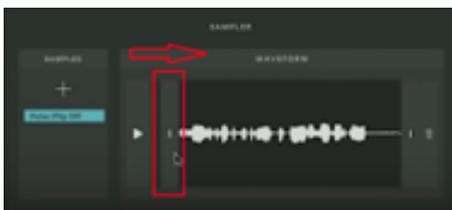
5. To edit the sample's ending, click on the right-hand editing bar immediately to the right of the sample waveform.

6. Drag the editing bar to the left until you like how the sample ends.
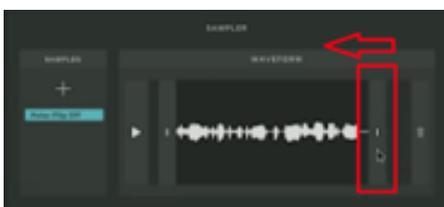
10.4 Color Indicators for Sample Pads

You can assign colors to the Sample Pads so that you can tell a Sample Pad's status at a glance, including the following conditions:

- **active/loaded**—the Sample Pad has a sample loaded and is playing back (color is bright)

- **inactive**—the Sample Pad has a sample loaded, but is not playing back ("active/loaded" color is dimmed)

- **sample empty**—no sample currently loaded to the Sample Pad (dimmed color, which may be different from the "active/loaded" color)

10.5 Building a Sample Library

Your sample library can be built by going to the Samples tab in the upper left corner of the GO XLR app screen.
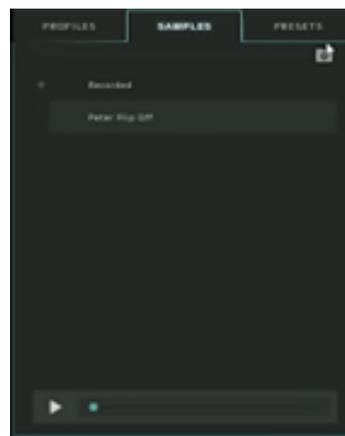

Samples tab

Click on the folder icon in the upper left of the Samples tab to open the file browser. Then, within the file browser, you can create new folders to organize your samples, e.g., "All Rick & Morty Samples" or "Samples I Made with Friends".
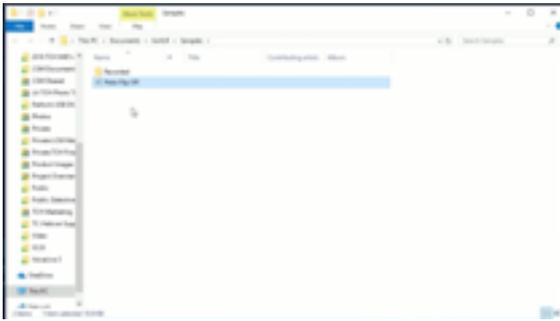
Samples tab file browser

You will also find a system-generated folder called "Recorded," which contains every sample you have ever recorded while you were broadcasting live. All of these historical samples will be date-stamped so that you can go back to pick your favorites and re-name the files to suit your purposes.
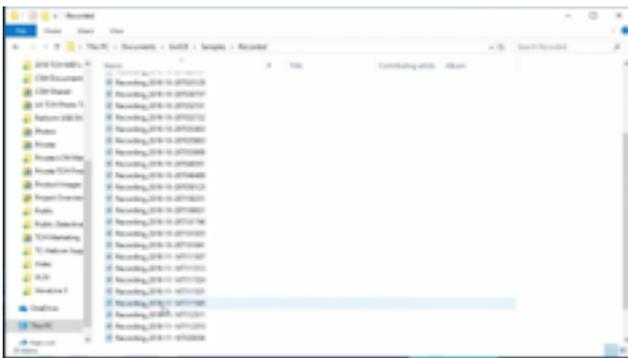
"Recorded" folder with time-stamped sample files

Pro Tip: The GO XLR sampler can accept long audio files, which can be useful when you have some background music that you want to launch on the fly, e.g., during crucial moments of a video game that you want to highlight musically.

10.6 Loading a Sample from the Sample Library

To pull a sample into GO XLR from your sample library, follow these steps:

1. Select the Sample Pad you wish to load by going to the lower Sampler tab.

2. Select the Bank and Sample Pad from the list in the Button section.

3. Click-and-hold on a sample from the Samples tab in the upper left of the GO XLR app.

4. Drag the sample down from the Samples tab to the Sample section in the lower right of the screen.

5. GO XLR will analyze the sample's audio file and adjust the playback volume to the same perceived loudness as your other samples.
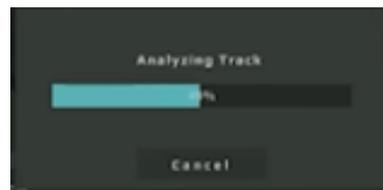

6. When loaded, the waveform and sample name will appear in the lower Sample section.

7. Edit the length of the sample, if desired, by clicking-and-dragging on the editing bars to either side of the waveform.
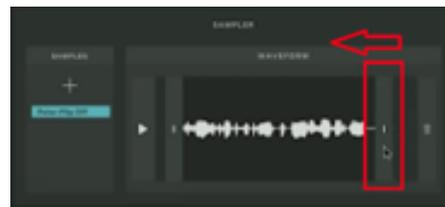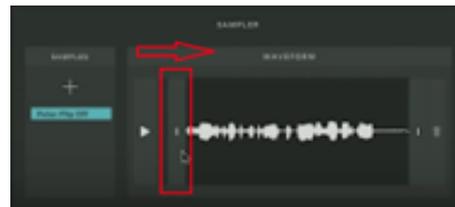
11. Global, FX & Sampler Lighting

The GO XLR app gives you detailed custom control over the color and appearance of the GO XLR panel. You can assign colors for different functions and states, such as whether a Sample Pad has a sample loaded, is actively playing back, is stopped, and so on.

Within the Lighting section of the lower System tab, you can a assign a single overall color for the GO XLR panel, customize the accent light color (the "X" in the GO XLR logo and the interior LEDs inside the ventilation grille), assign a color to the !@#$* or "bleep button," and set up a custom color for the Cough button.
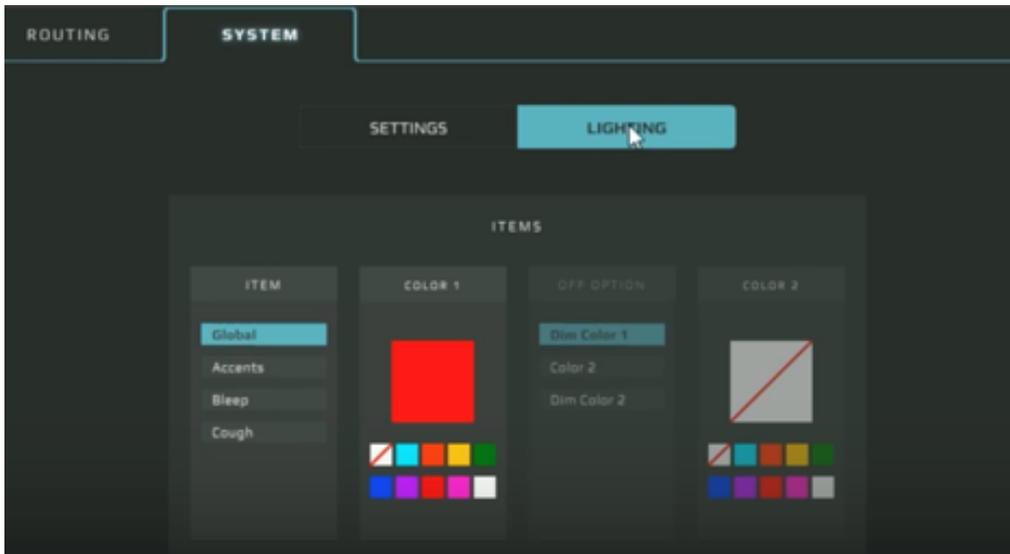
Global color settings under the System tab

11.1 Globally Assigning Colors

GO XLR can be set up with a single color as the overall, dominant "look" of the unit.

GO XLR panel with red global color scheme

To assign a global, overall color scheme for GO XLR, follow these steps:

1. Click on the System tab in the Control Tabs area at the bottom of the GO XLR app screen.
2. Click on the Lighting option.
3. Under Item, click on the Global option.
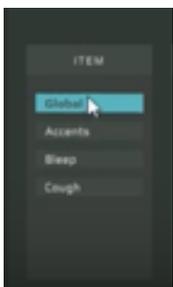
4. Under Color 1, select a color from the options shown on the palette. Whenever you select a new color, the GO XLR panel will immediately change to show the new color.
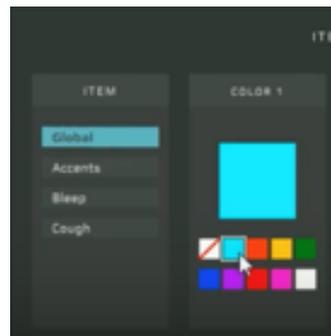

NOTE: Only one Global and Accent color may be selected, so the Color 2 option will be grayed out and non-functional for the Global lighting section.

GO XLR panel with blue global color scheme

The Bleep and Cough sections will also allow you to customize a Color 2 to represent the "off" state for those buttons. By default, the Off Option will be Dim Color 1, but you can easily select the Color 2 or Dim Color 2 options.
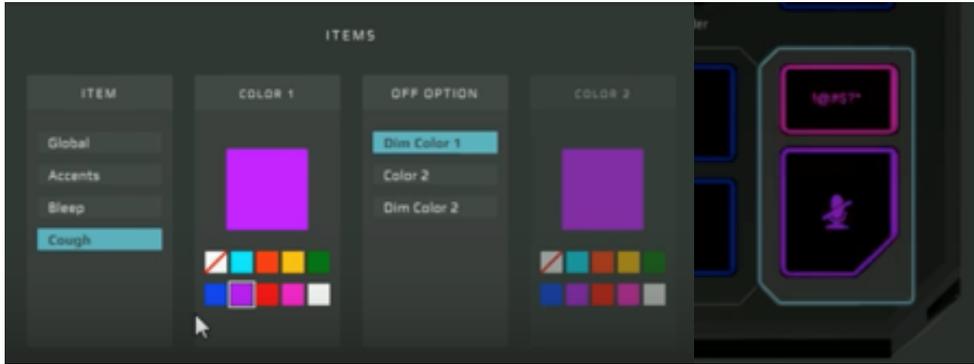
Cough button color assignments

11.2 Assigning Custom Sampler Colors

To begin assigning custom colors for Sampler buttons, go to the Sampler tab in the lower set of Control Tabs. Inside the Sampler tab, select Lighting to open up the Sample color-setting section.
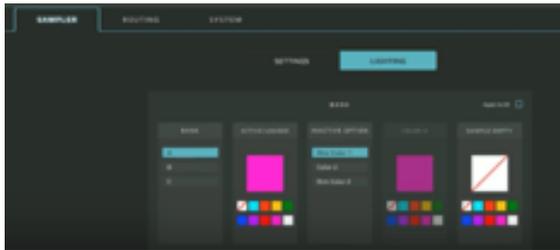

Sampler color assignment section

In this section, you can choose a color to represent when a Sample Pad has a sample loaded and is playing back.

For example, you might set up the following color arrangements for your Sample Pads:

- **Red = Active/Loaded**—the Sample Pads for that Bank will light up red whenever a sample is loaded.
- **Dimmed red = Inactive Option**—when a sample is loaded, but is not playing back, the Sample Pad will shine with a dimmed version of the red Active/Loaded color.
- **Green = Inactive Option**—when there is no sample assigned to a Sample Pad, that pad will appear green.
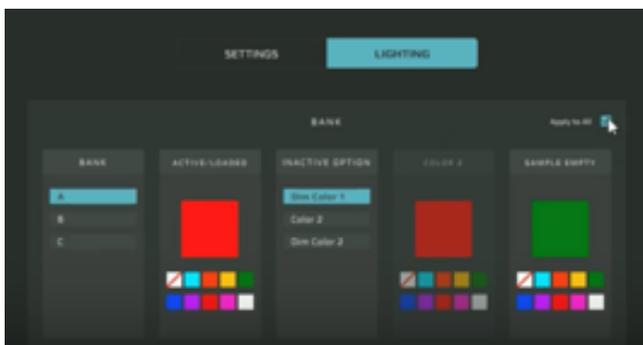
New Sampler color assignment

11.3 Apply To All

If you want all of your Banks to use the same color scheme, click the "Apply To All" check box in the upper right of the Lighting>Bank section.
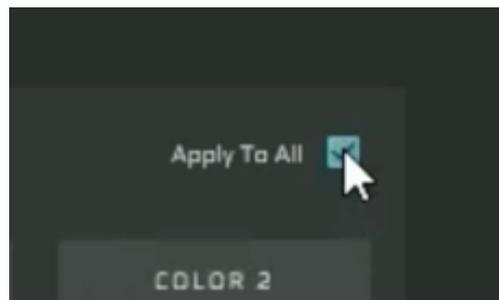

"Apply To All" option checked

Once "Apply To All" has been checked, any colors you set up in one Bank will automatically apply your new settings to all other Banks.

11.4 Assigning Custom Colors for Effects

Similarly, you may also assign custom colors to the buttons and knobs in the GO XLR Effects section, with separate sets of color options for Presets, Encoders and buttons for Effects, including the Megaphone, Robot, Hardtune and FX buttons.
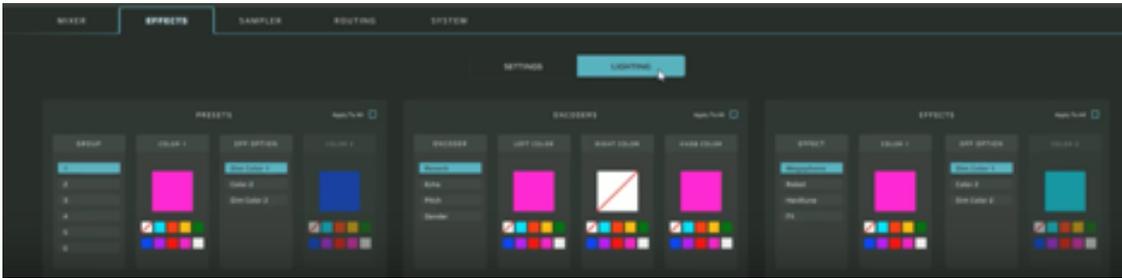

Effects lighting options

Each section also has the "Apply To All" option available if you want identical color schemes for all Presets buttons or for all encoder knobs.

11.5 Encoder Colors

The Encoder knobs have special color assignment options that allow you to assign separate colors on either of the white indicator that shows exactly where the encoder knob is set. For example, you could assign all LEDs to the left of the white indicator to shine red, while to the left the LEDs are blue.
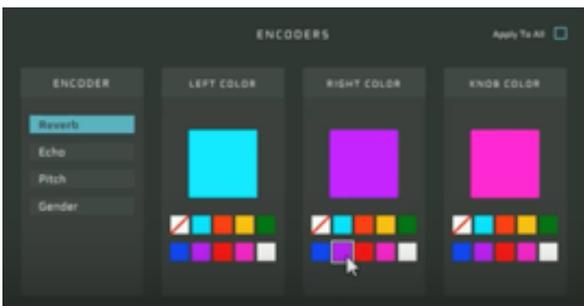

Color options for Encoder knobs

These differing color assignments are handy if you wish to know at-a-glance where the effects encoders are set.

Reverb encoder knob with blue to the left of the white indicator

You may also set the LEDs inside the encoder knobs to shine with a custom color by selecting a color under the Knob Color section.
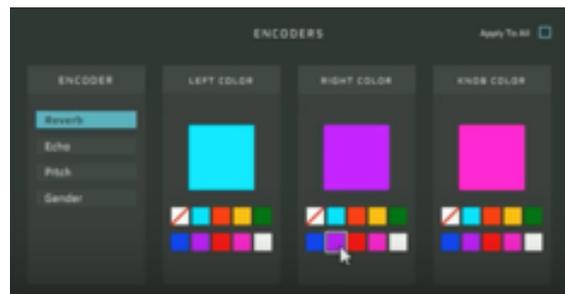
Knob Color with custom color assignment

12. Specification

Analog Connections

XLR In	1 x XLR, balanced
Phantom power	+48 V, switchable via control app
Line In	1 x ⅛" TRS, stereo
Mic	1 x ⅛" TRS, biased for computer microphone input
Phones	1 x ⅛" TRS, stereo
Line Out	1 x ⅛" TRS, stereo

Digital Connections

USB	1 x USB 2.0, type B
Optical	1 x Toslink

Controls

Motorized faders	4
Backlit LCD scribble strips	4
Rotational encoders	4
Lighting	RGB
Buttons	24

System / Processing

A/D – D/A conversion	24-bit @ 48 kHz
Effects	Reverb, echo, pitch shifting, gender (formant shifting), megaphone, robot, hardtune, sampler
Frequency response	10 Hz to 20 kHz, +0/-2 dB
Dynamic range	> 110 dB
S/N ratio	> 101 dB

Power Supply / Voltage

Power input	Standard 12 V DC, center negative < 1 A (power supply included)
Adapter	12 V DC / 1 A
Power consumption	10 W

Dimensions / Weight

Dimensions (H x W x D)	82 x 285 x 174 mm (3.2 x 11.2 x 6.9")
Weight	1.55 kg (3.41 lbs)

FEDERAL COMMUNICATIONS COMMISSION COMPLIANCE INFORMATION

FC **TC Helicon**
GO XLR

Responsible Party Name:	**Music Tribe Brands UK Ltd.**
Address:	**Klark Industrial Park,**
	Walter Nash Road,
	Kidderminster, Worcestershire,
	DY11 7HJ United Kingdom
Phone Number:	**+44 1562 732290**

GO XLR

complies with the FCC rules as mentioned in the following paragraph:

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Important information:

Changes or modifications to the equipment not expressly approved by Music Tribe can void the user's authority to use the equipment.