

HA1 Hybrid Audio Kit
with the
Presonus Revelator Microphone
OPERATION GUIDE



About This Manual

This manual covers the installation and usage of the SoniClear HA1 Kit, based on the Presonus Revelator Microphone. This kit is designed for use with all SoniClear digital recording software products.

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HA1 Operation

Overview

The SoniClear HA1 Hybrid Audio Kit uses the Presonus Revelator USB microphone to make it easy to record computer-based teleconferences with high audio quality using SoniClear recording products. It will work with any conferencing software, such as Zoom, Cisco WebEx, or Microsoft Teams. It also works with softphone programs, such as 8x8 Work, Vonage, and Avaya.

The kit includes the Presonus Revelator USB audio interface and cable kit. No additional cables or hardware are required. The Revelator is both a USB microphone and an advanced audio mixer in a single unit. The microphone plugs into the computer through the supplied USB cable and is powered by the USB port.



Configuring the Revelator Microphone

The Presonus Revelator must be installed correctly before use. See the section below, “*Presonus Revelator Installation*”. After installation, the Presonus Universal Control driver and control software will be ready to use when the computer is started, making it easy to record teleconferencing sessions in SoniClear.

Using the Revelator Microphone for Online Conference Software

The Presonus Revelator can be used as a USB microphone for telecommunication software, such as Zoom, Teams, and Webex. Once the system has been configured the Revelator will function as the input microphone for the communication software and for SoniClear.

Listening using Headphones

There is a headphone jack on the bottom of the Revelator microphone for listening to participants and monitoring audio from SoniClear. Plug the monitor headphone into the Headphone jack. Adjust the headphone loudness using the level knob labeled “Volume” on the front of the microphone.

Listening using Speakers

If you want to listen to remote participants without headphones, a wired computer speaker can be connected to the Revelator headphone jack. However, in this configuration the Universal Control mixer settings must be modified to prevent feedback from the microphone. Contact SoniClear for assistance with setting up this option.

Recording listening to the Remote Participants

The mixer built into the Revelator takes the audio from the communications software and sends it to headphones so that you can listen to the participants, and it also sends the participant audio to SoniClear for recording.

Note that there are no physical controls on the Presonus Revelator microphone for adjusting the playback level of remote callers on Zoom or softphones. The volume of playback or remote callers is adjusted using the Speaker control in the conferencing software when setting up the system.

Playing Audio from Any Windows Application

The Revelator mixer also allows the user to play audio from any program running on the Windows recording computer for remote participants to hear. This could be SoniClear for playing audio from a recording (such as a “readback”) or any other program that plays audio.

Note that there are also no physical controls on the Presonus Revelator microphone for adjusting the playback level of Windows programs. Adjust the volume for playback using the speaker control in the Windows application or using the volume controls built into Windows.

Using a Backup Recorder

You can also use a backup recorder that has a Line-In input. It can be connected using the included Y adapter to split the headphone output between the headphone and the backup recorder. The mix on the headphone output includes both microphones, the audio from the online participants, any readback or audio playback heard by the online participants, and any monitoring heard only on the headphones.

To set up a backup recorder with a direct connection, follow these steps:

- Connect the included 3.5mm stereo Y cable to the Revelator headphone jack.
- Connect the headphones to the Y cable.
- Connect a 3.5mm to 3.5mm stereo cable (not included) to the second Y cable jack and plug other end of that cable into the backup recorder Line-In jack.
- Set the volume for the headphones to the desired level.
- Adjust the backup recorder input to get the correct recording level.
- Check the audio quality being captured by the backup recorder after setting it up, to ensure a good backup.

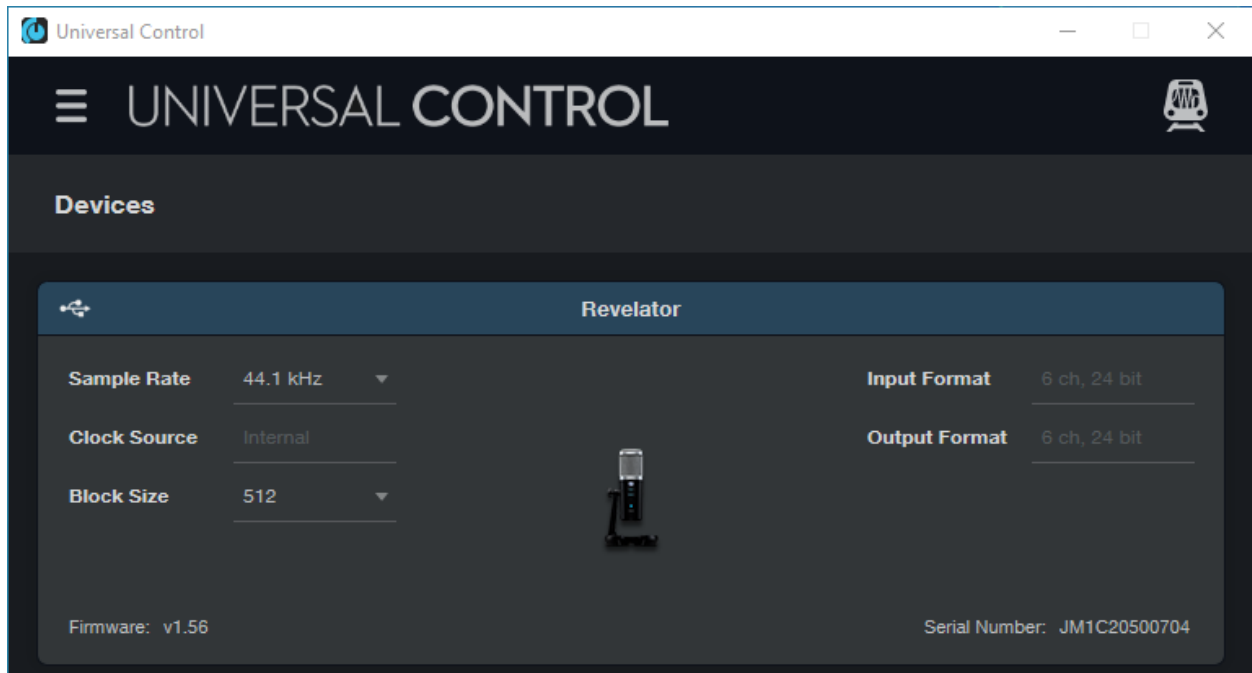
Additional Usage Notes

1. The functionality of the Preset button on the front of the Revelator microphone is disabled when using the recommended settings provided in this guide.
2. The default setting of the “Blend” (0.00) is appropriate for listening to the conference participants while still hearing yourself through the microphone. If more or less of the microphone sound is desired, the ratio of microphone to computer audio can be adjusted using the Blend control in the Universal Control program, or by pressing and holding the Monitor button on the microphone and turning the Volume knob on the microphone.
3. The Volume knob on the front of the Revelator microphone also functions as both a headphone volume level adjustment and a mute switch. Turning the Volume knob will turn the headphones audio up or down. Pressing the Volume knob will toggle the microphone in and out of mute mode. When the microphone is muted the button will be lit constantly in red.
4. If the volume level of the signal being captured by the Revelator microphone is too high, the light in the Volume knob will momentarily blink red. This is normal if it happens in response to loud noises in the room. It will also blink red when bumped or tapped. If it blinks red during normal usage when speaking, the setup of the microphone needs adjustment to reduce the microphone volume gain setting. Contact SoniClear Support for assistance with this adjustment.

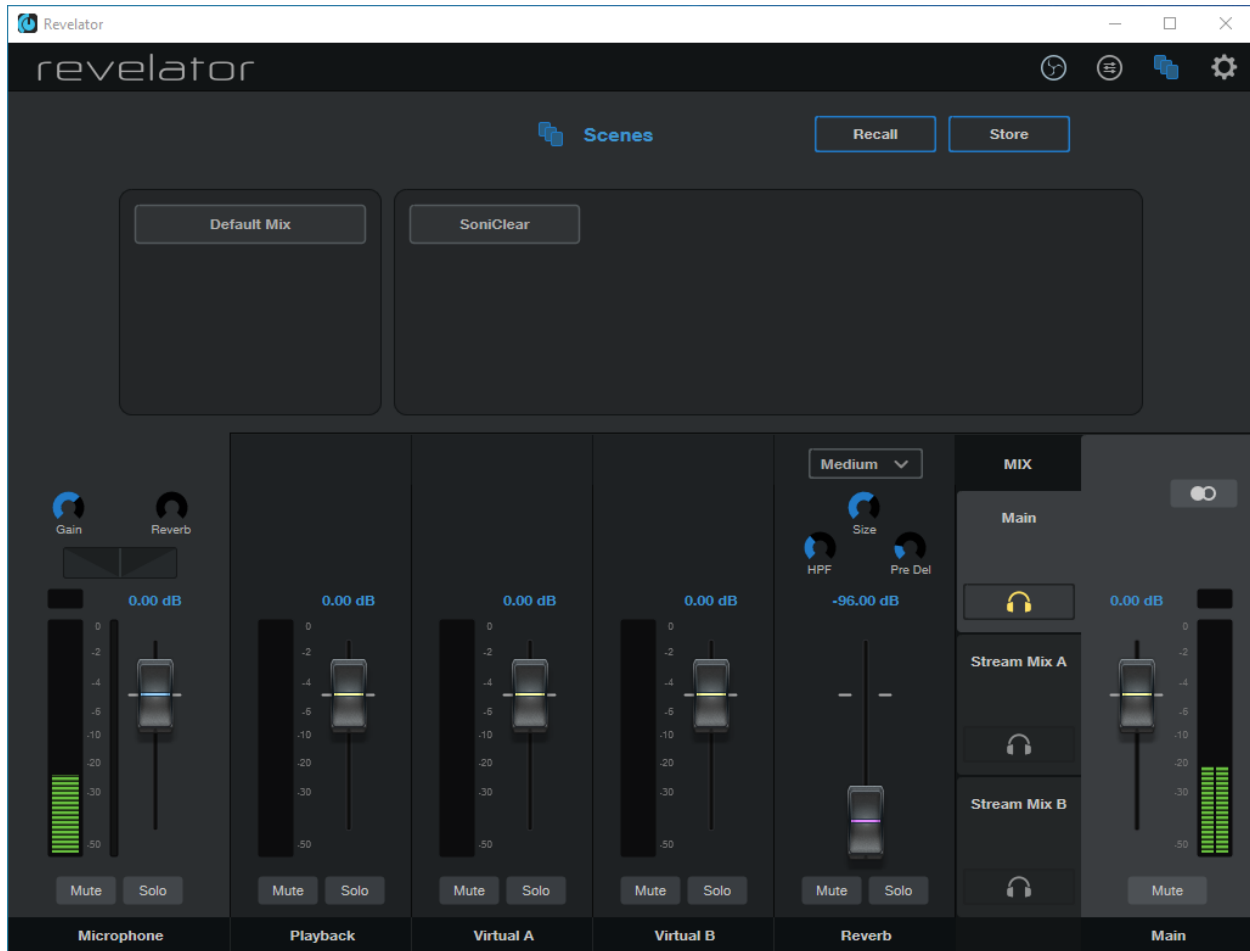
Resetting All Controls

Normally the Presonus Revelator will retain the settings from the last time adjustments are made using the Universal Control panel. However, if any of the required Revelator settings are accidentally changed, the default settings can be restored with the following steps.

Start the Presonus Universal Control program from the icon on the desktop or from the Windows Start button:



Then click on the Revelator device to display the Revelator mixer control panel:



- Click on the Scenes icon in the upper right corner of the mixer screen (the icon that looks like sheets of paper).
- Click on the SoniClear scene button (this preset is created when installing the HA1 kit).
- Click on the Recall button and click Yes to allow the settings to be restored to the correct values for using SoniClear.

Presonus Revelator Installation

Hardware Installation

Overview

The HA1 Kit includes the parts needed for recording Windows communication software, such as a Zoom online conference, or VOIP (“softphone”) call. Included in the kit are:

- Presonus Revelator USB microphone with built-in audio mixer
- USB C to USB A cable for connection to the computer
- Headphone Y adapter for connecting backup recorder

You will need to provide headphones with a 3.5mm standard connector for listening to the audio through the Revelator microphone.

USB Interface

The Presonus Revelator interface requires a USB 3.0 connection on the computer using the included USB C to USB A cable. The Revelator should only be connected directly to a port on the computer, a manufacturer supplied docking station, or a SoniClear approved USB Hub. Connecting it to a generic USB hub may result in unreliable operation. If the computer has a USB C port, a user supplied USB C to USB C cable can be used instead of the USB C to USB A cable.

Power Connection

The Presonus Revelator is powered from the USB connection.

Speaker Connection

A speaker can be plugged into headphone jack. This will require changes to the mixer setup of the Revelator to prevent feedback from the microphone. Contact SoniClear Support for assistance with this configuration.

Backup Recorder Connection

A user-supplied backup recorder can be connected to the Headphone jack through a 3.5mm Y cable included in the kit. The recorder must have an input for line-in audio. For recorders with a 3.5mm line-in input, connect a 3.5mm cable to it from the second Y cable jack. If the recorder does not have a 3.5mm line input jack, an appropriate adapter will be needed to make this connection.

Presonus Revelator Software Installation

Drivers

The Presonus Revelator requires manual installation of Presonus Universal Control software, which includes the required drivers for using the Revelator, and control panel software for configuring the device. As of the last update to this manual, the download link for the driver installer was:

<https://legacy.presonus.com/products/Universal-Control/downloads>

Only install software downloaded from the official Presonus website. Do not install software from any other source.

The first time running the Universal Control program may require the firmware for the Revelator to be updated. Follow the instructions on screen to complete this step.

The currently available Universal Control software includes a menu option to scan for software updates. However, this requires signing up for an account at the Presonus website. Alternatively, you can periodically check the Presonus support site to see if any updates have been made to the software.

Loading Presets

The Presonus Revelator does not provide a simple way to import presets from a file. Instead, you will need to manually configure the required settings on the first use. Those settings can then be saved to the computer as a preset, what the software refers to as a “Scene”.

Presonus Revelator Configuration

Manually configure the settings before the first use of the kit, following the instructions provided in this section of the Operation Guide.

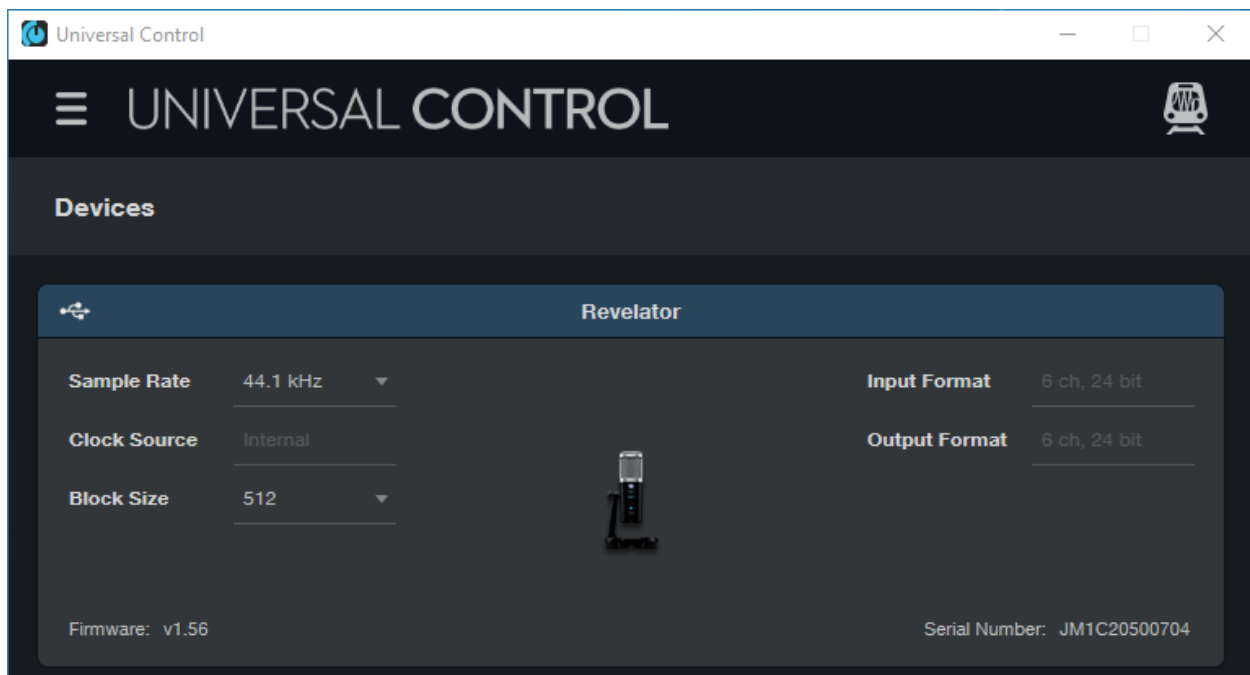
Overview

The goal is to make it possible to use one setup for remote meetings, depositions or court sessions through an online conferencing service, such as Zoom, Teams, or Webex.

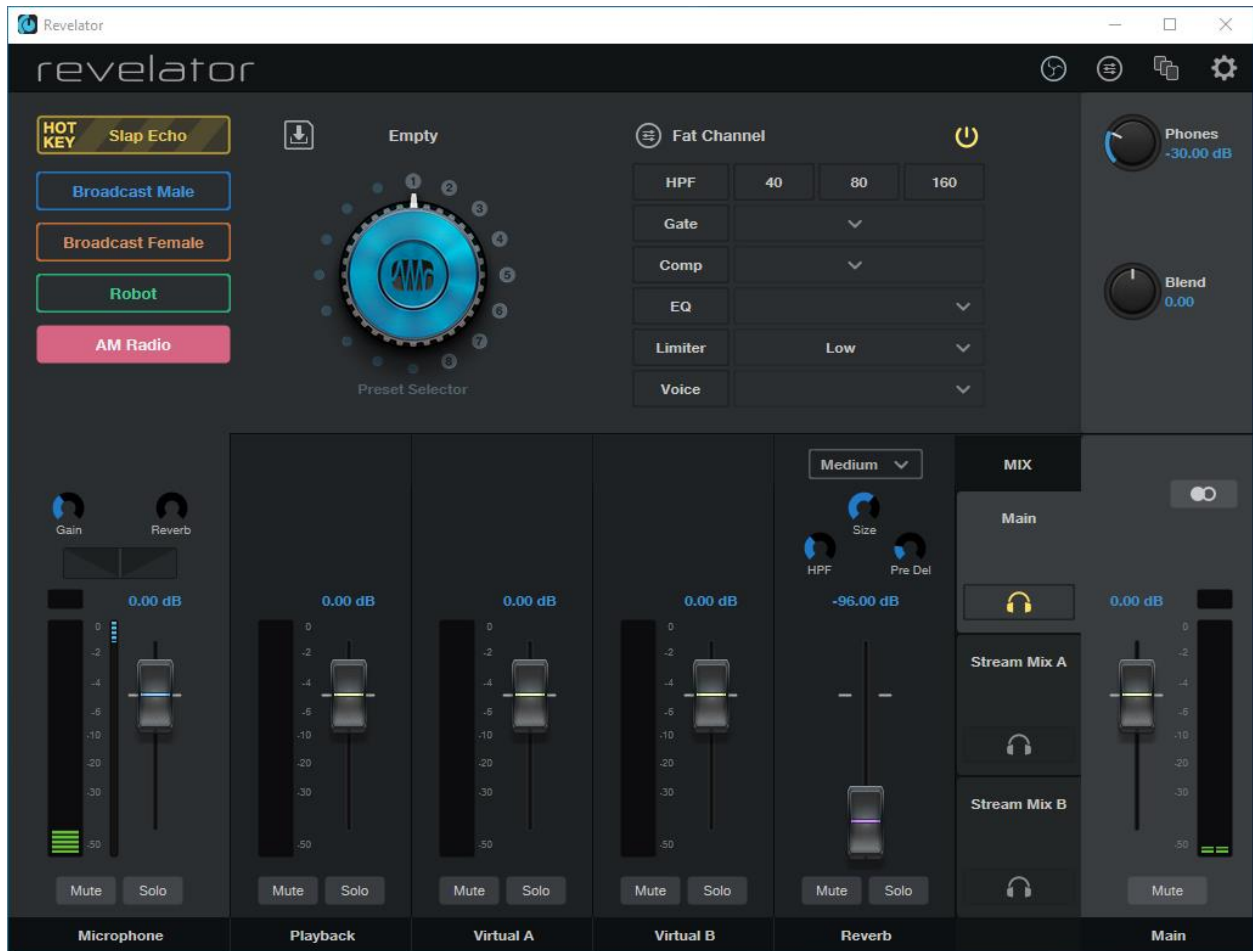
To accomplish this, the Presonus Revelator must be configured to use the built-in loopback audio channels to provide the correct mix to the conferencing software and a mix for recording in SoniClear.

Open the Presonus Universal Control Panel

Double click on the Universal Control icon on the desktop or through the Windows Start menu:



Then click in the Revelator microphone section shown on the screen. This will display the list of mixer settings and options for controlling the Revelator interface:

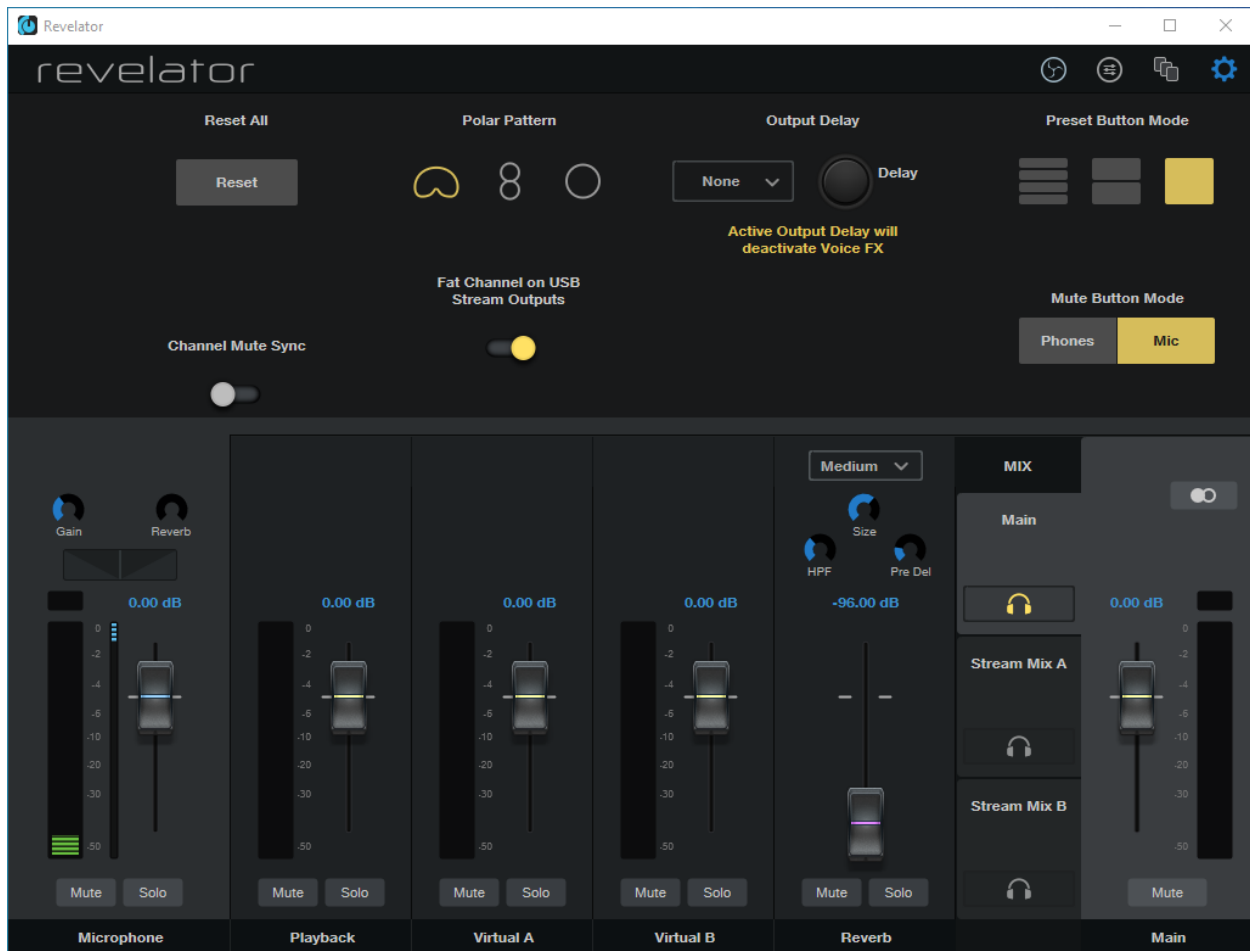


Three Separate Mixes

The default settings for the microphone provided by the factory are not compatible with SoniClear. There are three mixes that need to be configured for this application:

- Main This is the signal that you listen to through the headphone jack.
- Stream Mix A Mix to send to the conference software (Zoom/Teams/Webex).
- Stream Mix B Mix to send to the SoniClear recording software.

Mixer Settings



After starting the Revelator control panel, click on the wheel Settings icon in the upper right corner of the control panel.

The only change from the default values on the Settings screen is to select the rightmost Preset Button Mode (single square box, indicating a single preset). This disables the multiple presets functionality of the preset button on the front of the microphone, which is not needed for this application.

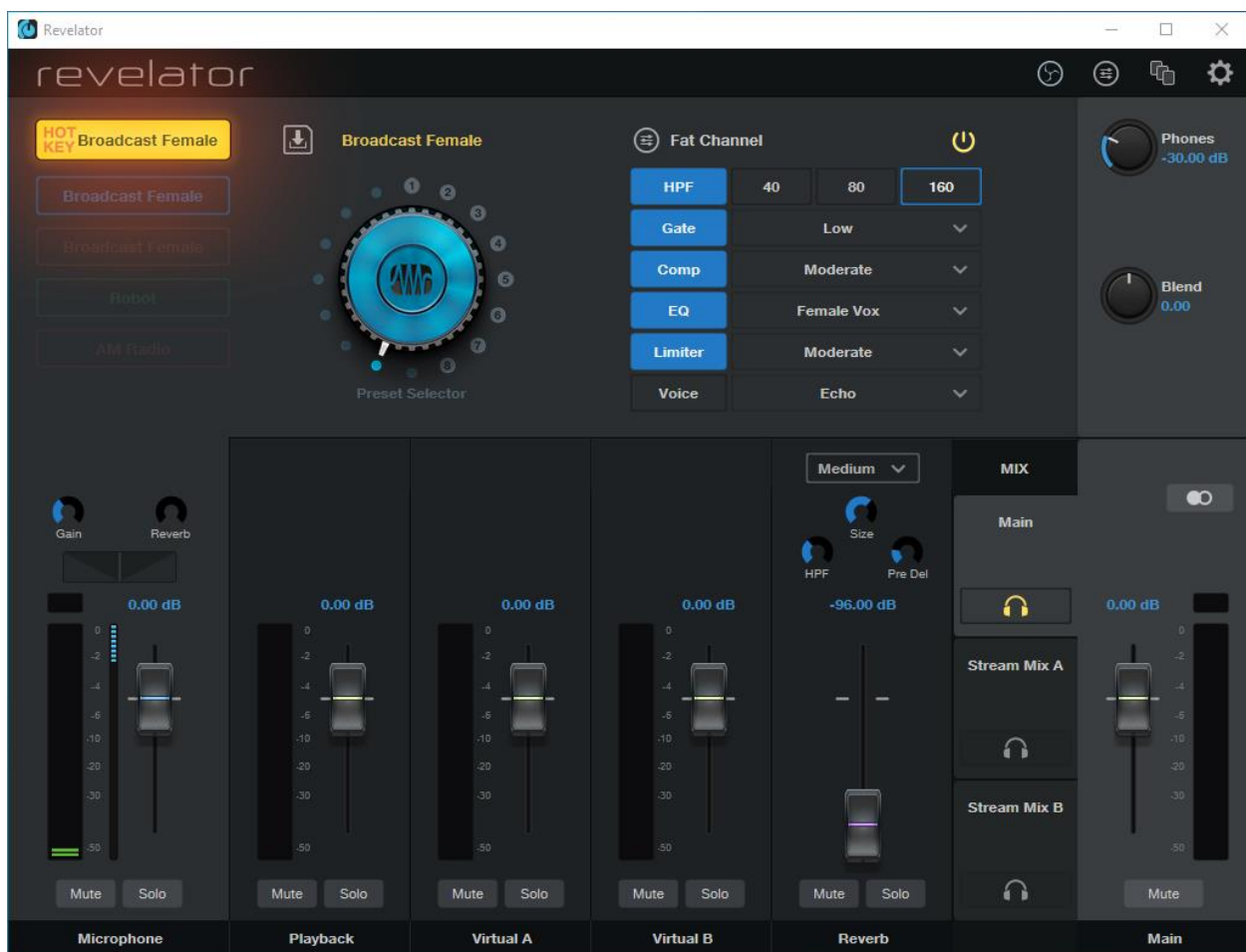
To close the Settings overlay, click the wheel Settings icon again.

Microphone Audio Processing Settings

The top section of the control panel displays settings for adjusting the sound quality of the microphone audio. The design of these controls is intended for podcasting applications and they need to be disabled to avoid unexpected changes to the voice quality when participating in conference calls.

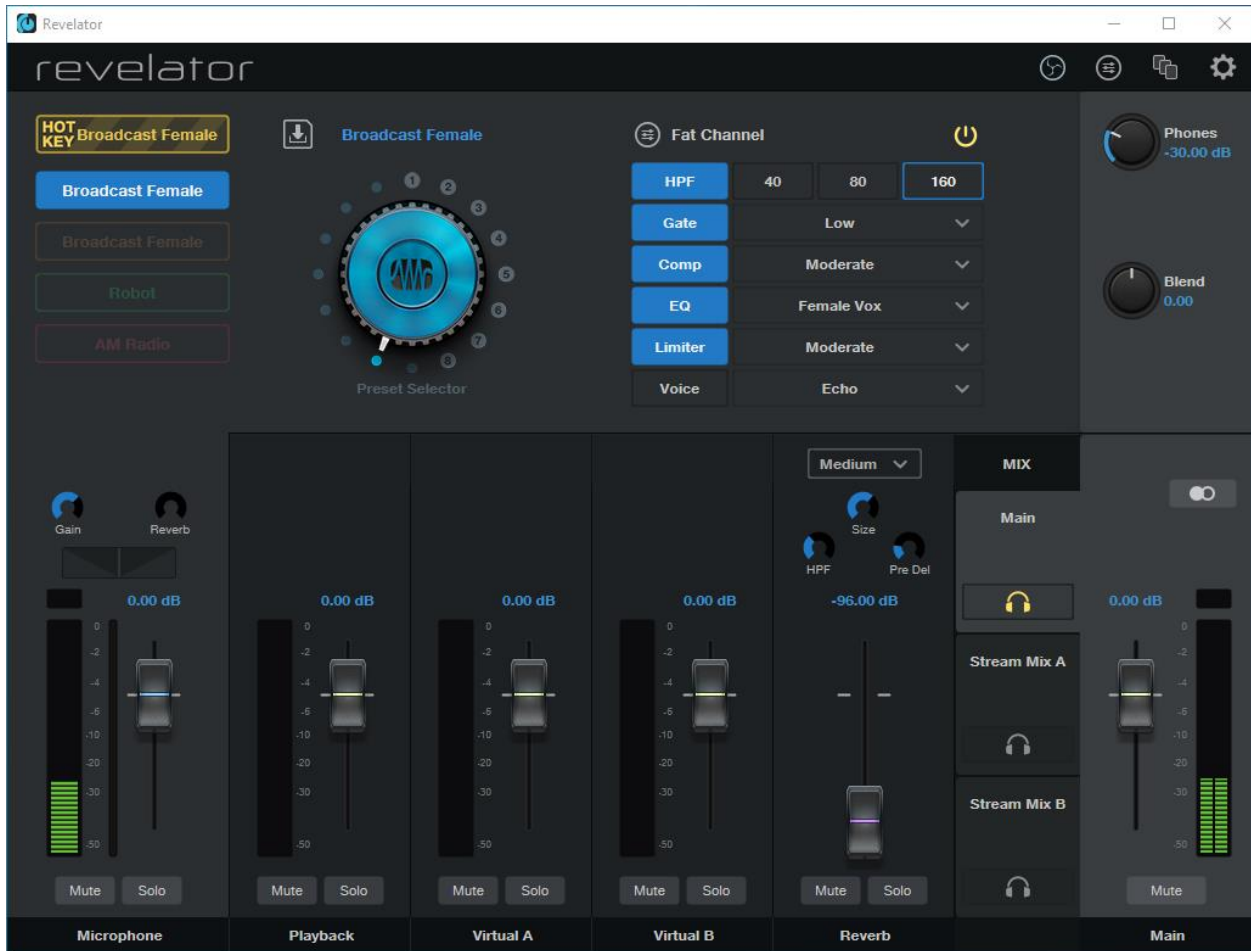
The default HOT KEY option is a reverb effect for the microphone called “Slap Echo”. This special effect is not used in this application.

To disable the special effect, click on the yellow HOT KEY button. Then click on the blue Preset Selector wheel and hold the mouse button down while sliding the mouse to change the audio effect selection. The two suitable options are “Broadcast Male” and “Broadcast Female”.



On the same screen click on the single preset option button below the HOT KEY button. Then use the same Preset Selector wheel to select the desired default microphone audio processing, “Broadcast Male” or “Broadcast Female”.

Main – Headphone Monitor Mix

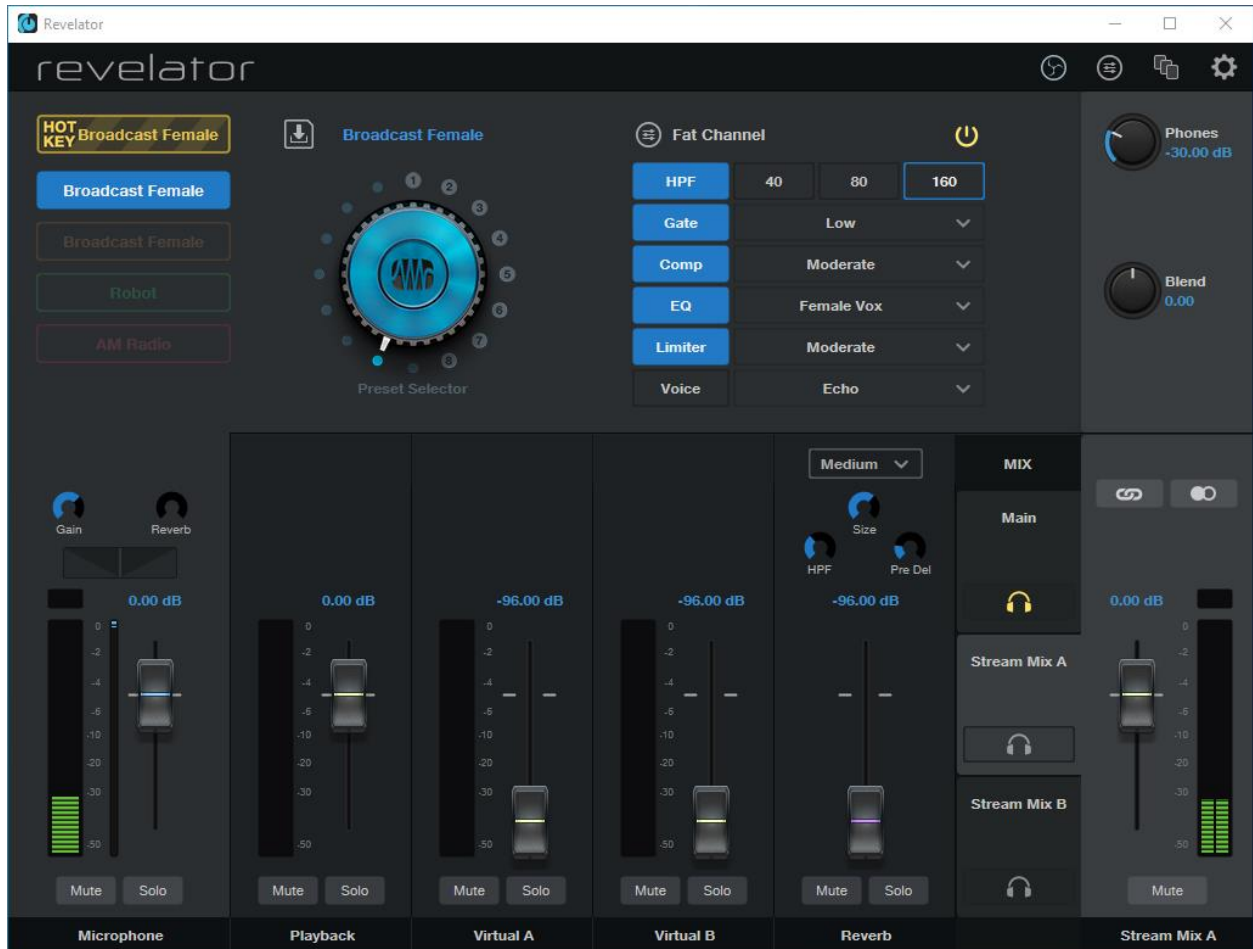


The Main mix is sent to the headphone jack on the Revelator microphone. This mix allows you to hear all the signals in real time (without delay) on the headphones plugged in the microphone. Settings needed for this mix are adjusted using the controls on the bottom half of the screen:

Microphone Gain	40 dB
Microphone Reverb	0 dB
Microphone Level Slider	0.00 dB
Playback Slider (Readbacks and Windows Audio)	0.00 dB
Virtual A (Conference Call Participants Audio)	0.00 dB
Virtual B (SoniClear Monitoring)	0.00 dB
Reverb	-96.00 dB
Main (Mix Volume)	0.00 dB
Headphone Button	ON (Yellow)
Mute Buttons	OFF
Solo Buttons	OFF

Note: to adjust the graphical settings, click on the control and move the mouse. The slider volume levels can also be set by clicking on the blue level number above the control and typing in a value.

Stream Mix A – Conference Software Mix

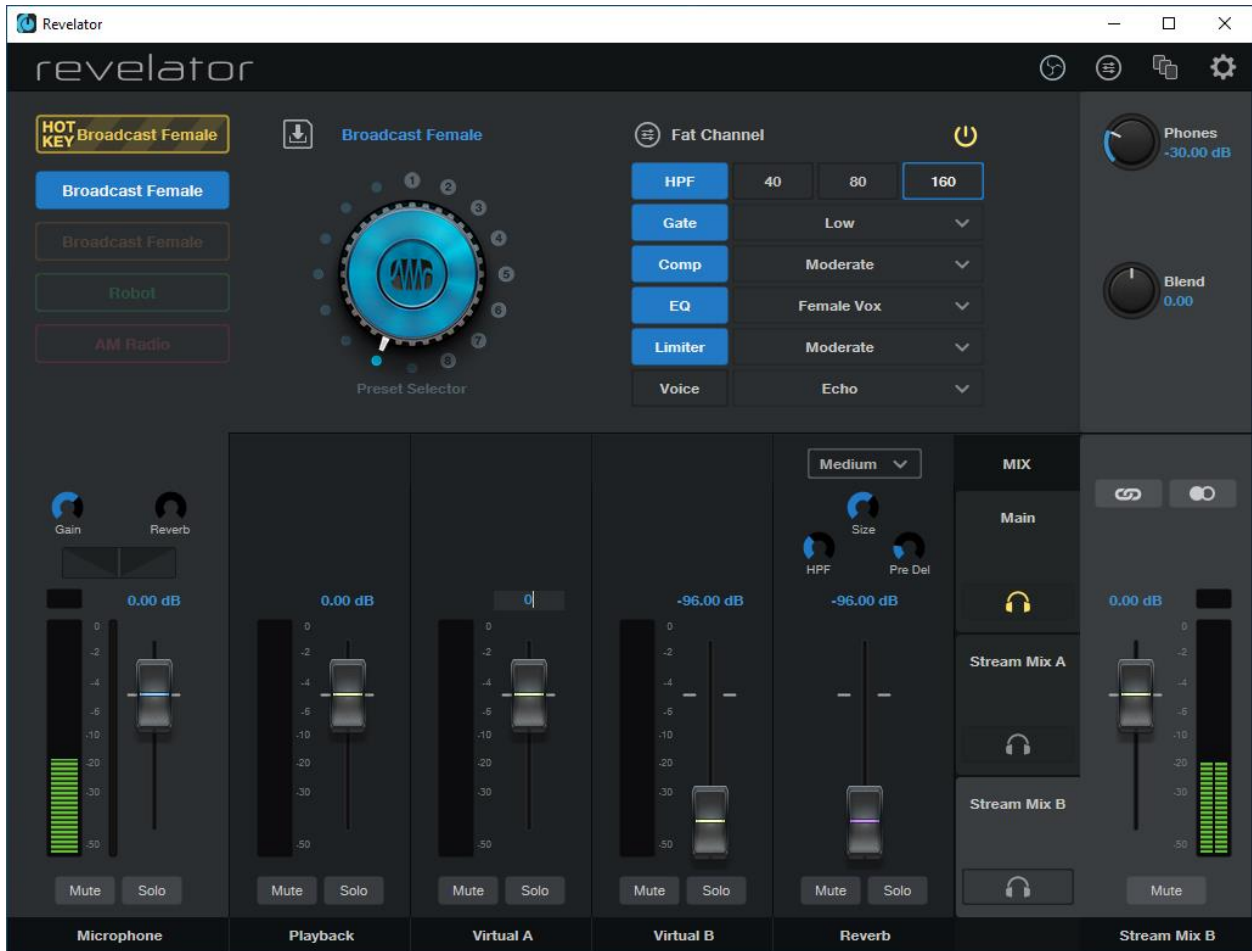


The Stream Mix A mix is for the conferencing software, such as Zoom, Teams, or Webex. The Microphone soundcard in the conferencing software will be set to Stream Mix A to receive this mix.

The audio being sent to the conferencing software must exclude the speaking of the remote participants (to prevent echo). This mix also needs to exclude audio played in SoniClear while recording to monitor audio quality and position playback for readbacks. The settings needed for the Stream Mix A mix are adjusted using the controls on the bottom half of the screen by clicking on the Stream Mix A section on the right side of the mixer panel. Set the controls to these values:

Microphone Level Slider	0.00 dB
Playback Slider (Readbacks and Windows Audio)	0.00 dB
Virtual A (Conference Call Participants Audio)	-96.00 dB
Virtual B (SoniClear and Windows App Playback)	-96.00 dB
Reverb	-96.00 dB
Stream Mix A (Mix Volume)	0.00 dB
Headphone Button	OFF (grey)
Mute Buttons	OFF
Solo Buttons	OFF

Stream Mix B – SoniClear Software Mix



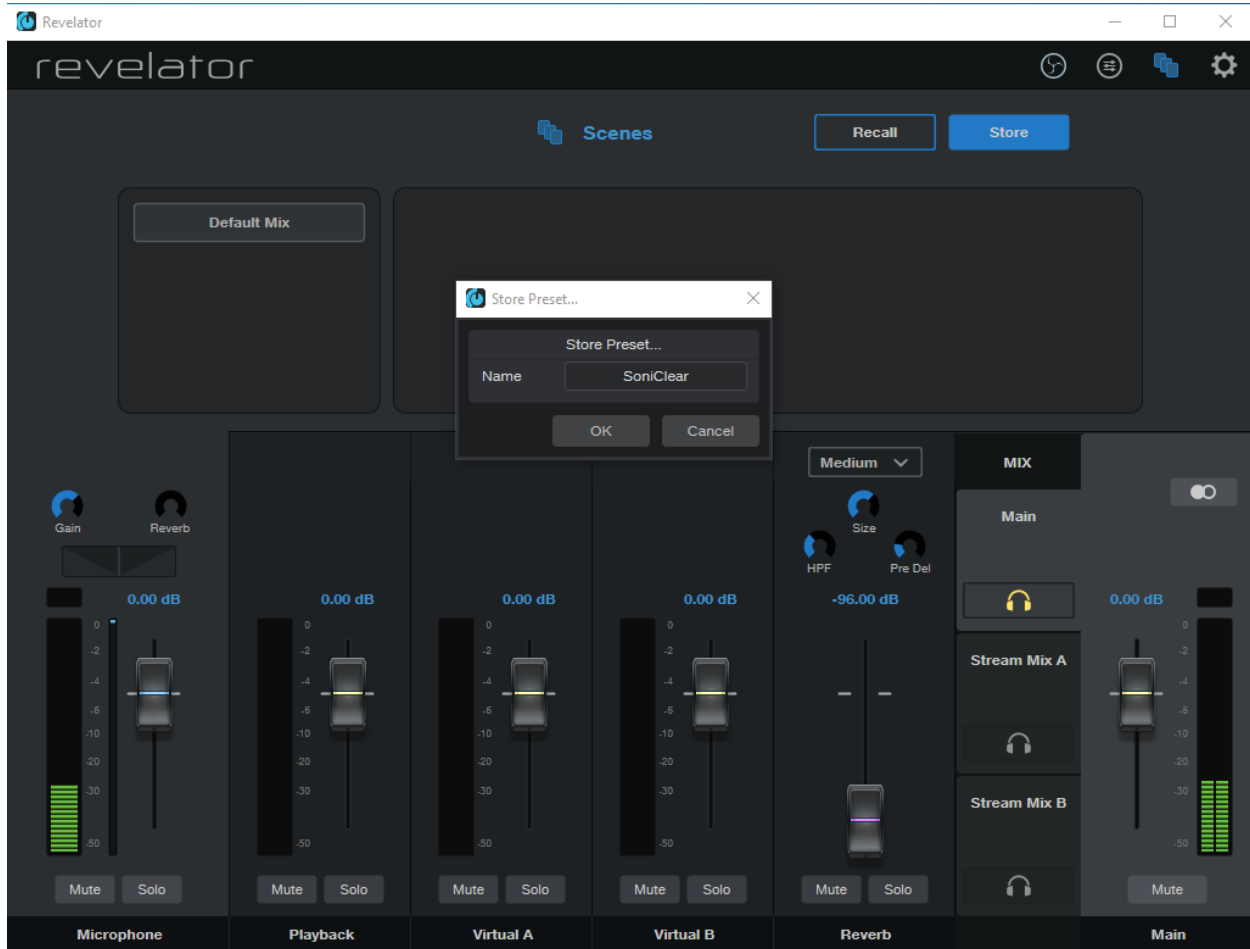
The Stream Mix B mix is for the SoniClear software. The mix includes audio from the Revelator microphone, remote participant audio, and any playbacks heard by the participants. The SoniClear Hardware settings will be configured to utilize this mix.

Settings needed for the Stream Mix B mix are adjusted using the controls on the bottom half of the screen by clicking on the Stream Mix B section on the right side of the mixer panel. Set the controls to these values:

Microphone Level Slider	0.00 dB
Playback Slider (Readbacks and Windows Audio)	0.00 dB
Virtual A (Conference Call Participants Audio)	0.00 dB
Virtual B (SoniClear and Windows App Playback)	-96.00 dB
Reverb	-96.00 dB
Stream Mix B (Mix Volume)	0.00 dB
Headphone Button	OFF (grey)
Mute Buttons	OFF
Solo Buttons	OFF

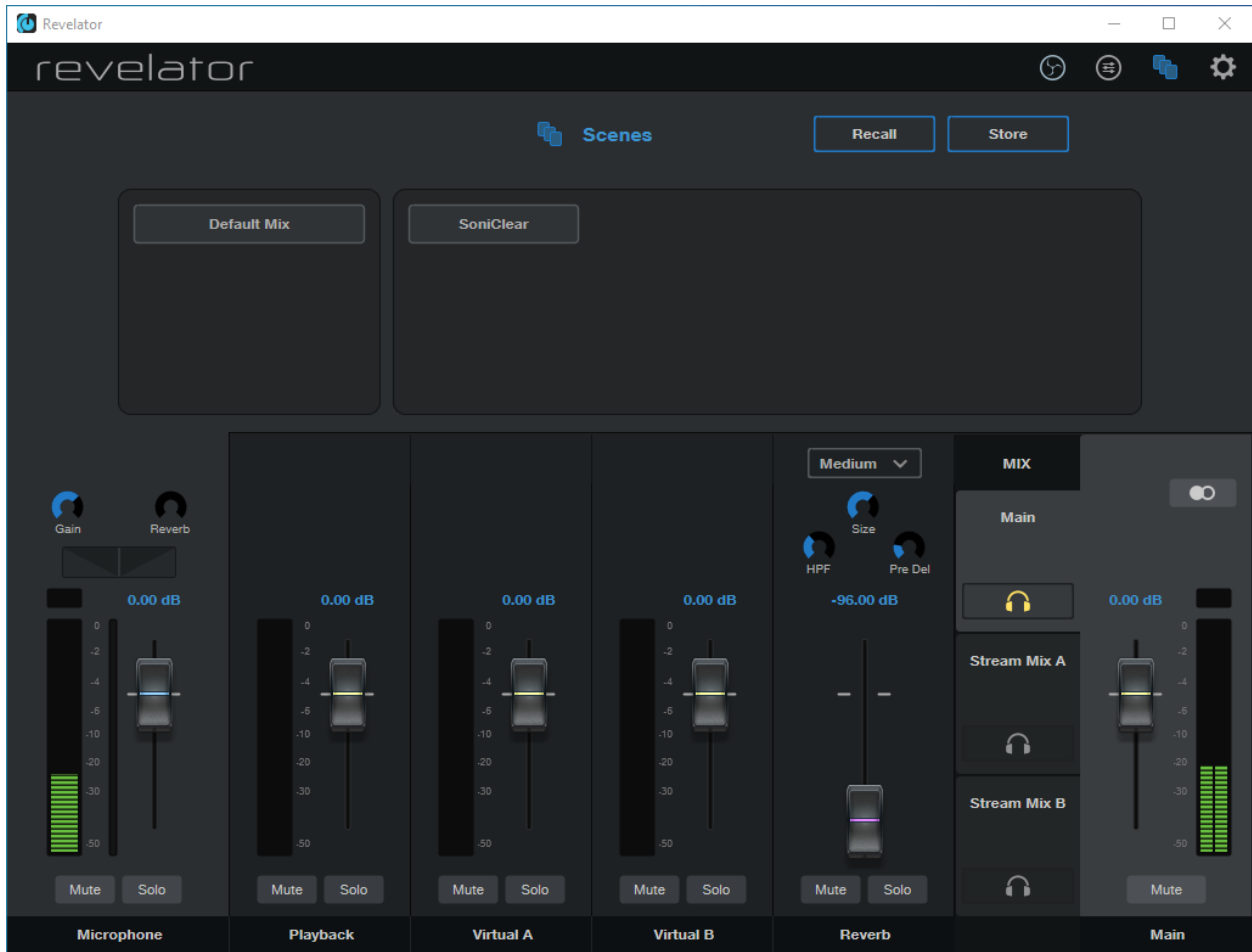
Saving Presets in a Scene

Once the Revelator settings have been configured, save the settings in a preset, what is referred to in the Universal Control panel as a “Scene”.



- Click on the Scenes icon in the upper right corner of the mixer screen (the icon that looks like sheets of paper).
- Click on the Store button.
- Enter the name of the Scene preset, “SoniClear”.

The stored SoniClear Scene allows you to restore the correct settings using the Recall button, if the settings become changed inadvertently:



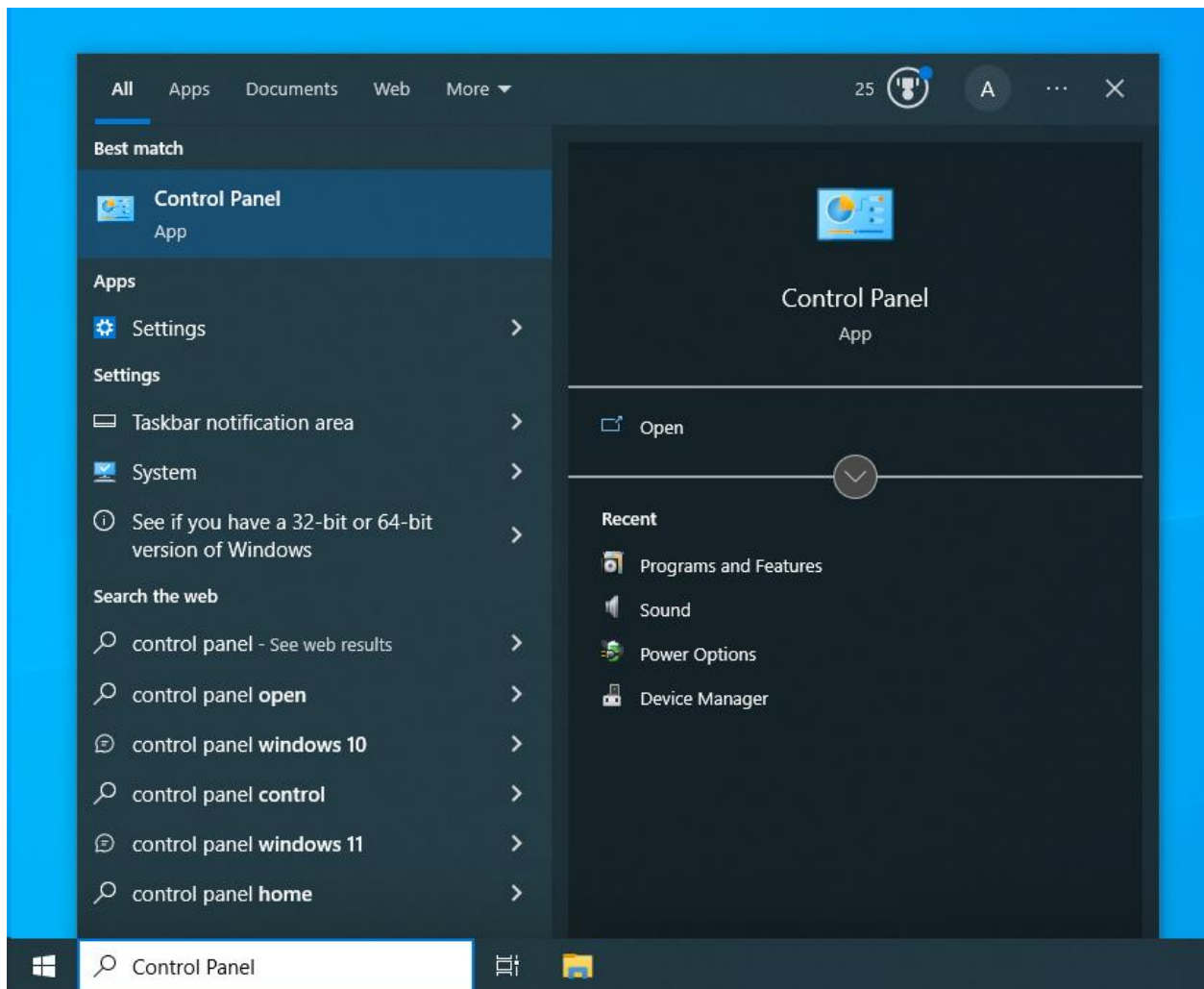
Windows Sound Settings

The Windows soundcard devices need to be configured to work with the Revelator.

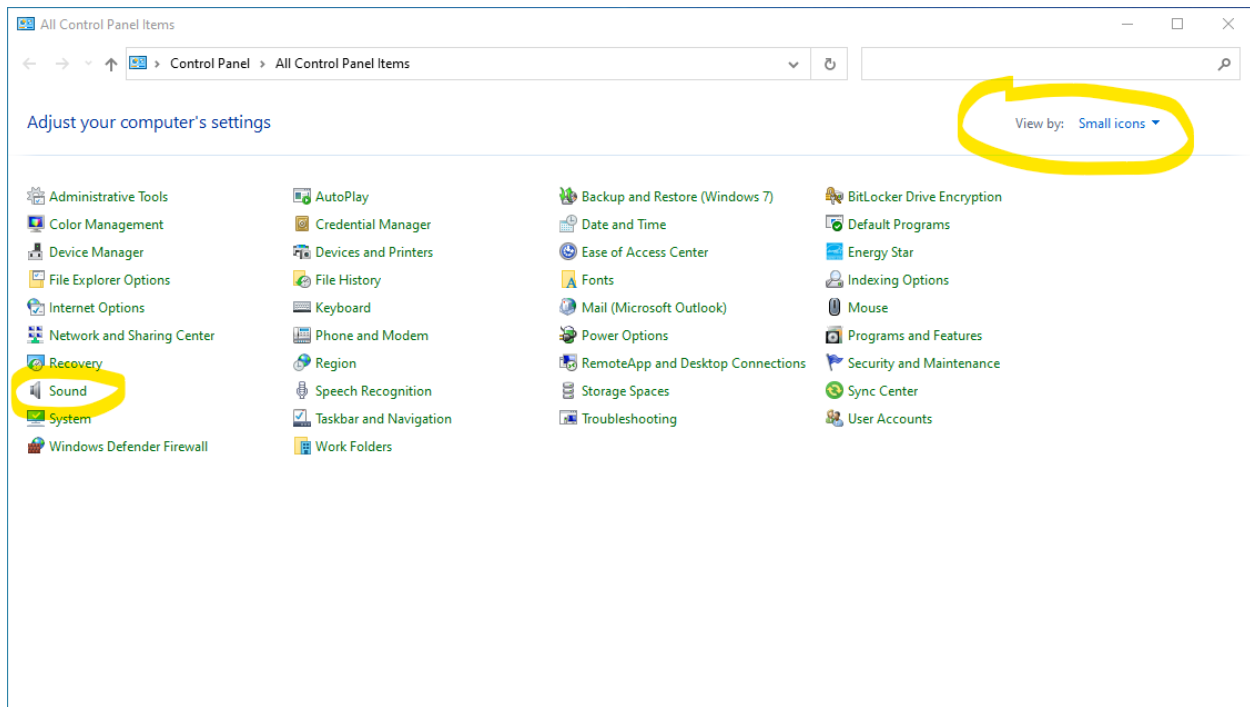
Open Sound Control Panel

Open the “Windows Sound Panel” option using for the following steps.

Click on Windows Search in the Task Bar (next to Windows Start button). Search for “Control Panel” and click on the Control Panel App search result:



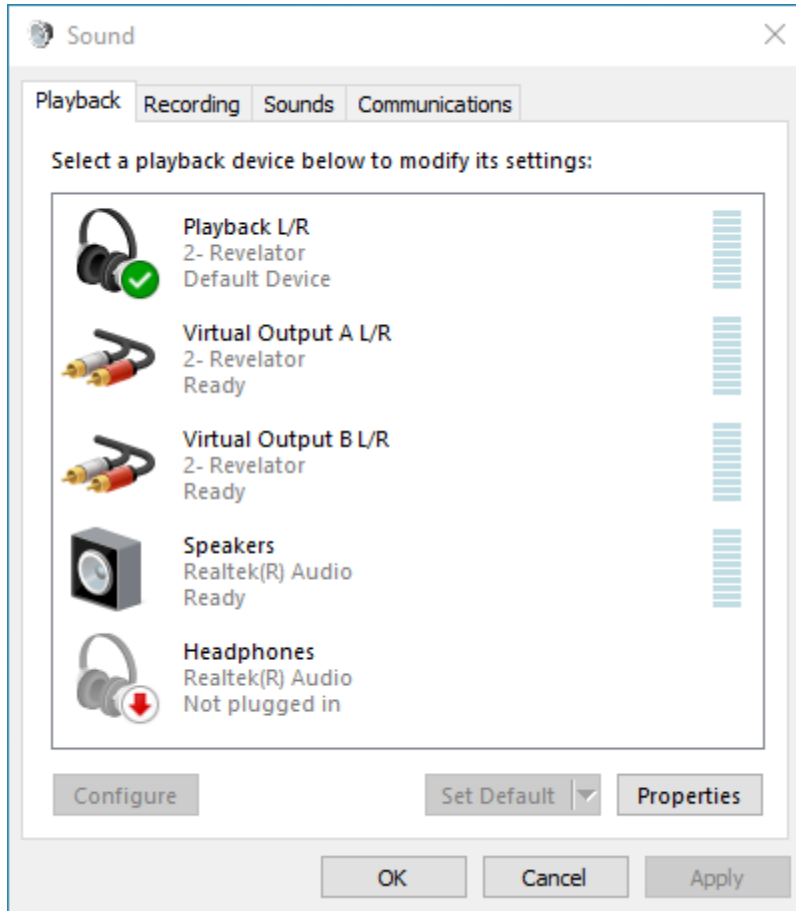
Make sure the “View by” control is set to Small icons, then click on the Sound control panel entry in the list:



That will display the Windows Sound control panel.

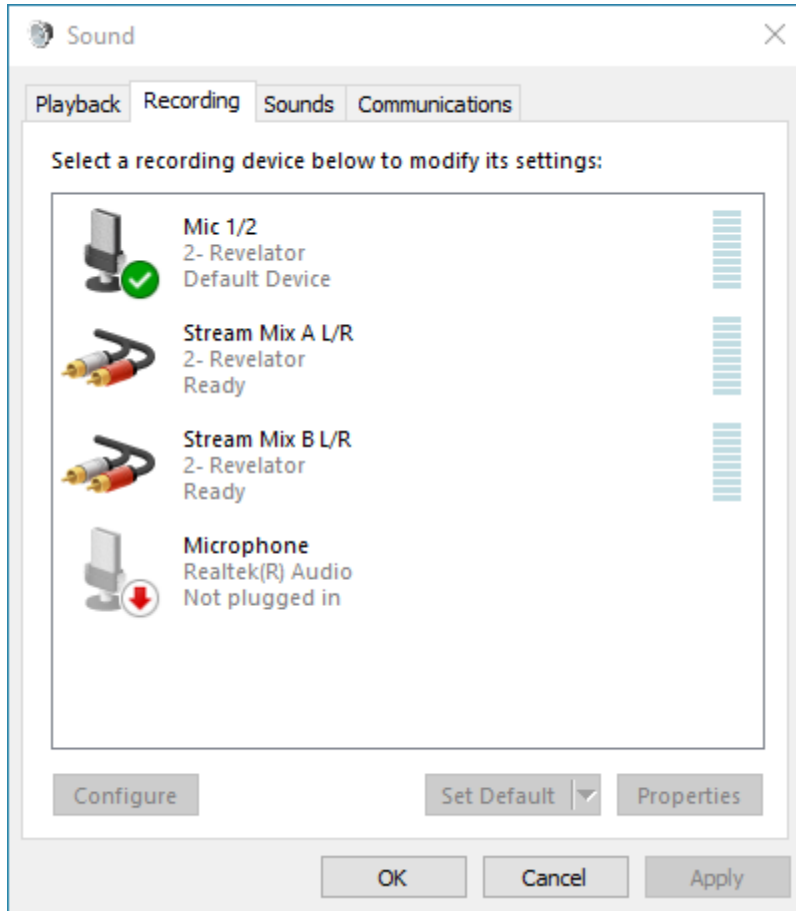
Default Playback Device

In the Playback tab of the Sound control panel, select the Playback L/R (Revelator) device and click the Set Default button. This will set the Revelator as the default output device for playing from any Windows program:



Default Recording Device

Click on the Recording tab. Click on the Mic1/2 (Revelator) device and click the Set Default button. This will select the Revelator microphone to be used as a regular USB microphone when using Windows applications other than SoniClear:



SoniClear Software Preferences

Overview

The SoniClear software preferences must be configured to work with the Presonus Revelator interface. To do this, start SoniClear and select Edit/Preferences from the pulldown menu.

The recordings created with this configuration will have the following channels:

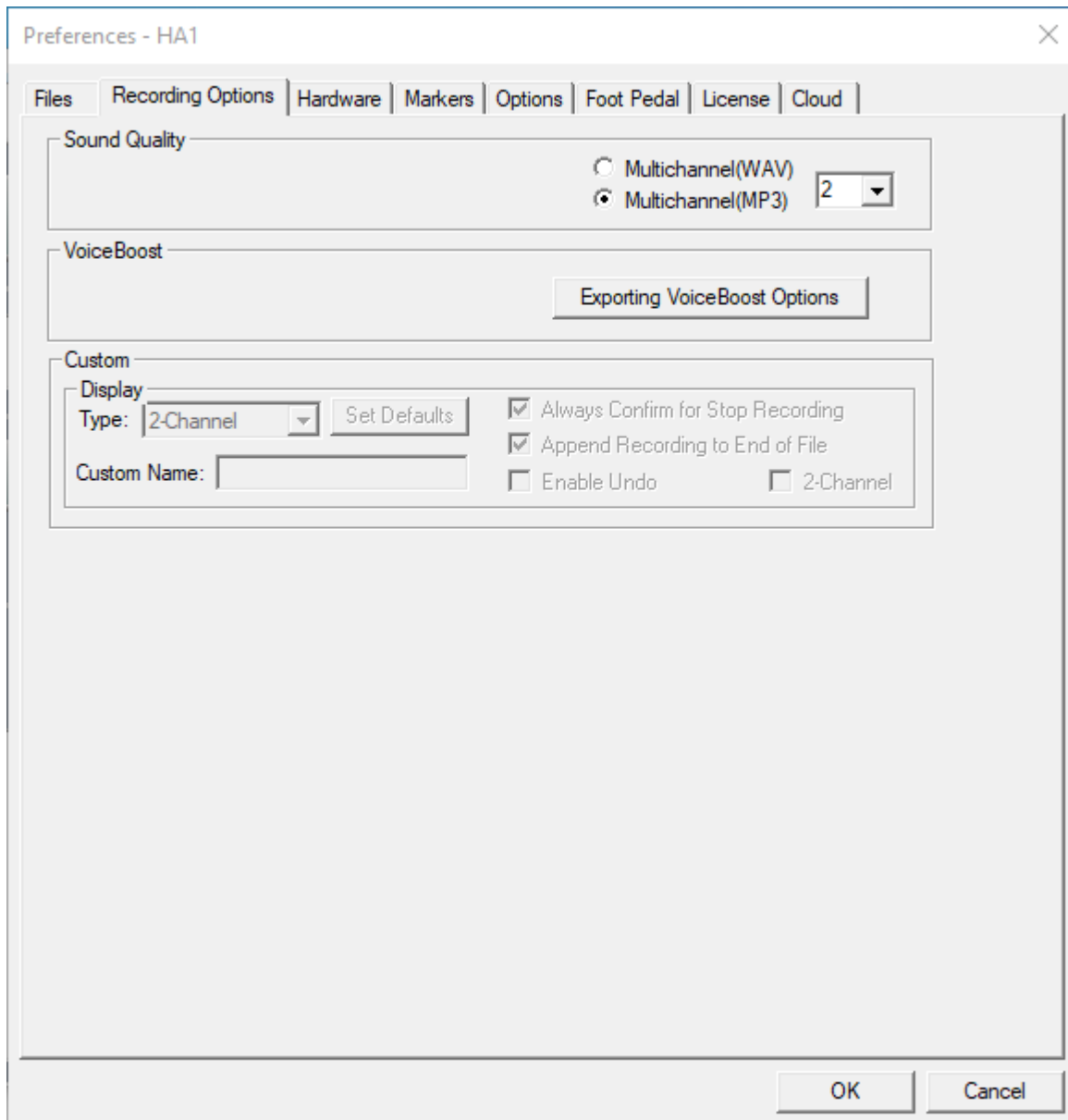
SoniClear Channel	Audio Recorded on Channel
Stereo Mix	Revelator Microphone
	Remote Conference or Softphone Participants
	SoniClear Readback Audio
	Windows Program Playback
Left	Revelator Microphone
	Remote Conference - Left
	SoniClear Playback Audio - Left
	Windows Program Playback - Left
Right	Revelator Microphone
	Remote Conference - Right
	SoniClear Playback Audio - Right
	Windows Program Playback – Right

Recording Options Tab - Sound Quality

In the Recording Options preferences tab, set the recording format.

For Meeting Recorder 9 select Meeting (Stereo WAV).

For All other SoniClear products, select Multichannel (MP3) and set the channels selector to 2 channels.



Hardware Tab – Audio Device Selection

Select the Hardware tab and modify the settings according to the following instructions.

The screenshot shows the 'Preferences - HA1' dialog box with the 'Hardware' tab selected. The dialog is divided into several sections:

- Recording Device Setup:** Includes dropdown menus for 'Default Recording Device / Stereo Mix' (Stream Mix B L/R (2- Revelator)), 'Input Source' (Master Volume), and 'First Recording Array Device' (Mic 1/2 (2- Revelator)). There is an 'Edit' button next to the last dropdown.
- Removable Recording Device:** Includes a text field, a 'Clear' button, an 'Input Source' field, a 'Set Default Device as Removable' button, and two checkboxes: 'Use Removable Device If Present' and 'Automatically Set Removable Device'.
- Advanced Recording Options:** Includes a 'Recording Priority' dropdown (High), a 'Disk Update Time' field (5000 milliseconds), and two checked checkboxes: 'MMCSS' and 'Force Recording at 44.1KHz'.
- Playback Device Setup:** Includes a 'Default Speaker Device' dropdown (Playback L/R (2- Revelator)), a 'Removable Playback Device' text field with a 'Clear' button, a 'Set Default Device as Removable' button, and two checkboxes: 'Use Removable Device If Present' and 'Automatically Set Removable Device'.
- Advanced Playback Options:** Includes a checkbox for 'Enable Live Monitoring', a 'Monitor Device' dropdown (Virtual Output B L/R (2- Revela)), a 'Monitor Delay' field (3 secs), and a checked checkbox for 'Force Playback at 44.1KHz'.

At the bottom right of the dialog are 'OK' and 'Cancel' buttons.

Recording Device Setup

The Recording Device Selection side of the Hardware tab controls the usage of the sound cards in the computer during recording.

Default Recording Device

This is the sound card input for recording the stereo mix of all the participants. It should be set to “Stream Mix B L/R (Revelator)”. Note that the name may have an additional number included in the parenthesis. This indicates that the Revelator interface has been plugged into more than one USB jack on the computer at some point in time.

Once the Default Recording Device field has been set, the Revelator must be plugged into the same USB jack on the computer each time it is used.

First Recording Array Device

Disregard this section as the multichannel recording option is not used for this kit.

Removable Recording Device

“Use Removable Device If Present” and “Automatically Set Removable Device” options should be unchecked.

Advanced Recording Options

These options control how recording is processed.

Recording Process Priority

Default value should be set to High or Automatic.

Disk Update Time

The default value should be set to 5000 milliseconds.

MMCSS

The value should be set to Checked.

Force Recording at 44.1KHz

The value should be set to Checked.

Playback Device Selection

The Playback Device Selection section of the Hardware tab controls the usage of the sound cards in the computer during playback.

Default Speaker Device Selection

This is the sound card that will be used for playback to the participants in the room (through the speaker), and to the remote participants (through the conference software). It also sends audio for playback to the headphones.

Set the Speaker Device Selection to “Playback L/R (Revelator)”.

Removable Recording Device

“Use Removable Device If Present” and “Automatically Set Removable Device” options should be unchecked.

Enable Live Monitoring

The Live Monitoring option should be enabled and the Monitor Device set to the “Virtual Output B L/R”.

Advanced Playback Options

These options control how playback is processed. These fields should only be changed in the event of problems with playback using the default settings. Consult SoniClear support for assistance (www.soniclear.com/support).

Monitor Delay

Monitor Delay should be set to the default of 3 seconds.

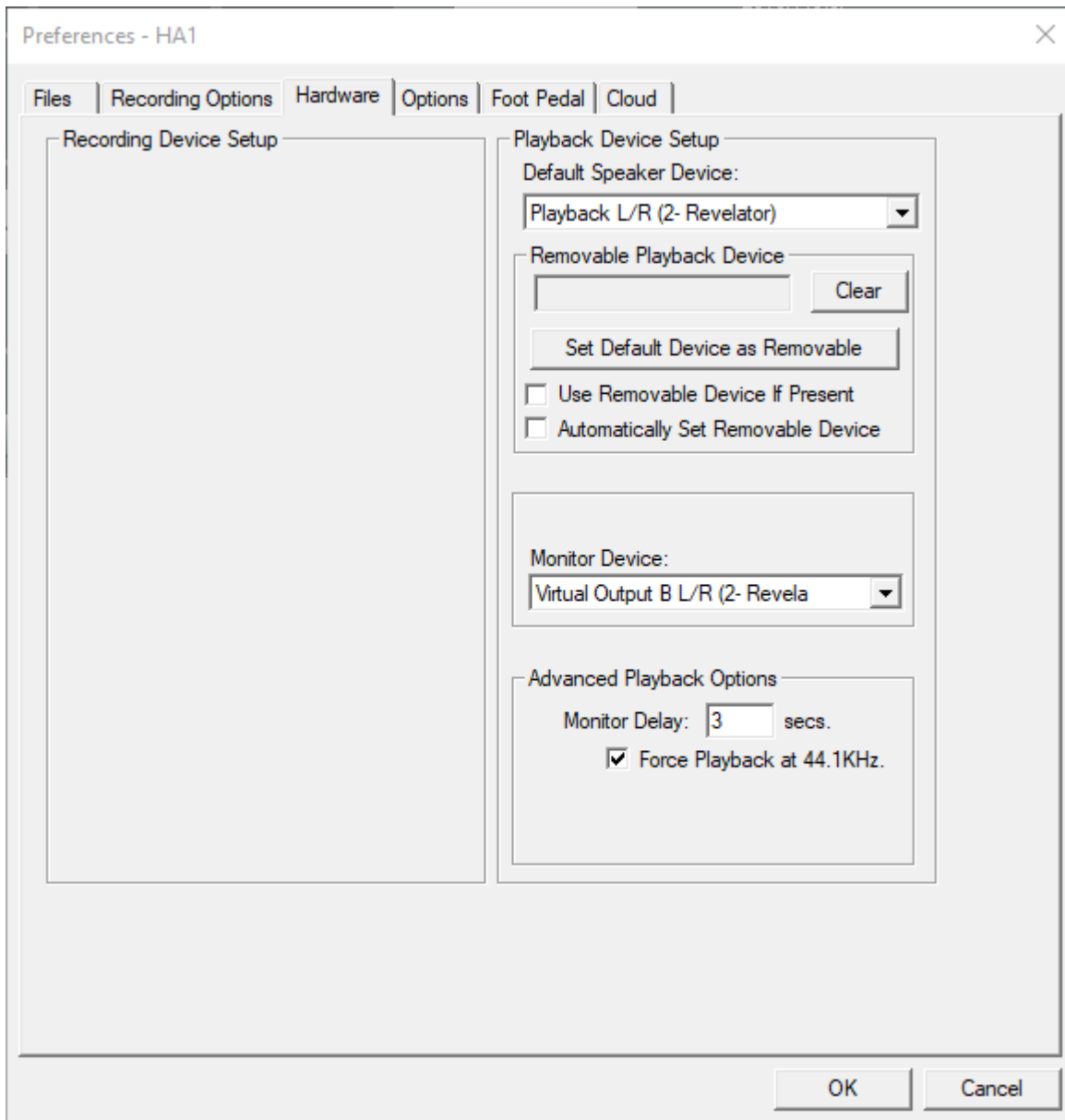
Force Recording at 44.1KHz.

This field should be set to Checked.

Transcriber Live Software Preferences

When Transcriber Live is used with SoniClear Court Recorder 9, the Presonus Revelator headphone can be used to monitor audio, and readbacks can be played so that the readback audio is heard by the teleconference participants.

Configure Transcriber Live for this usage in Edit/Preferences Hardware tab.



Hardware Tab – Audio Device Selection

Select the Hardware tab and modify the settings according to the following instructions.

Playback Device Selection

The Playback Device Selection section of the Hardware tab controls the usage of the sound cards in the computer during playback.

Default Speaker Device Selection

This is the sound card that will be used for playback into the teleconference call (like playing into speakers in the room when meeting in person). Set the device to “Playback L/R (Revelator)”.

Removable Recording Device

The “Use Removable Device If Present” and “Automatically Set Removable Device” check boxes should be unchecked.

Enable Live Monitoring

Enable live monitoring by checking this option. Set the Headphone device to “Virtual Output B L/R”.

Advanced Playback Options

These options control how playback is processed. These fields should only be changed in the event of problems with playback using the default settings. Consult SoniClear support for assistance if this happens (www.soniclear.com/support).

Monitor Delay

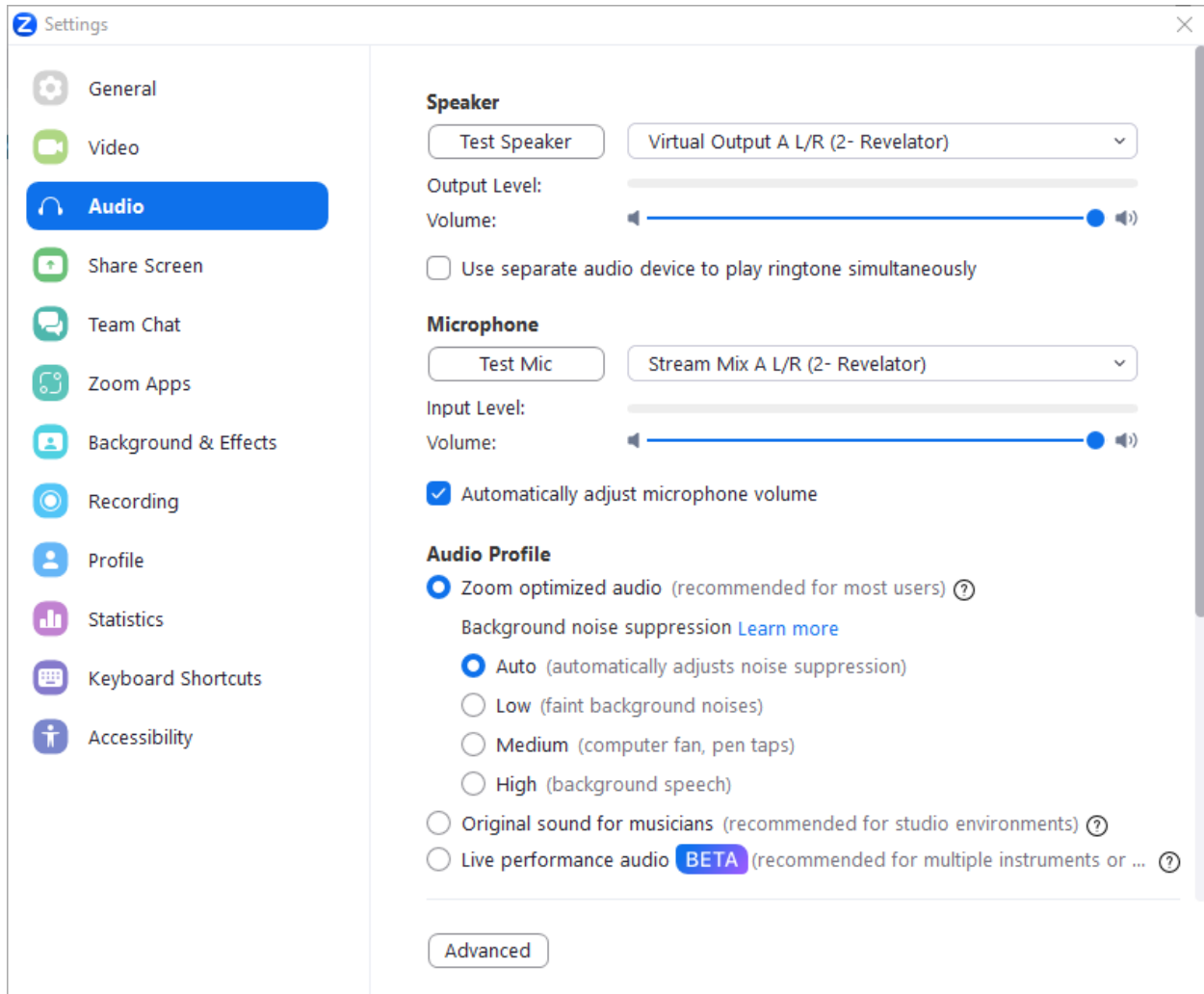
Monitor Delay should be set to the default of 3 seconds.

Force Recording at 44.1KHz.

This field should be set to Checked.

Zoom Conferencing Software Configuration

The Zoom conferencing application must be manually set to the correct configuration to work with the Presonus Revelator interface.

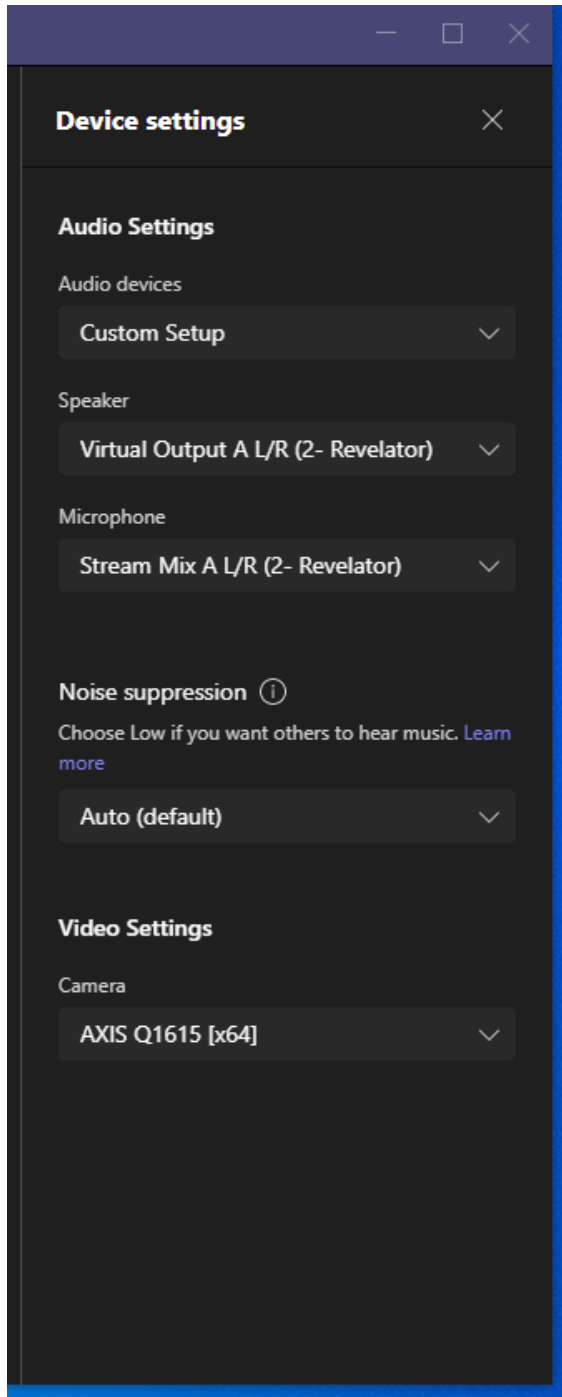


Set the Speaker device to “Virtual Output A L/R”.

Set the Microphone device to “Stream Mix A L/R”.

Teams Conferencing Software Configuration

The Microsoft Teams conferencing application must be manually set to the correct configuration to work with the Presonus Revelator interface.

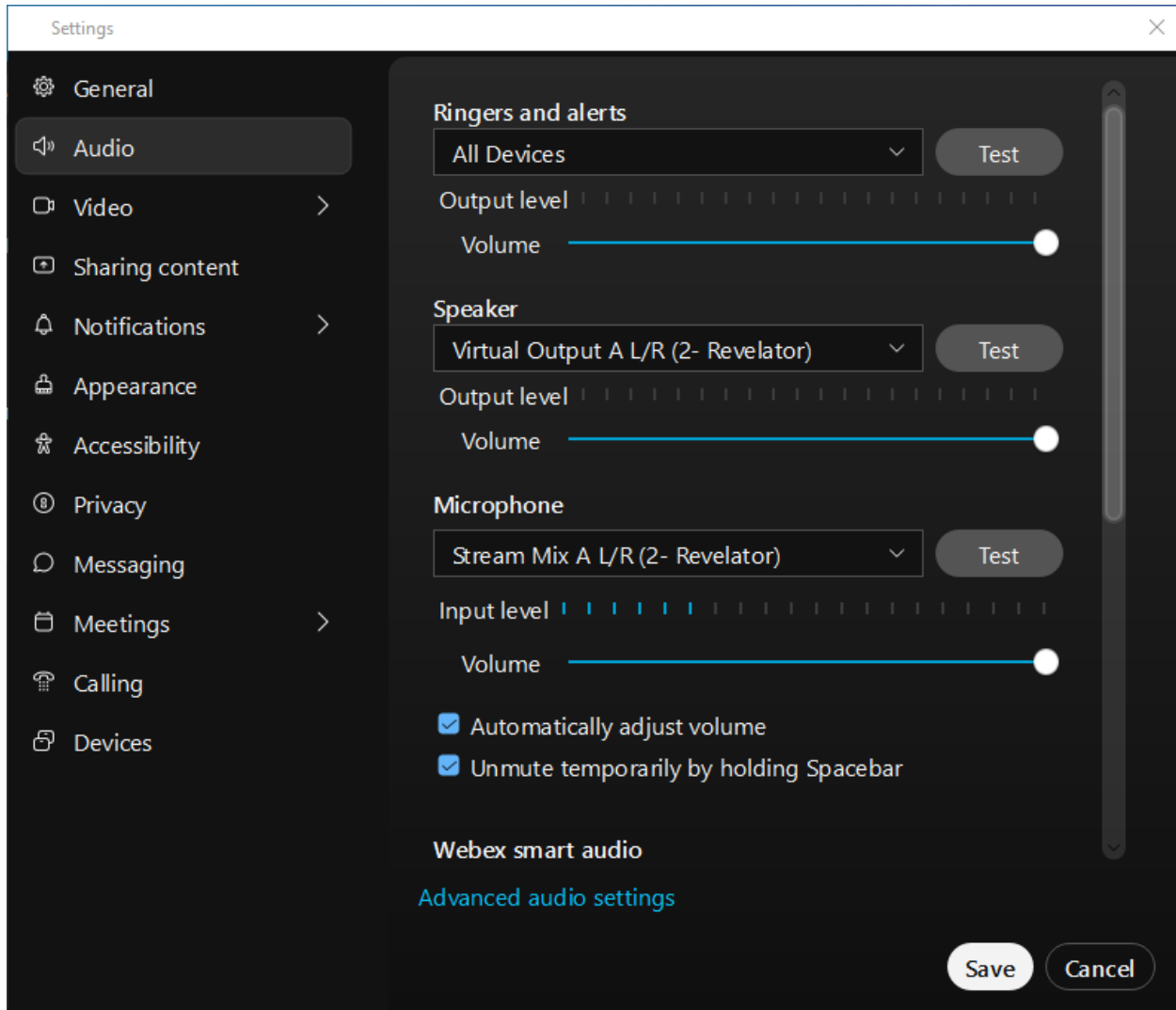


Set the Speaker device to “Virtual Output A L/R”.

Set the Microphone device to “Stream Mix A L/R”.

WebEx Conferencing Software Configuration

The Cisco WebEx conferencing application must be manually set to the correct configuration to work with the Presonus Revelator interface.



Set the Speaker device to “Virtual Output A L/R”.

Set the Microphone device to “Stream Mix A L/R”.

Other Communication Software Configuration

The communication software (such as a softphone app) must be set up to work with the Presonus Revelator interface. To do this, follow the instructions provided for the communication software for configuring audio devices, using the Mix Minus mix from the Revelator:

Set the Speaker device to “Virtual Output A L/R”.

Set the Microphone device to “Stream Mix A L/R”.

Windows App Software Playback Configuration

The Presonus Revelator can be used to play audio from software programs on the computer. With this configuration the audio being played back can be heard by the conference call participants and on the Revelator monitoring headphones. The playback audio will also be recorded in SoniClear.

A typical application would be to play a video file on the computer for conference participants to hear. Any software that plays to the default speaker will be heard and recorded properly. If the Windows App has a setting for speaker playback, set to “Playback L/R (Revelator)”.