



Symphony Desktop User's Guide

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Overview

Introduction

Put the Sound of a Symphony on Your Desktop

Symphony Desktop for Mac, iPad Pro and Windows offers the legendary sound quality of Apogee's flagship Symphony I/O Mk II into an elegant 10x10 audio interface that sits on your desk and fits in your bag. With Symphony Desktop, musicians and producers are empowered to record, overdub and mix with the music industry's most respected AD/DA converters and mic preamps.

By combining superior performance with new features like mic preamp emulation, the Symphony ECS Channel Strip and Clearmountain's Spaces reverb plugins, and ultra low latency recording with hardware DSP and Apogee native FX plugins, Symphony Desktop will amplify your creativity in the studio or on the go, giving your recordings the Apogee quality advantage.

Features

Symphony Analog-to-Digital Conversion

Similar to Symphony I/O MkII, Symphony Desktop's analog-to-digital converter stage features ultra-low distortion, high-slew rate, fully differential analog op-amps plus a cutting edge A/D converter in a performance-enhancing dual-sum configuration. Create with the confidence that every nuance of your analog input is faithfully reproduced in the digital domain.

Symphony Digital-to-Analog Conversion

Symphony Desktop's digital-to-analog stage employs brand new technology to provide uncompromising Symphony DAC performance in a portable product, including a robust ultra-low distortion, high-current output driver. Regardless of downstream connections, Symphony Desktop provides a transparent, widescreen window into the sonic landscape of your mix.

Immersive Touch screen

The immersive TFT touch screen and responsive Control knob gives you total control over all aspects of Symphony Desktop, from input and output levels, mic preamp emulation, low latency mixers and routing. With everything at your fingertips, your music creation and production flows freely, whether you're on a Mac, Windows or iOS platform.

Apogee Alloy Mic Preamp Emulation

Apogee Alloy mic preamp emulation offers analog circuitry plus DSP processing to create the richest, most authentic audio modeling available in an audio interface. Critical aspects of the model such as input impedance, transient profile and distortion characteristics are first implemented in the analog domain, followed by precise and accurate refinement in DSP, for a hybrid result that's greater than the sum of its parts.

The AP-66 emulation is based on the Class A solid-state Neve 1066 mic preamp, with a characteristic low-mid color and slightly compressed transients.

The AP-57 emulation offers the lush, larger-than-life tube saturation of a carefully restored 50s era Ampex 601 preamp.

Innovative Workflows with Hardware DSP

Symphony Desktop includes flexible and powerful onboard DSP processing that supports a wide range of innovative workflows, using the Apogee Channel FX plugin. Whether you're printing your tracks with Apogee Alloy mic preamp emulation or enjoying the benefits of DualPath monitoring, there's a DSP-powered workflow that fits you like a glove.

Apogee Plugins Included

Included with Symphony Desktop is the Symphony ECS Channel Strip plugin. Tuned by Bob Clearmountain, Symphony ECS includes EQ, Compression and Saturation for quick and effective processing when tracking vocals or acoustic instruments.

Also included is the Apogee Clearmountain's Spaces plugin, which reproduces legendary mixer Bob Clearmountain's personalized workflow for creating the distinctive, rich spaces where his mixes live. With the very same echo chamber profiles and processing he's used on countless hit records, Clearmountain's Spaces lets you envelope your tracks in unique and cohesive atmospheres that set your mixes apart.

Zero-Ohm Headphone Outputs

Symphony Desktop has two completely independent ultra low impedance headphone outputs that are individually routable, equipped with dual-sum ESS DACs. Output power range is tailored to the expected type of headphones: the front panel output can drive virtually any headphones, while the rear panel output is specifically designed for high-efficiency headphones.

Advanced Stepped Gain Mic Preamps

At the core of the input stage, Symphony Desktop's mic preamps offer up to 75dB of gain. The preamp design features Apogee's unique Advanced Stepped Gain Architecture to ensure ultra-low noise and distortion regardless of the source, from pounding kick drum to delicate fingerpicking on an acoustic guitar. With variable impedance settings on both mic and instrument inputs, Symphony Desktop optimizes the input stage to better match your specific devices, for deep lows and clear highs. Selectable mic preamp emulation adds character, attitude and a bit of grit to your recordings.

Apple Logic Pro Integration

Logic Pro X users enjoy the ultimate Apogee Channel FX and DualPath Monitoring experience, thanks to unique hardware-software integration features, such as the Logic Pro X Direct button and Audio Device Control view. And, it can all be controlled from a single window in Logic, no need for an additional mixer or console app.

Navigating This User's Guide

A computer-based audio production system built around the Symphony Desktop includes the following components:

- Symphony Desktop Hardware Interface
- Apogee Desktop Control software application
- Apogee Channel FX plus Apogee FX plugins
- Mac, Windows or iOS device plus a Digital audio workstation (DAW) software application
- Microphones and Instruments for recording plus speakers and headphones for listening

This User's Guide will take you through the following steps to integrate the components of your system into a powerful and efficient audio production environment. When text is highlighted in [blue](#), it may be clicked to link to further information in this Guide.

- Download and run the Symphony Desktop Installer, which installs the Apogee Desktop Control application (and driver if required) on your computer ([link](#)).
- Connect Symphony Desktop to AC power (required) and to your computer via USB ([link](#)).
- Update Touch Screen Control using the included USB thumb drive ([link](#)).
- Configure your computer's operating system (OS) to use Symphony Desktop for audio input and output ([link](#)).
- Configure your DAW to use Symphony Desktop for audio input and output ([link](#)).
- Connect microphones, instruments, headphones, speakers and other audio hardware to Symphony Desktop ([link](#)).
- Use Symphony Desktop's top panel TFT touch screen to navigate Input, Output and most System settings ([link](#)).
- Use Desktop Control software to navigate all settings, including direct monitor mixing and Apogee Channel FX ([link](#)).
- Choose a Monitoring workflow and configure your DAW and Symphony Desktop ([link](#)).
- Set up Plugin Processing workflows according to your preference ([link](#)).

See the Apogee FX User's Guide (included in the Symphony Desktop Installer download) for information about the Apogee Channel FX and plugins, including the Symphony ECS Channel Strip.

See the Clearmountain's Spaces User's Guide (included in the Symphony Desktop Installer download) for information about the Clearmountain's Spaces plugin.

In the Box

- Symphony Desktop
- Universal Power Supply with US (North America), UK, EU and SAA AC connector.
- USB-C > USB-C & USB-C > USB-A cables
- 1Gb USB thumb drive for Touch screen Control updates
- Quick Start Guide
- Warranty Booklet

System Requirements

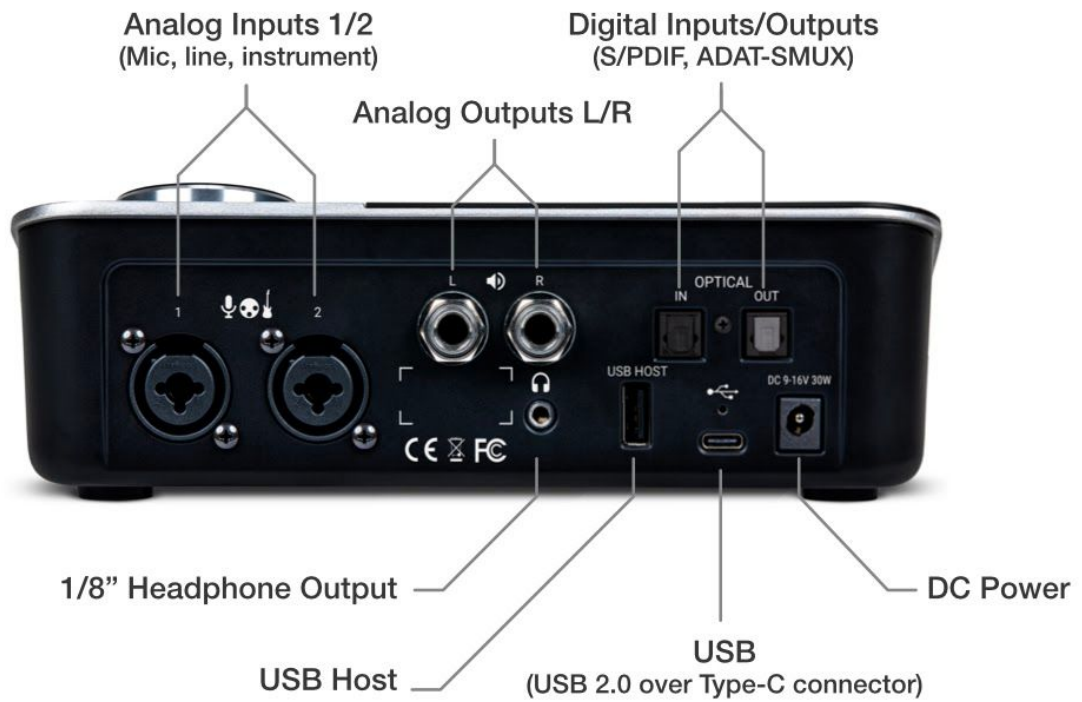
- macOS 10.13 or greater
- Windows 10 Anniversary update or later
- iOS 13 or greater
- Mac & Windows: 4GB minimum RAM, 8GB Recommended

Register your Product

- Access Apogee's expert Technical Support for free
- Receive important product update information by email
- Take the Customer Satisfaction Survey for a chance to win Apogee gear!

Register Now: www.apogeedigital.com/support/register

Symphony Desktop Panel Tour



Getting Started

Installing Apogee Desktop Software

To register your product and receive the Symphony Desktop Installer, learn the most up-to-date information on new releases, and view Interactive tutorials, click the link below.

www.apogeedigital.com/support/symphonydesktop

Once you've registered your Symphony Desktop, you'll receive an email with links to Mac and Windows versions of the Symphony Desktop Installer download.

macOS Installer

Once downloaded, double-click the .dmg file to display the contents:

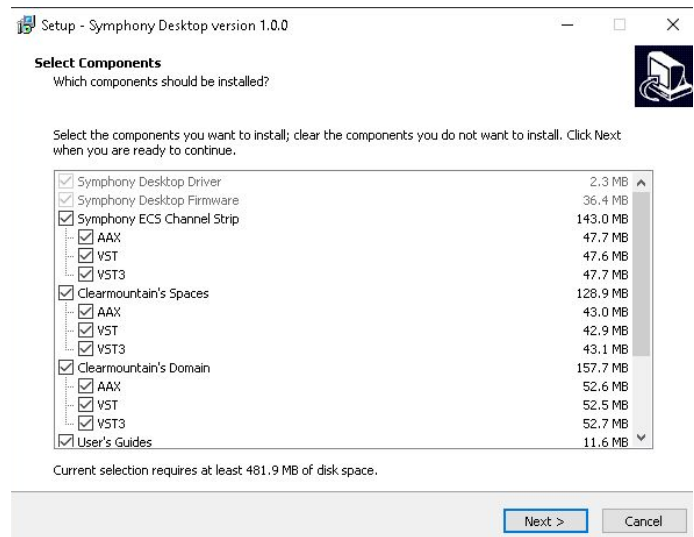
- Desktop Control Software Installer
- SymphonyDesktopUpdate file
- Documentation for Symphony Desktop & Apogee plugins
- Symphony Desktop Uninstaller

To install Desktop Control Software:

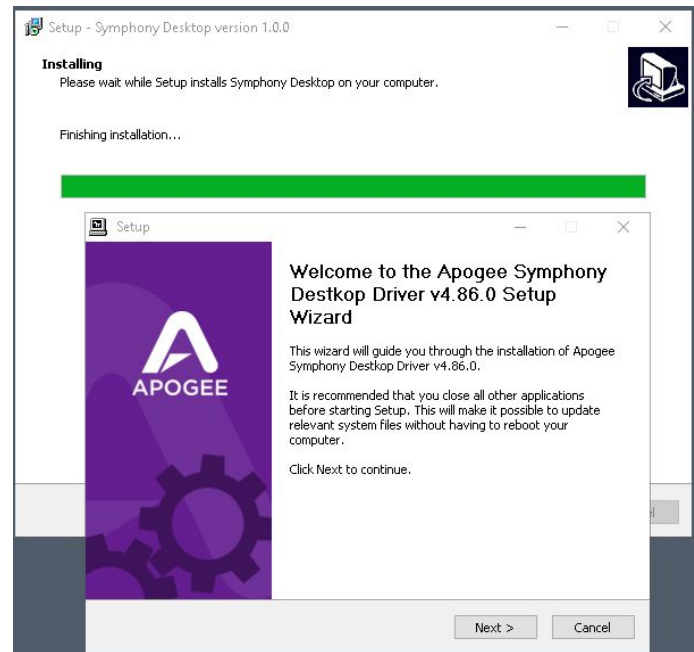
1. Double-click the Desktop Control Software installer.
2. A dialog box will appear with a series of steps to complete the installation.
3. By default, all Apogee plugins are installed in all formats. Even if you don't have an iLok license for a plugin, you can try it for a limited time. You can customize what plugins and formats are installed in the Plugins step.
4. You will be required to restart your computer.

Windows 10 Installer

1. In your Downloads folder, double-click the .zip file to extract it, then double-click the .exe file to start the installation process.
2. By default, all Apogee plugins and documentation are installed, In the Select Components window, you can de-select plugins and/or plugin formats you don't want to install.



3. Click Next through all steps, then click Finish at the final step.
4. You should restart your computer immediately.
5. The User's Guides are installed on your computer's desktop.



iPad Pro/iPhone

There is no software to be installed when using Symphony Desktop with an iPad Pro or other iOS device like your iPhone. All Desktop settings are accessed from the touch screen.

Connecting Symphony Desktop

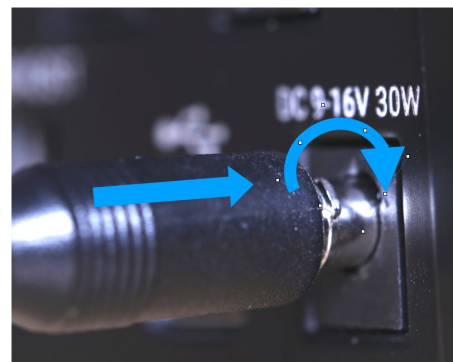
AC Power

1. Connect the supplied Universal power supply to your AC (wall) outlet.

- For Type A-compatible outlets (North America) - Flip down the connector blades.
- For Type C,G or I- compatible outlets (UK, EU & SAA) - Slide the adaptor down over the closed connector blades.



2. **IMPORTANT, READ CAREFULLY-** Symphony Desktop's DC connection includes a locking mechanism. Line up the locking tabs on the cable barrel connector with the locking slots on the rear panel DC socket.
3. Insert the barrel connector until it is flush against the socket, then turn clockwise until it stops.
4. Lightly tug the connector to ensure it's locked in place.
5. Tap the Control Knob to power up Symphony Desktop - the touch screen will flash for for approximately 30 seconds as the internal processor starts.



Connecting to a Mac or Windows computer

Using one of the supplied cables (USB-C to USB-C or USB-C to USB-A), connect Symphony Desktop's USB-C port to a USB port on your Mac or Windows computer.

Be sure to use Symphony Desktop's USB-C port, not the port labelled USB Host.

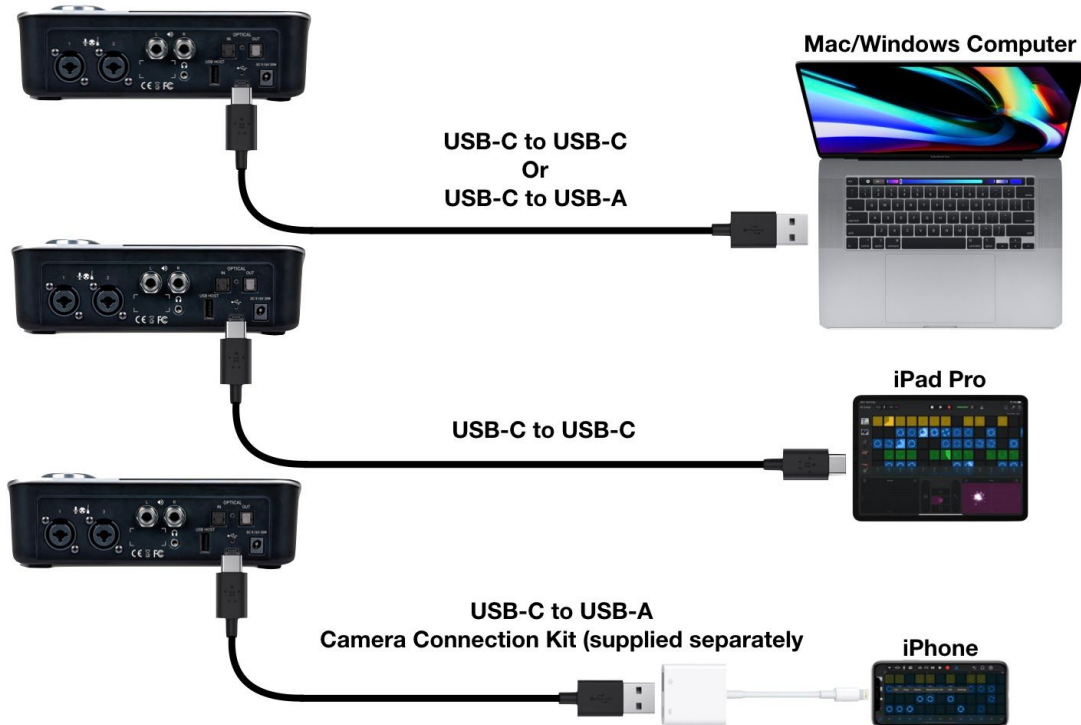


Connecting to an iPad Pro (USB-C)

Using the supplied USB-C to USB-C, connect Symphony Desktop's USB-C port to the iPad Pro's USB-C connector.

Connecting to an iOS Device

Using one of the supplied cables (USB-C to USB-C or USB-C to USB-A), connect Symphony Desktop's USB-C port to an Apple Camera Connection Kit, supplied separately. The Camera kit's Lightning connector is then connected to your iOS device.

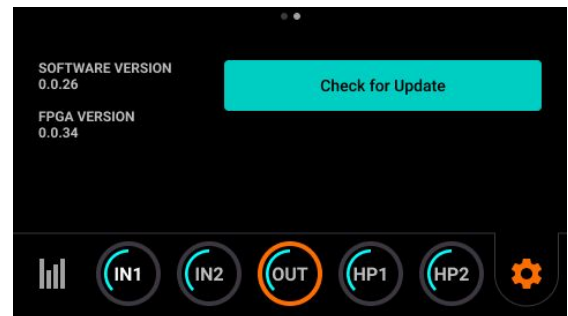


Update Touch Screen Control

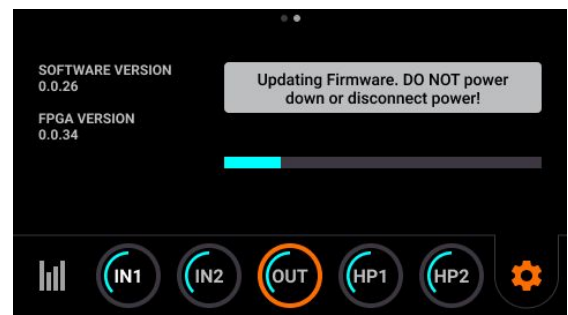
Please note - Before using Symphony Desktop, it's necessary to update Touch Screen Control, using the supplied USB thumb drive. If you don't have the supplied thumb drive, any USB thumb drive formatted in the FAT32 format will work. See below for formatting instructions on Mac & Windows.

1. Connect the supplied USB thumb drive to your computer. To connect to a USB-C port, use a USB-A to USB-C adapter.
2. On macOS - Double-click the Symphony Desktop Installer to open it, then drag the SymphonyDesktopUpdate folder into the USB thumb drive.
3. On Windows 10 - In your Downloads folder, double-click the SymphonyDesktopInstaller.zip to extract the contents, then drag the SymphonyDesktopUpdate folder into the USB thumb drive.
4. Eject the thumb drive from your computer, then connect the thumb drive to the Symphony Desktop rear panel USB Host connector.

5. On the Symphony Desktop touch screen, tap the gear icon to open System Settings, then swipe right to page 3 (page 2 in early versions).
6. Tap the Update (labelled Firmware in early versions) button, then tap Check for Update.
7. Tap Yes to the Update? query, tap Yes again to the Proceed? query.



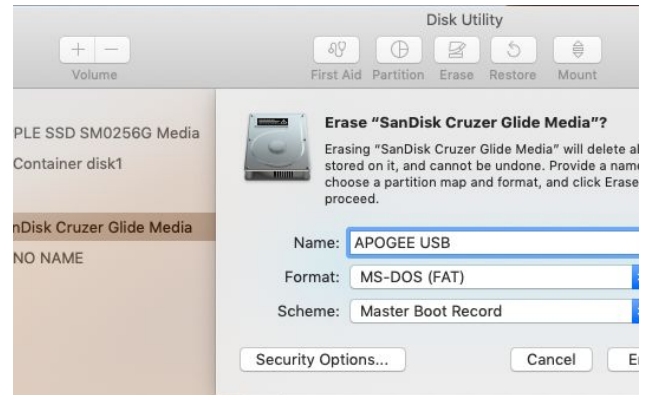
8. The Touch Screen Control update will start as indicated by a progress bar. Do NOT power Symphony Desktop off or remove the power connection.
9. Once the Touch Screen Control update is complete, Symphony Desktop will automatically power cycle. It is now ready for use.



To use your own USB thumb drive, it must be formatted to the FAT32 file system.

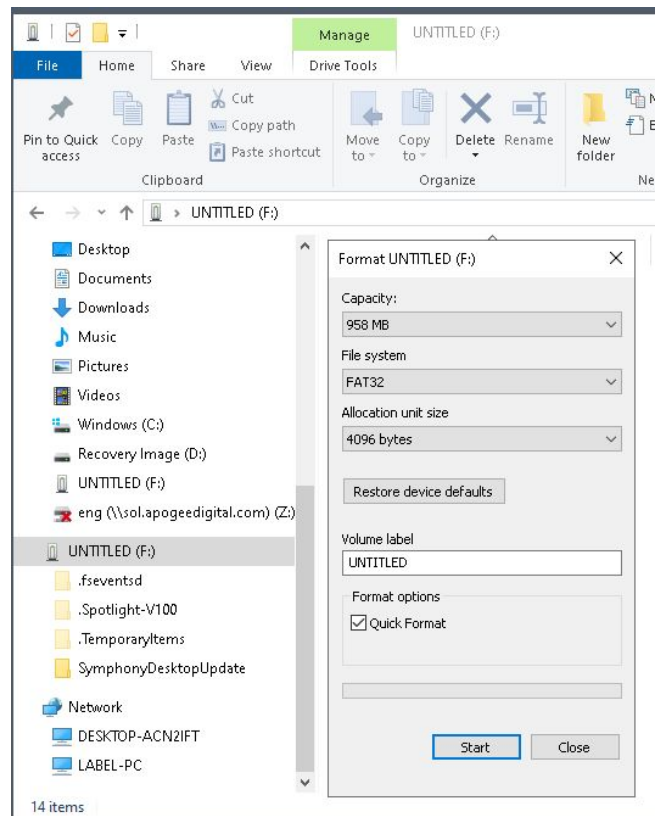
1. On macOS:

- Connect your USB drive to your computer, then open Disk Utility from the Applications > Utilities folder.
- In the menu bar, select View > Show All Devices.
- In the left hand External column, click the USB thumb drive Root Device (i.e the volume representing the thumb drive that's higher and to the left).
- In the upper Toolbar, click the Erase button.
- Enter a name, set the Format to MS-DOS (FAT), set the Scheme to Master Boot Record, then click Erase.



2. On Windows 10:

- Open File Explorer.
- Right-click on the USB thumb drive and choose Format.
- Set File System to FAT32 and click Start.

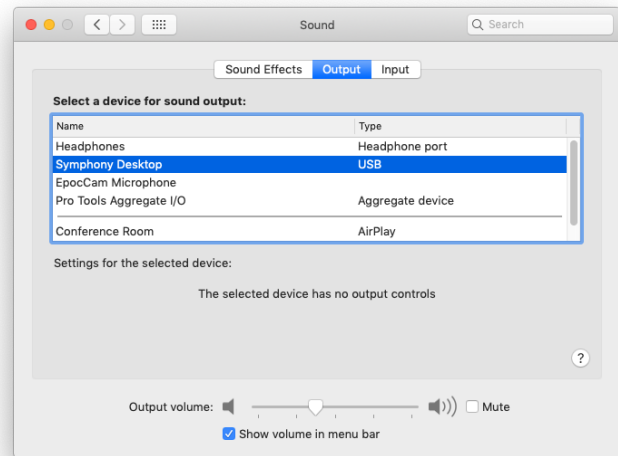


Configure OS to use Symphony Desktop for Audio I/O

macOS

To choose Symphony Desktop as the audio interface for Mac applications that don't have specific audio hardware preferences, such as Safari, Spotify, Voice Memos and others:

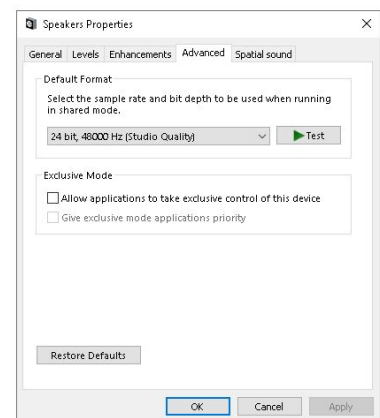
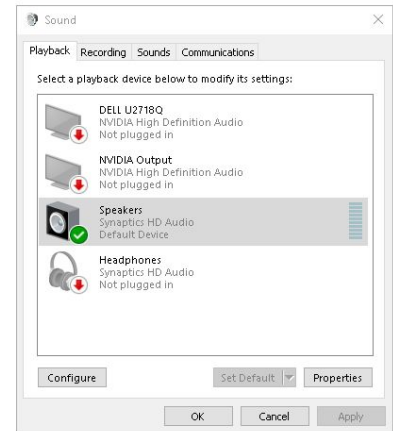
1. Open System Preferences by choosing Apple menu > System Preferences.
2. Click the Sound icon to open the Sound preferences panel.
3. Click the Output tab, then click on Symphony Desktop in the devices list.
4. Click the Input tab, then click on Symphony Desktop in the devices list.



Windows 10

To choose Symphony Desktop as the audio interface for Windows applications that don't have specific audio hardware preferences, such as Google Chrome, Spotify, and others:

1. Type Control Panel in the Windows search bar to open the Control Panel. Double-click the Sound icon.
2. Click the Playback tab and select Speakers-Symphony Desktop.
3. Click Properties, then click the Advanced tab.
4. Uncheck Exclusive Mode checkboxes. When using a DAW and apps like Spotify simultaneously, match the Default Format sample rate with the rate of the DAW session.
5. Click Apply.
6. Click the Recording tab and repeat steps 2-5

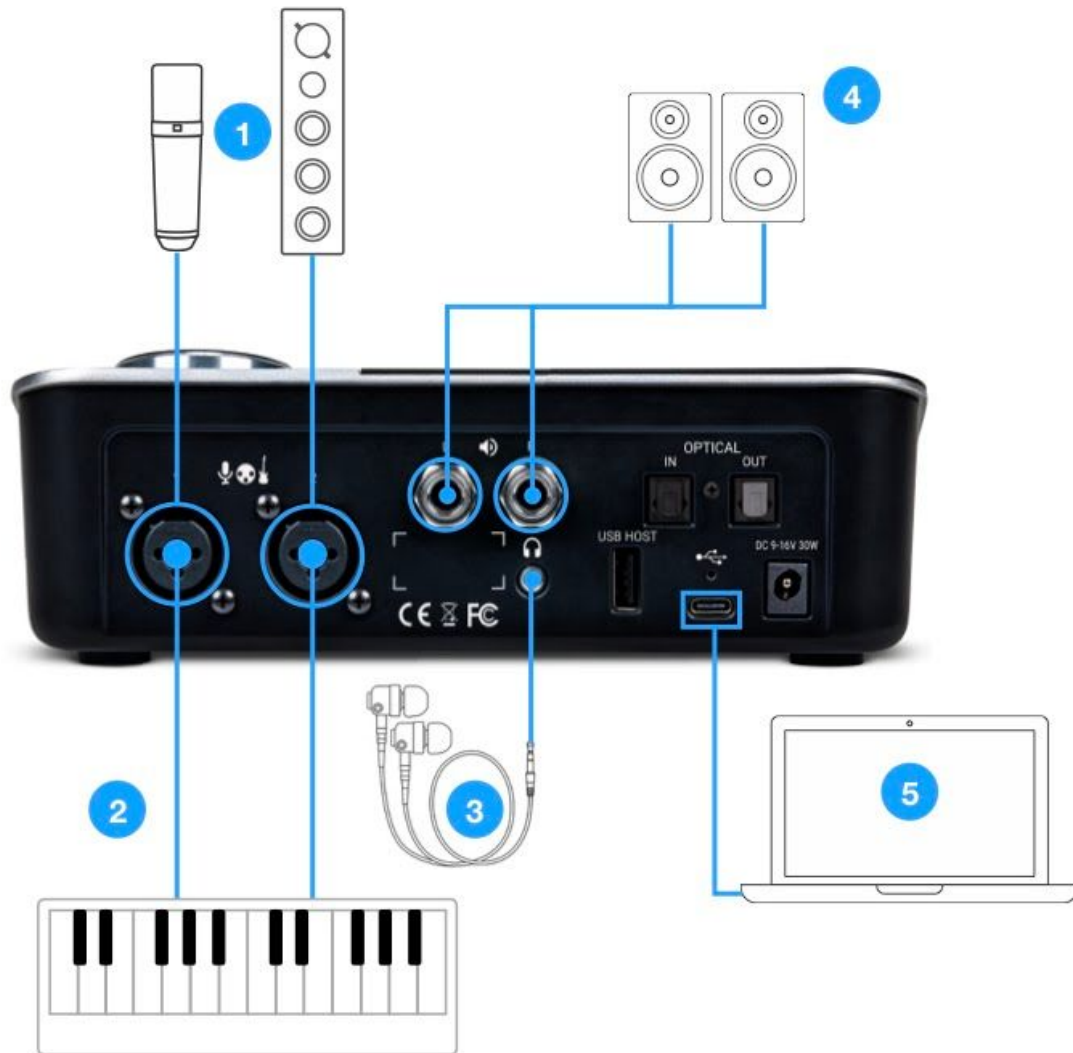


Apple iOS

Apple iOS automatically chooses the most recently connected audio interface as the audio I/O device for all applications. Simply connect Symphony Desktop to your iOS device's Lightning or USB-C port as described [here](#).

Connecting Your Studio

A wide range of devices, including dynamic & condenser microphones, electric instruments, speakers, headphones, and digital I/O expanders may be connected to Symphony Desktop.



1. Connect microphones and line level audio gear to the rear panel XLR inputs.
 - Connect dynamic and condenser mics to XLR inputs, then set Analog Level to Mic from the touch screen ([link](#)) or Desktop Control ([link](#)). When using condenser mics, be sure to engage 48v phantom power.
 - Connect analog line level audio gear line outputs to the XLR inputs using the appropriate adaptor if required. Set Analog Level to +4 dBu for professional sources, set to -10dBV for consumer level sources.
2. Connect synthesizers and keyboards to the rear panel 1/4" inputs 1 & 2, then set Analog Level to Instrument from the touch screen or Desktop Control.

3. Connect consumer headphones, earbuds and balanced armature headphones (with comparatively low impedance and higher sensitivity) to the rear panel 1/8" headphone output.
4. Connect Main outputs 1-2 directly to active speakers. If your speakers are equipped with XLR inputs, use a 1/4" TRS (tip-ring-sleeve) to XLR male adaptor cable. If using passive speakers, connect the Main outputs to the speaker's amplifier inputs.
5. Connect to your Mac, Windows or iOS device to the USB-C port.



6. Connect electric guitars and basses to the front panel 1/4" input. Once the 1/4" connector is inserted, Input 2 Analog Level automatically toggles to Instrument.

Important Note - When connections are made to *both* the rear panel analog input 2 (XLR or TRS) and the front panel Instrument input, the rear panel connection takes precedence. To use the front panel instrument input, disconnect the rear panel connection.

7. Connect professional headphones (with a comparatively higher impedance and lower sensitivity) to the front panel 1/4" headphone output.



8. Connect audio gear equipped with optical outputs only (such as mic preamp expanders, CD players, and other hi-fi devices) to the rear panel Optical input. Thanks to transparent sample rate conversion on the optical input, there's no need to clock one device to the other - both may remain set to Internal clock.
 - Set Symphony Desktop Optical format to match that of the connected device from the touch screen ([link](#)) or Desktop Control ([link](#)).



9. For bi-directional streaming of digital audio between Symphony Desktop and Symphony IO MkII, interconnect Optical I/O between each interface.
 - Set Symphony Desktop and Symphony I/O MkII Optical format to ADAT or SMUX (depending on sample rate).
 - Set Symphony I/O MkII Clock source to Optical.

Standalone Operation

Symphony Desktop may be used standalone (i.e not connected to a computer) with any digital audio device equipped with S/PDIF or ADAT/SMUX optical I/O.

To configure for standalone operation, make the following settings from the touch screen:

1. Connect Symphony Desktop Optical output to the device's Optical in; connect the device's Optical out to Desktop's Optical in (as shown in figure 9).
2. In Touch Screen Control:
 - Set Optical outputs 1-2 Routing to HW Inputs > Analog Inputs 1-2.
 - Set the Main, HP1, and HP2 outputs to Direct HW Inputs > Optical In 1-2.
 - See [here](#) for further details on Routing
3. Set the connected device's clock source to Optical.

TFT Touch Screen Control

The immersive Touch Screen Control and responsive Control knob gives you total control over all aspects of Symphony Desktop, from input and output levels, mic preamp emulation, Direct monitoring mixers and routing.

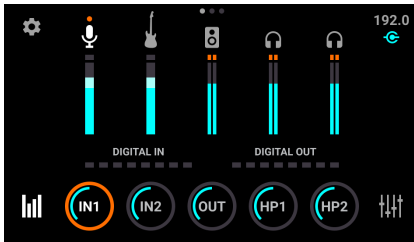
Navigating the Touch screen Interface

The touch screen interface consists of three primary views - Input/Output, Mixer, and System Settings, accessible by tapping the icons indicated below. Once a primary view is selected, additional settings are accessed by tapping displayed buttons and swiping left <> right between views.

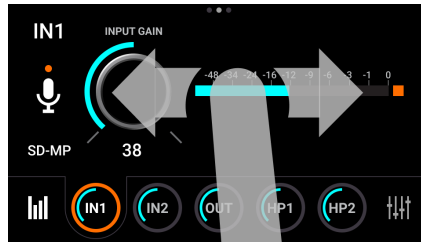


The Input/Output (I/O) view provides I/O metering, sample rate indication, connection status, and analog I/O parameters.

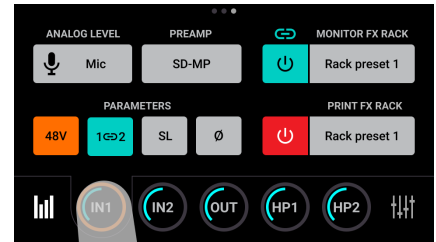
1. The five circular I/O buttons at the bottom of the I/O view display level settings for Symphony Desktop's analog inputs and outputs.
 - To quickly modify level settings, tap an I/O button to highlight it with an orange focus ring - this assigns the Control knob to that button. Turn the Control knob to increase or decrease the level.
 - Tap the highlighted button repeatedly to toggle through Overview and Settings screens for the selected input/output and the I/O View. You can also swipe left <> right to navigate through the views.



I/O View



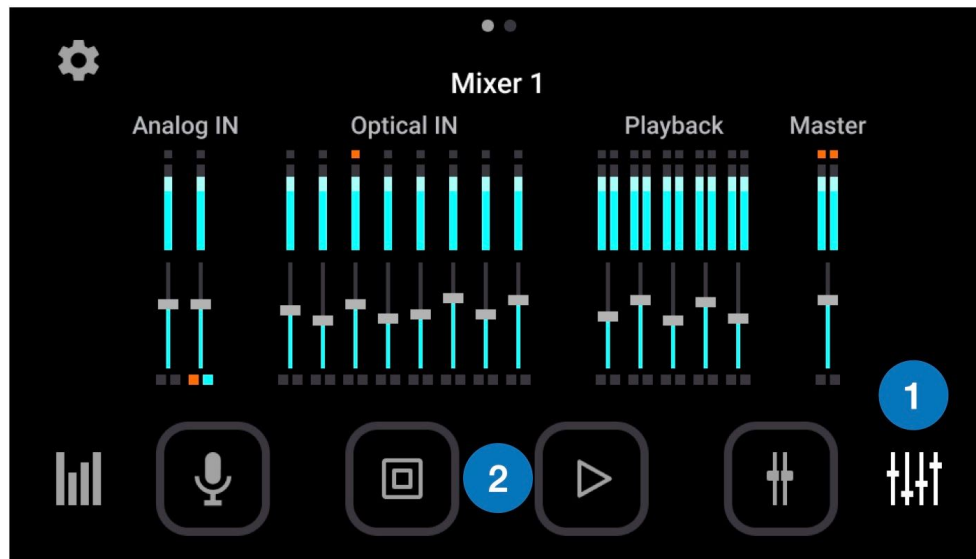
Input 1 Overview



Input 1 Settings

2. In the upper right hand corner of the touch screen, the hardware sample rate and current USB connection status are displayed.

The Mixer view provides access to Symphony Desktop's two Direct monitoring mixers.



1. Tap the Mixer icon repeatedly to toggle between the two Direct mixers. You can also swipe L<>R between the mixers.
2. Four square Channel buttons at the bottom of the Mixer views provide access to settings for the Analog, Optical, Playback and Master Out channels.
 - Tap a Channel button repeatedly to toggle through Channel Settings views for a specific type of channel - for example, tapping the Analog Channel button toggles between Analog IN 1 and Analog IN 2 Channel Settings views. You can also swipe through the views.

The System Settings views provide complete I/O routing plus system level settings.



- Swipe left <> right to navigate through the 3 System Settings views.

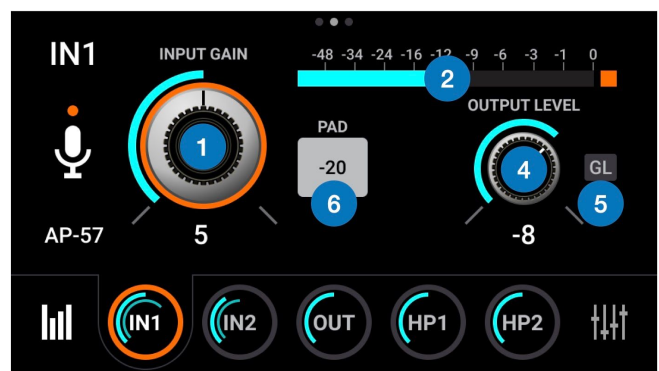
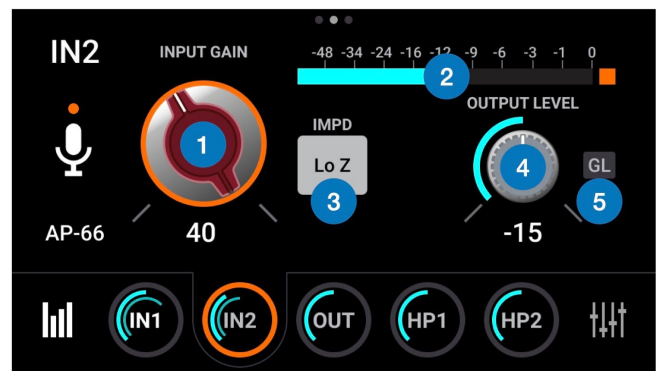
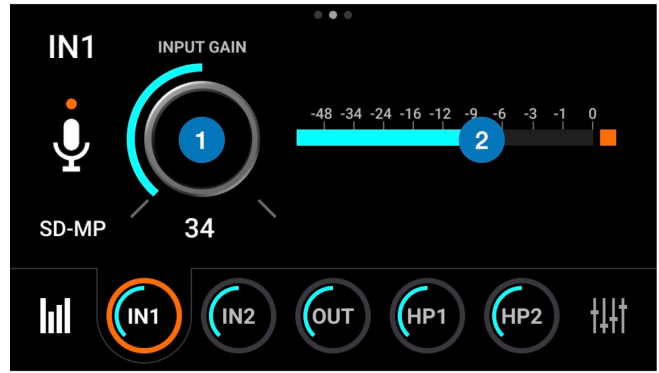
All I/O, Mixer and System Settings views are described in greater detail below.

I/O Views

Input 1-2 Overview

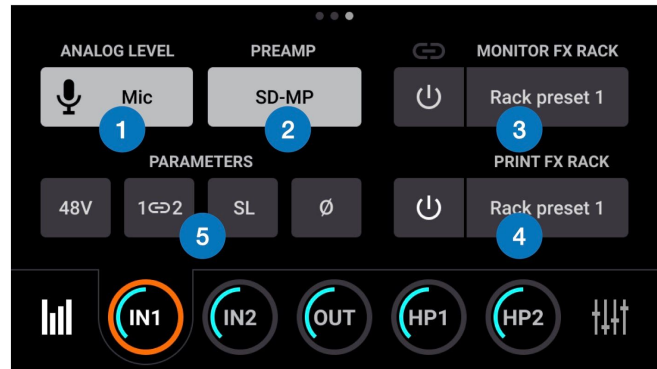
The Input 1-2 Overview has 3 different presentations, based on the Preamp setting: SD-MP, AP-66 and AP-57.

1. Input Gain - tap to set the gain of the preamp with the Control knob, when Analog Level is set to Mic or Instrument. Gain Control is hidden when Analog Level is set to +4dBu or -10 dBV line input.
2. Digital meter - displays the digital level after A/D conversion
3. Lo-Z Impedance - (AP-66 only) set the impedance of the mic preamp to low (300 ohms) when using low impedance mics, such as certain ribbon mics.
4. Output level - (AP-66, AP-57 only) tap to set the output level of the mic preamp stage.
5. GL - Gain link - (AP-66, AP-57 only) link the Input gain to the Output level so increasing the Input gain reduces the Output level to maintain a consistent signal level. This is useful when driving the mic preamp emulation into distortion.
6. -20 db Pad - (AP-57 only) decreases the sensitivity of the analog input by 20 dB. Engage the -20 dB pad when gain is set to 0 but the input is still overloading.



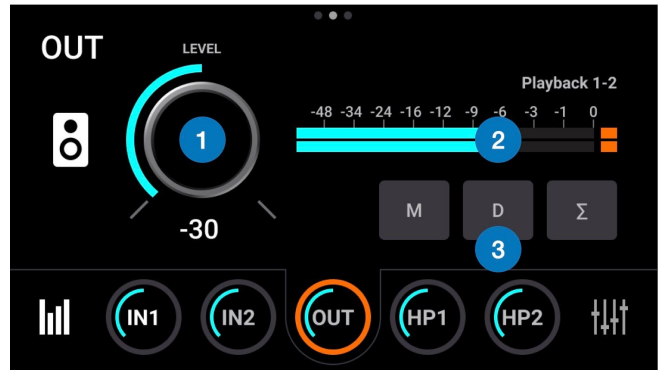
Input 1-2 Settings

1. Analog Level - choose the analog reference level for Analog inputs 1-2.
 - Choose **Mic** when connecting microphones or direct boxes to the XLR input.
 - Choose **Inst** when connecting a guitar, keyboard, or any high impedance (Hi-Z) instrument to the 1/4" input (balanced TRS or unbalanced TS).
 - Choose **+4dBu** when connecting "pro" gear with a nominal +4 dBu output level (such as an external mic pre, compressor, or EQ) to the XLR input.
 - Choose **-10dBV** when connecting "semi-pro", hi-fi, or musical instrument gear with a nominal -10dBV dBu output level to the XLR input.
2. Preamp - select the mic preamp:
 - SD-MP - Symphony mic pre with no emulation processing and a gain range of 0-75 dB.
 - AP-66 - based on a vintage Neve 1066 mic preamp section with a gain range of 20-80 dB.
 - AP-57 - based on a highly modified Ampex tube mic preamp with a gain range of 0-10.
3. Monitor FX On/Off & Preset Select - Enable Apogee Channel FX processing in the Monitor path (through the Control app direct monitoring mixer), and select a preset.
4. Print FX On/Off & Preset Select - Enable Apogee Channel FX processing in the Record path (to audio software) and select a preset.
5. Input Settings
 - 48V - enable 48 volt phantom power on each analog input when Analog Level is set to Mic. Most condenser mics require 48 volt phantom power to operate.
 - Group - Link the Input Gain (plus Output Level and Gain Link button when present) of each analog input. Any level offsets that exists before inputs are grouped will be preserved after a group is chosen.
 - Soft Limit - engage Soft Limit on each analog input. Soft Limit is an analog circuit that begins to attenuate transient peaks at a threshold of -4dBfs, replicating the transient softening of analog tape.
 - Polarity Invert - invert the polarity of the analog input signal.



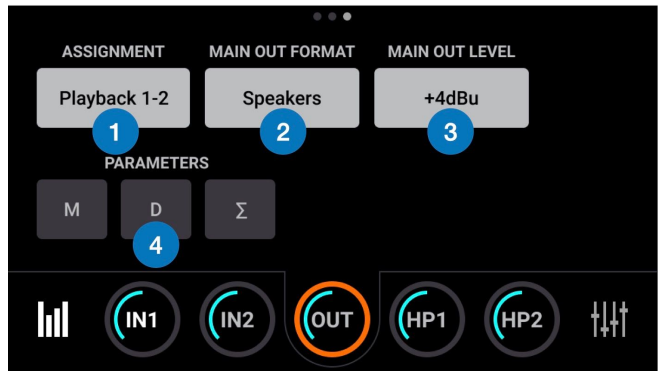
Main Out Overview

1. Level - set the level of Main outputs 1-2;
2. Source Meter - displays the digital level of the Main output source, before D/A conversion;
3. Main Out parameters:
 - Mute - mute the Main outputs 1-2.
 - Dim - dim (reduce) the Main output 1-2 level by 15 dB.
 - Sum to Mono - sum to mono the Main outputs.



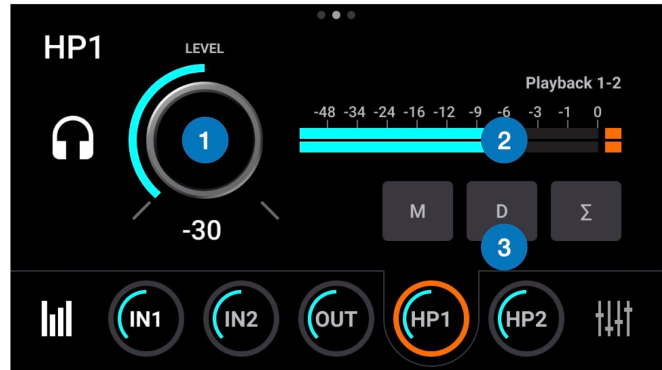
Main Out Settings

1. Assignment - choose the signal source for Main outputs 1-2;
 - SW Playback - route the selected stereo Playback signal from audio software to the Main output.
 - Direct Mixers - route the stereo signal from the selected mixer to the Main output.
 - HW:Inputs - route the selected mono or stereo signal from the selected hardware input(s) to the Main output.
2. Main Out Format - set the Main output format;
 - Variable - use the Control knob or software volume controls to modify the Main output level.
 - Fixed - the Main output level is fixed at the selected reference level.
3. Main Out Level - set the Main output reference level:
 - +4dBu - set the reference level to +4 dBu when connecting to professional gear.
 - -10 dBV - set the reference level to -10 dBV when connecting to consumer gear.
4. Main Out parameters:
 - Mute - mute the Main outputs 1-2.
 - Dim - dim (reduce) the Main output 1-2 level by 15 dB.
 - Sum to Mono - sum to mono the Main outputs.



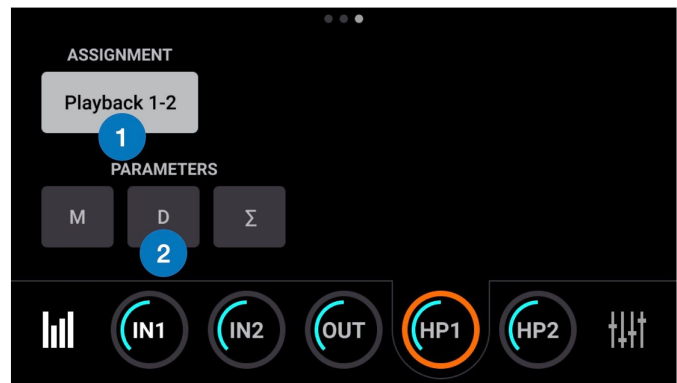
Headphone Out 1-2 Overview

1. Level - displays the level of the headphone output:
 - HP1 = front panel output.
 - HP2 = rear panel output.
2. Source Meter - displays the digital level of the HP output source, before D/A conversion.
3. Main Out parameters:
 - Mute - mute the Main outputs 1-2.
 - Dim - dim (reduce) the Main output 1-2 level by 15 dB.
 - Sum to Mono - sum to mono the Main outputs.



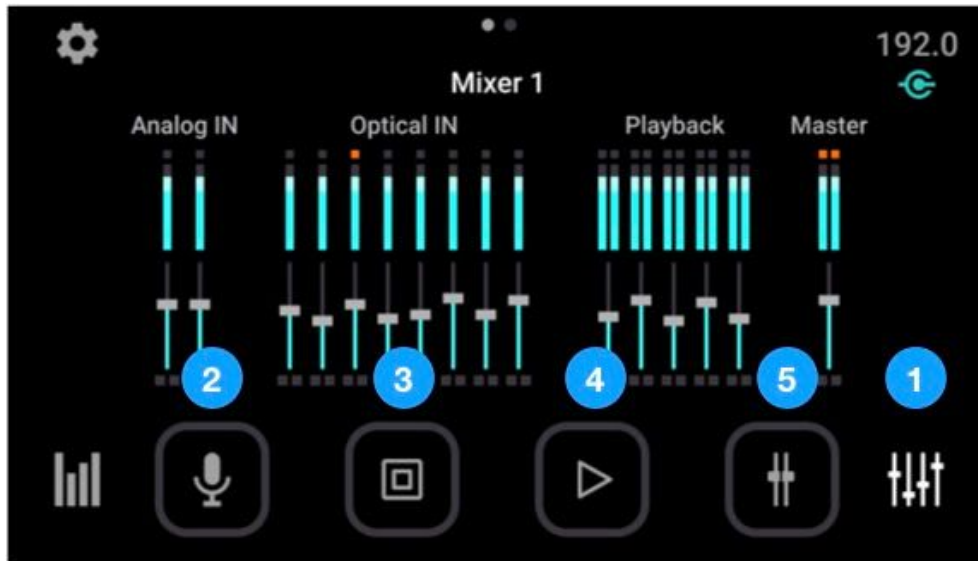
Headphone Out 1-2 Settings

1. Assignment - choose the signal source for the headphone output;
 - Follow Main -
 - SW:Playbacks - route the selected stereo Playback signal from audio software to the HP output.
 - Direct:Mixers - route the stereo signal from the selected mixer to the HP output.
 - Direct:HW Inputs - route the selected mono or stereo signal from the selected hardware input(s) to the HP output.
2. HP 1-2 parameters:
 - Mute - mute the HP1 or HP2 outputs.
 - Dim - dim (reduce) the HP1 or HP2 output level by 15 dB.
 - Sum to Mono - sum to mono the HP1 or HP2 outputs.



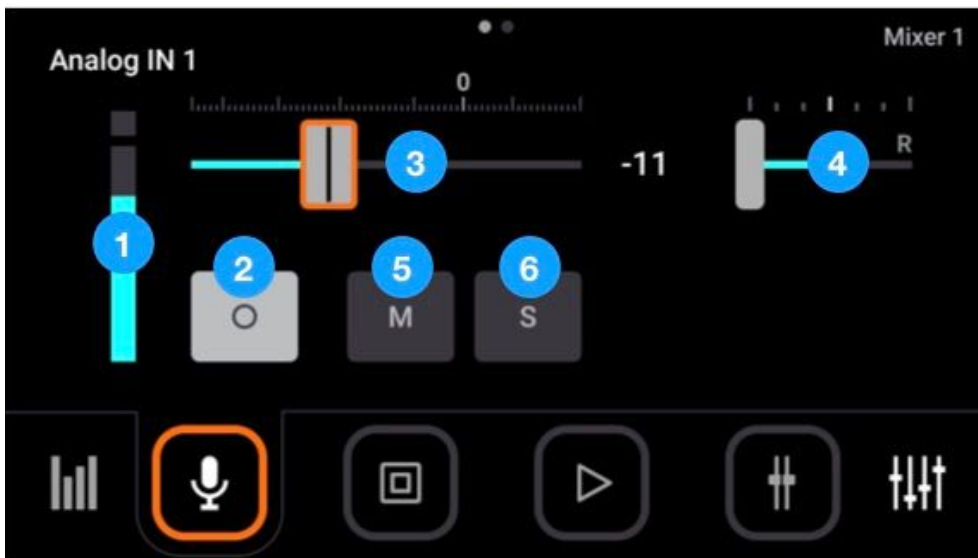
Mixer Views

Mixer Overview



1. Tap the Mixer icon repeatedly to toggle between the two Direct mixers. You can also swipe L<>R between the mixers.
2. Tap repeatedly or swipe to toggle between Analog IN Channel settings views.
3. Tap repeatedly or swipe to toggle between Optical IN Channel settings views.
4. Tap repeatedly or swipe to toggle between Playback Channel settings views.
5. Tap to display the Mixer Master settings view.

Channel Settings



1. Input meter (mono or stereo) - displays the digital signal level of the channel. The Analog IN channel levels are post A/D conversion.
2. Stereo Link - tap to toggle the channel between mono and stereo. Playback channels are always stereo linked, so no button appears.
3. Channel fader - Set the level of the channel signal in the Mixer Master stereo output.
4. Channel pan control - Set the left-right placement of the channel signal in the Mixer Master stereo output. Stereo
5. Mute - Mute the signal to the mixer stereo output.
6. Solo - Solo the channel - all other channels are muted (unless their Solo button is engaged).

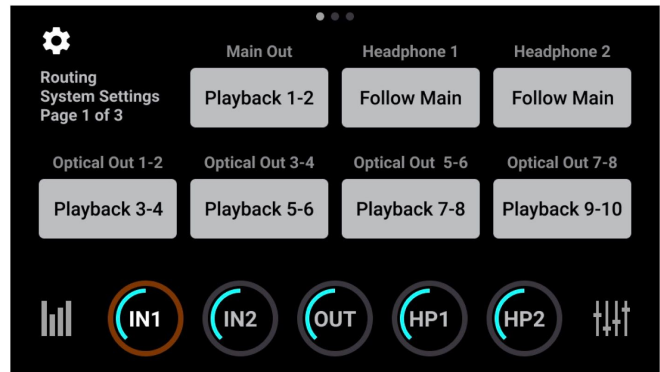
System Settings Views

Page 1 - Routing

To configure routing for each stereo analog and digital output pair:

Tap an output button, then choose a source from the nested menu.

- SW:Playbacks - route the selected stereo Playback signal from audio software to the output.
- Direct:Mixers - route the stereo signal from the selected mixer to the output.
- Direct:HW Inputs - route the selected mono or stereo signal from the selected hardware input(s) to the output.
- Follow Main - Headphone 1 & 2 Output only - when a headphone output is set to Follow Main, the audio signal routed to that output is determined by the Main Out Routing setting.



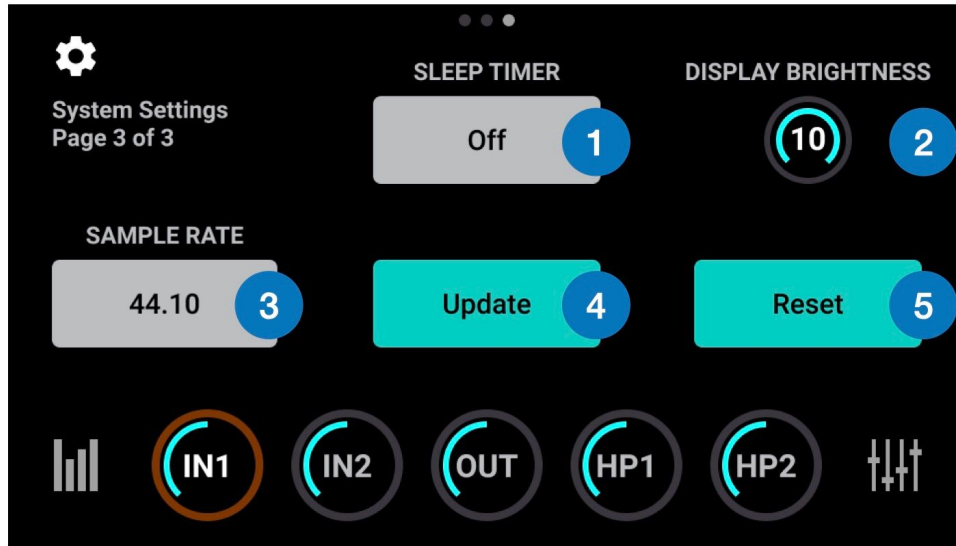
For example, to route the Direct Mixer 1 to the Main Out and Headphone 1 while routing Playback 3-4 to Headphone 2:

1. Tap Headphone 1, then tap Follow.
2. Tap Main Out, then tap Direct:Mixers > Mixer 1.
3. Tap Headphone 2, then tap SW:Playbacks > Playback 3-4.



1. Optical Meters - tap to show or hide Optical I/O level meters on the I/O View.
2. Optical Format - tap to set the Optical I/O digital format:
 - S/PDIF - 2 channel format at sample rates of 44.1-96kHz.
 - ADAT - 8 channel format at sample rates of 44.1-48 kHz.
 - SMUX - 4 channel format at sample rates of 88.2-96kHz.
3. Controller - set the behavior of the top panel Control knob when tapped:
 - None - nothing happens when tapping the Control knob.
 - Mute All Outs - mutes the Main, HP1 and HP2 outputs.
 - Mute Main Outs - mutes the Main outputs only.
 - Mute HP1 - mutes the front headphone output only.
 - Mute HP2 - mutes the rear headphone output only.
 - Toggle Mute HP/Speaker - toggle between Main outs muted/headphones unmuted and Main outs unmuted and headphone muted. Great when you're tracking in the control room and want to listen to playback over speakers.
 - Toggle I/O Selections - Toggle the Control knob assignment through the two inputs and three outputs.
4. Peak Hold - tap to set the time* that peak indicators are held on the level meters.
5. Over Hold - tap to set the time* that over indicators are held on the level meters.

* Infinite hold time not guaranteed.



1. Sleep Timer - tap to set the time that, if untouched, the touch screen enters sleep mode.
2. Display Brightness - set the brightness of the touch screen.
3. Sample Rate
 - When Symphony Desktop is connected to a computer or iPad, the sample rate is a read-only indicator of the current sample rate.
 - When Symphony Desktop is not connected, i.e. in Standalone mode, tap to set the system sample rate.
4. Update - Check and update Touch Screen Control.
5. Reset - Reset Symphony Desktop to its factory default state.

Shutdown/Display Sleep

To power off Symphony Desktop, tap and hold the Control knob.

1. Tap Display Sleep to turn off the touch screen but maintain full audio and Control knob operation.
2. Tap Shutdown to power off Symphony Desktop.

Apogee Desktop Control Software

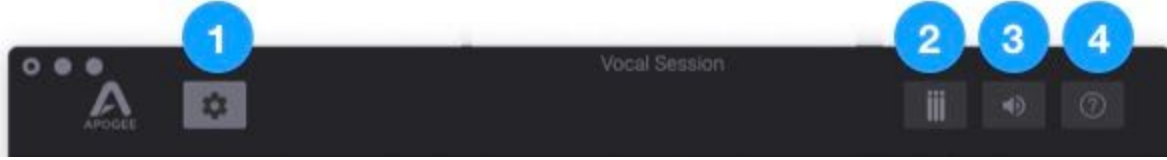
The Apogee Desktop Control application provides access to all settings, including System setup, direct monitor mixing, hardware DSP and Monitor controller functionality.

Primary Window

All features and settings of the Symphony Desktop interface can be controlled from the Primary window. It is broken down into several sections:



Tool Bar

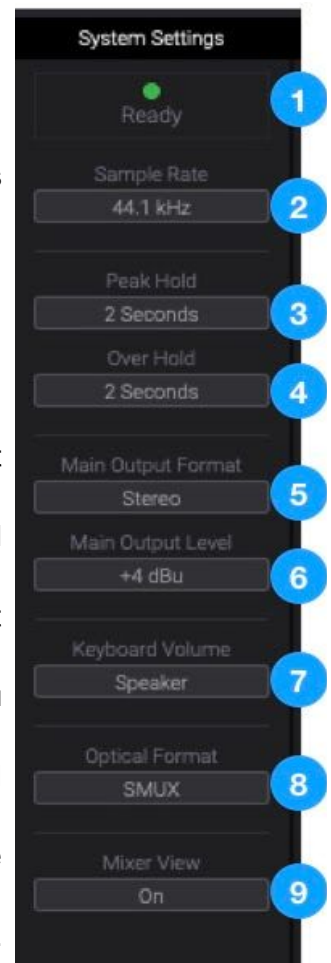


1. Show/hide System Settings sidebar
2. Clear Meters
3. Mute Outputs
4. Open the Hover Help window

System Settings Sidebar

Provides System-wide settings that apply to your recording system as a whole.

1. System Status Display - Displays the status of the connected hardware.
 - **Green** - System is ready: Hardware is connected and recognized, and the digital clock is locked to the Clock Source.
 - **Red** - System not ready. Either the hardware is not connected, or the system is not locked to the Clock Source.
2. Sample Rate - Set Symphony Desktop's sample rate. In some cases this setting may be overridden by software running on the computer (e.g. when a DAW session is open).
3. Peak Hold - Set the time that peak indications are held on the level meters.
4. Over Hold - Set the time that over indicators are held on the level meters.
5. Main Output Format - Select the format of the Main ¼" analog outputs:
 - Variable - Choose Variable when connecting directly to powered monitors or a power amplifier connected to passive speakers. Output level may be set using the Control knob.
 - Fixed - Choose Fixed when connecting to devices that include level controls, such as mixing consoles.
6. Main Output Level - Select the line-level reference for the Main output jacks:
 - Choose +4dBu when connecting to "pro" gear with inputs at a +4dBu nominal level.
 - Choose -10dBV when connecting to "semi-pro", hi-fi, or musical instrument gear with inputs at a -10dBV nominal level.
7. Keyboard Volume - Choose the Symphony Desktop analog outputs to be controlled by the Mac System Preferences > Sound Output volume slider.
8. Optical Format - Set the digital audio protocol for the optical connectors. Match the optical format to that of the connecting device:
 - SPDIF: Optical I/O is formatted in the SPDIF format, which offers 2 channels at a sample rate up to 96kHz.



- ADAT/SMUX: Optical I/O is formatted in the ADAT/SMUX format, which offers 8 channels at 44.1/48kHz sample rate and 4 channels at 88.2/96kHz.
9. Mixer View - Show/hide the Direct mixers in the Primary window.
 10. Channel FX Recall Preference - When a DAW session is opened which contains linked Channel FX plugins, this setting determines which Channel FX - the Direct Mixer plugin or the DAW plugin - overwrites the other.
 - Always Ask - ask to overwrite the Direct Mixer Channel FX.
 - Replace Hardware State - overwrite the Direct Mixer Channel FX with settings from the linked DAW FX.
 - Keep Hardware State - overwrite the linked DAW Channel FX with settings from the Direct Mixer Channel FX.
 11. Auto disable 48v - Toggle On/Off

Channel Section

This portion of the Primary window displays channels for Analog input, Optical input, Playback input, and Optical output.



General Settings

1. Channel View Button - click to show/hide Optical In, Playback and Optical Out channels. The Analog In channels are always shown.
2. Channel Label - Indicates the channel type - Analog In, Optical In Playback, or Optical Out. Analog and Optical IN labels are transmitted to your DAW.

3. Channel Icon - Displays the channel type. Analog IN icons display the input type selected from the Analog Level drop-down.
4. Input Channel Level Meter - displays the digital signal level of the channel. The Analog IN channel levels are post A/D conversion.
5. Print FX On/Off - Toggle on/off Apogee Channel FX plugins on the Print signal path.
6. Load Print FX - Load and modify Apogee Channel FX plugins on the Print signal path.

For more detailed information about Apogee Channel FX plugins, see [here](#) and the Apogee FX User's Guide, included in the Symphony Desktop Installer.

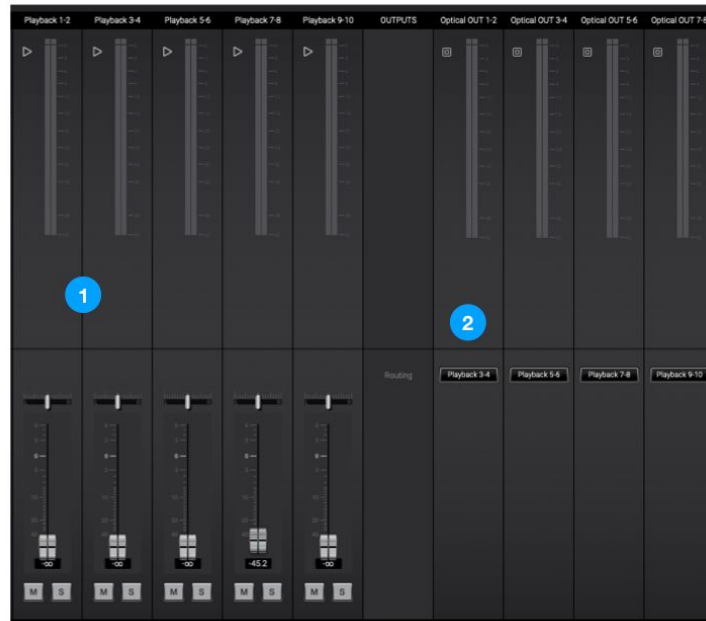
Analog IN Channels 1-2

Analog IN channels represent inputs from microphones, instruments and other analog sound sources.

- Analog inputs are routed to software (DAW) inputs 1-2;
 - Analog inputs are routed to direct monitoring Mixers 1 & 2;
 - Analog inputs may be routed to Optical and Monitor outputs for Standalone operation.
7. Analog Level - choose the analog reference level for Analog inputs 1-2.
 - Choose Mic when connecting microphones or direct boxes to the XLR input.
 - Choose Inst when connecting a guitar or keyboard, or any high impedance (Hi-Z) instrument to the 1/4" input (balanced TRS or unbalanced TS).
 - Choose +4dBu when connecting "pro" gear with a nominal +4 dBu output level (such as an external mic pre, compressor, or EQ) to the XLR input.
 - Choose -10dBV when connecting "semi-pro", hi-fi, or musical instrument gear with a nominal -10dBV dBu output level to the XLR input.
 8. Preamp - Choose a Mic preamp
 - SD-MP - Symphony mic pre with no emulation processing and a gain range of 0-75 dB.
 - AP-66 - based on a vintage Neve 1066 mic preamp section with a gain range of 20-80 dB.
 - AP-57 - based on a highly modified Ampex tube mic preamp with a gain range of 0-10.
 9. Gain Control - Adjust the gain of the preamp, when Analog Level is set to Mic or Instrument. Gain Control is hidden when Analog Level is set to +4dBu or -10 dBV line input.
 10. Input Settings - Provides options for the various inputs:
 - 48V - Enable 48 volt phantom power on the corresponding Analog In channel. Visible only when Analog Level is set to Mic. Most condenser mics require 48 volt phantom power to operate.
 - Group - Link the Gain Controls (plus Output Level and Gain Link button when present) for each Analog In channel. Visible only when Analog Level is set to Mic or Instrument. Gain offsets that exist before grouping channels are preserved.
 - Soft Limit - engage Soft Limit on each analog input. Soft Limit is an analog circuit that begins to attenuate transient peaks at a threshold of -4dBfs, replicating the transient softening of analog tape.
 - Polarity Invert - Invert the polarity of the analog input signal. When a single sound source is picked up with 2 transducers, inverting the polarity of one transducer results in a fuller sound. For example, if a drum is captured with a mic on each drumhead, inverting the polarity of one mic results in a fuller sound with more low end. The same principle applies when capturing an electric instrument with a miked amp and a direct injection feed.

Optical IN Channels

- Optical IN channels represent digital inputs from external digital audio devices like standalone mic preamp expanders, digitally connected synths, and others.
 - Optical inputs are routed to software (DAW) inputs 3-10, depending on the Optical Format setting;
 - Optical inputs are routed to direct monitoring Mixers 1 & 2;
 - Optical inputs may be routed to Optical and Monitor outputs for Standalone operation.



Playback Channels

- Playback channels represent the playback signal from your audio software (DAW) outputs.
 - Playback channels are routed to direct monitoring Mixers 1 & 2 for using when Direct monitoring.
 - Playback channels may be selected as the source for Monitor outputs when software monitoring.
 - Playback channels may be selected as the source for Optical outputs.

Optical Output Channels

- Optical output channels represent digital outputs to be connected to external digital audio devices. The audio source for the channel is selected in the Routing dropdown menu:
 - Playbacks - route the selected stereo Playback signal from audio software to the Optical output.
 - Mixers - route the stereo signal from the selected mixer to the Optical output.
 - HW Inputs - route the selected mono or stereo signal from the selected hardware input(s) to the Optical output.

Mixer Section

The mixer section provides two independent mixers for blending Analog, Optical and Playback inputs.

- Route mixer outputs to Main and headphone outputs for low latency direct monitoring while recording;
- Route mixer outputs directly to audio software inputs;
- Route mixer outputs to Optical for standalone mixing.



1. Mixer View - toggle the faders, pan controls and Mute/Solo buttons between two independent mixers, Mixer 1 and Mixer 2.
2. Enable Apogee FX processing in the Monitor path (through the Mixer).
3. Load Monitor FX - Load and modify Channel FX plugins on the Monitor signal path. For more detailed information about Channel FX plugins, see [here](#) and the Apogee FX User's Guide.
4. Channel Pan Control - Set the left-right placement of the channel signal in the mixer stereo output.
 - Option-click to reset the pan to center (0)
 - Option+Command-click to set all pans in that mixer to center (0).
5. Channel Fader - Set the level of the channel signal in the mixer stereo output.
 - Option-click to reset the fader to 0dB.
6. Channel Mute button - Mute the signal to the mixer stereo output.
 - Command-click to mute all channels
7. Channel Solo button - Solo the channel - all other channels are muted (unless their Solo button is engaged).
 - Command-click to solo all channels.
 - Control-click the Solo button to engage Solo-Safe mode, where the channel remains unmuted regardless of the Solo status of other channels.
8. Assign to SW Inputs
 - Assign the output of the Mixer to a stereo pair of software inputs. This overrides the default hardware input routing.
9. Mix Master Output Fader - Set the output level of the Mixer.

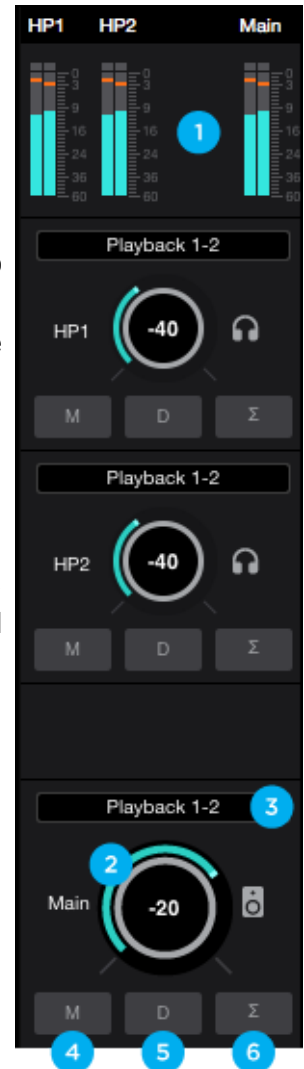
Monitor/Output Section

In the Monitor/Output Section, select the signals to be routed to the Main and Headphone outputs, then control their volume. Output Level Meters display the presence of signal at the outputs, useful as a diagnostic tool.

1. Output Level Meters - Displays the level of the HP1, HP2 or Main outputs' digital source.

The following settings are available for the Main, HP1 and HP2 outputs:

2. Source - choose the signal source for the output (Main, HP1 or HP2).
 - SW Playback - route the selected stereo Playback signal from audio software to the HP output.
 - Direct Mixers - route the stereo signal from the selected mixer to the HP output.
 - HW:Inputs - route the selected mono or stereo signal from the selected hardware input(s) to the HP output.
3. Mute - mute the output
4. Dim - dim (reduce) the output by 15 dB;
5. Sum to Mono - Collapse left and right signals to mono at the output. This combined signal is sent through both Left and Right Outputs and is useful for verifying the mono-compatibility of a stereo mix.
6. Output Level Control - Set the listening level of the output.



Menu Bar Menus

Desktop Control Menu



About Symphony Desktop Control - Choose this menu item to display version information for all hardware connected and software elements installed on your Mac.

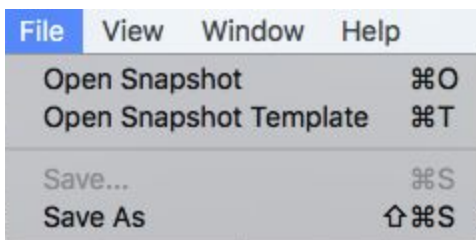
Hide Symphony Desktop Control - Choose this menu item to hide the Maestro application

Hide Others - Choose this menu item to hide all other open applications

Show All - If any open applications have been hidden, choose this menu item to reveal all open applications

Quit Symphony Desktop Control - Choose this menu item to quit Symphony Desktop Control

File Menu



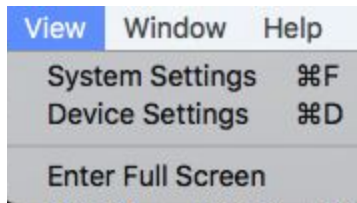
Open Snapshot - Choose this menu item to open a user-saved snapshot template file on your computer.

Open Snapshot Template - Choose this menu item to open the Snapshot Template Chooser window.

Save - Choose this menu item to save a user-customized Snapshot file to a location on your computer.

Save As - Choose this menu item to save a customized Snapshot file in a new name or new location on your computer.

View Menu



System Settings - Choose this menu item to open the System Settings sidebar

Enter Full Screen - Choose this menu item to expand Element Control to fill the display screen.

Window Menu

Selecting an item in the **Window Menu** switches to a view of that selection.

Help Menu

Use the **Search** Field to search for a specific menu item.

Symphony Desktop Support Online - Select this menu item to be taken to the Apogee website's Support page for Symphony Desktop.

Choose Your Symphony Desktop Workflows

In the previous sections of this User's Guide, the individual components of Symphony Desktop have been described in detail. This section describes how these components work together to form a sophisticated and efficient audio production environment.

All of us - producers, engineers and artists - have their preferences when recording and mixing, so Symphony Desktop offers a wide variety of compelling workflow options.

A Glossary of Important Workflow Concepts

With a better understanding of some important workflow concepts, you'll get the most from your Symphony Desktop.

Latency - If you've done any recording at all with your computer or iPad, you've probably encountered that annoying delay that makes recording your performance difficult - it's like you're trying to record over a transatlantic phone call - that's latency!

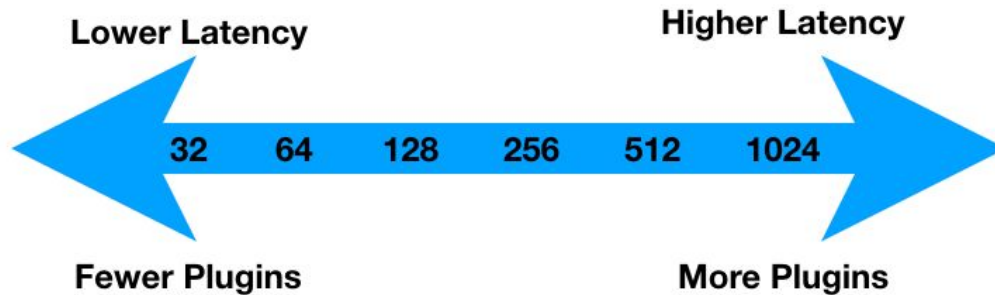
What is latency and why do you have to deal with it? Well, it starts with the fundamental process of digital audio - to convert audio waveforms to numbers for editing, processing, mixing and more, then convert numbers back into audio waveforms for listening. At each stage of your digital audio system - analog to digital conversion, recording & playback in your audio software, plugin processing - computations are performed on the digital audio that require time. Add up the total time from microphone input to headphone output, and the delay can significantly distract a performer as they record.

Buffer, aka IO Buffer, H/W Buffer - Most Digital Audio Workstation (DAW) software applications have a buffer setting, which is potentially the largest source of latency in your system. The buffer setting offers a range from 32 to 2048 samples* to specify the amount of time the app spends to pass audio from the hardware interface, record it, process it through plugins and mixing, and finally pass it back to the interface for listening. Why wouldn't you set the buffer to the lowest time, 32 samples? Then you'd get the lowest latency!

At the lowest setting, you're giving the DAW the least amount of processing time. As your session grows and you add tracks, plugins and virtual instruments, the DAW won't have enough time to complete the processing before the allotted time, and you'll get clicks, pops and other symptoms of a DAW application under stress.

* Buffer settings may vary by DAW and sample rate.

Thus, the Buffer setting is always a compromise between lower latency and more processing power.



Monitoring - One of the fundamental workflow choices you'll make is input monitoring - that is, how performers hear themselves while recording. Symphony Desktop offers two monitoring workflows, Software monitoring and Direct monitoring, which are described [below](#) in greater detail.

Native DSP Processing - When you open and run plugins in your DAW software, they use your computer's native CPU processing power to perform the required DSP, and are said to be **native** plugins. If you've set the DAW Buffer to it's maximum setting, you can run virtually thousands of Apogee plugins from a reasonably recent computer - there's really a lot of native DSP processing power available from your computer!

Hardware DSP Processing - Even though you can open thousands of plugins running natively on your computer, there are a few instances where you need hardware DSP processing on-board your audio interface.

- To fulfill the requirements of Direct monitoring, your audio interface needs hardware DSP for the Direct monitoring mixer and plugins;
- Hardware DSP can process an interface input before it's sent to your DAW, so you can sculpt your sound and record the results.

Apogee Ensemble Thunderbolt, Element Series and Symphony Desktop all offer hardware DSP on-board.

Ideally, your plugins can run both as a native plugin in your DAW and as a hardware plugin in your audio interface's Direct monitoring mixer. The Apogee Channel FX plugin is one of the very few that can!

Apogee Channel FX Plugin - when referred to in this User's Guide, the Channel FX

Apogee FX Plugin - the collection of Apogee plugins that can be opened in the Channel FX plugin

Print FX - the term "Print FX" or "printing" is used in this guide to specify DSP processing that is "destructive", or permanently applied to the audio file being processed. For example, when EQ processing is "printed", it becomes a permanent and irreversible characteristic of the audio file.

Monitor FX - in contrast to Print FX, Monitor FX are on channel playback, and are thus “non-destructive” - you can always change your mind. As you become more confident with plugin processing, you may choose to print some effects while monitoring through others.

DAW (Audio Software) - The digital audio workstation, or DAW, is a specific type of audio software that offers sophisticated functionality, including the ability to choose an audio interface independently of the OS (operating system), manage multiple channels of input/output, support software or direct monitoring, support software plugins, and offers adjustable throughput latency.

Many software applications include audio functionality but don't offer the critical functionality for completely supporting Symphony Desktop workflows. Nevertheless, these apps can work with Symphony Desktop when the OS is configured to use Symphony Desktop for audio input/output, as described [here](#).

Monitoring Workflows

The two basic monitoring workflows, Software monitoring and Direct monitoring, are described below.

Software Monitoring

When your system is set up for Software monitoring, the audio that the performer hears is routed through the DAW, including plugins and mixers, and thus incurs the maximum latency of the system, as shown below.

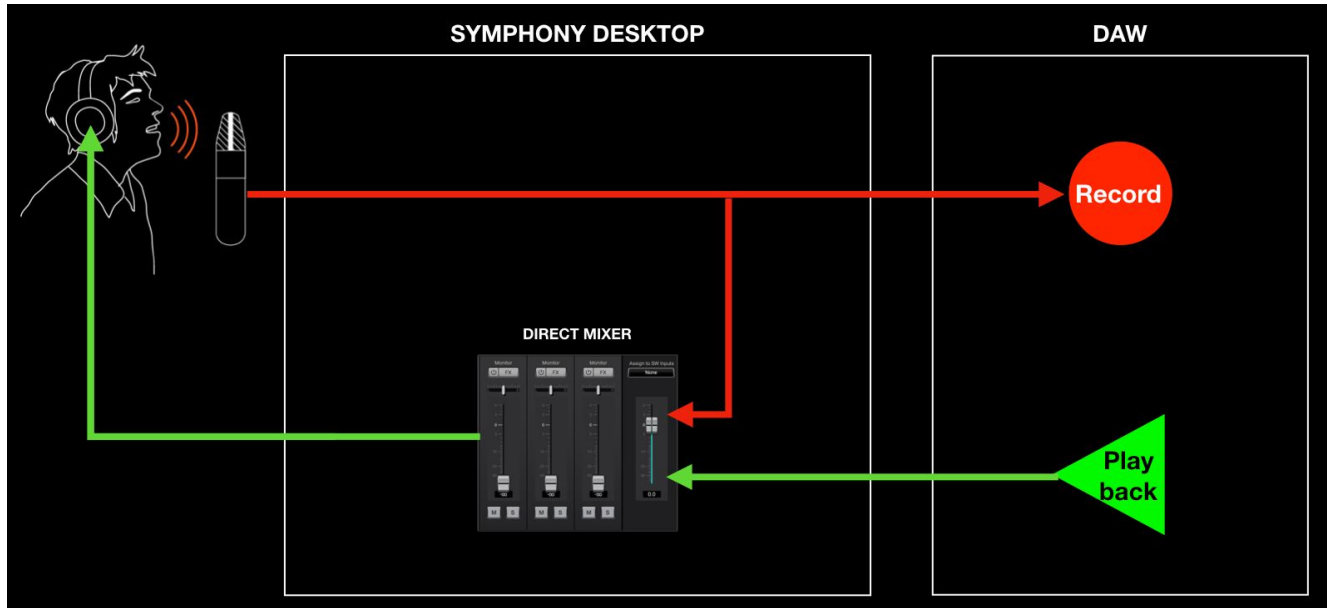


- Pros - This is the simplest monitoring workflow, where most settings are made in the DAW window.
- Cons - It's necessary to set the DAW IO Buffer setting to a compromise between lower latency and maximum CPU plugin processing - the lower the latency, the fewer native plugins may be run.

If you have a powerful computer and your sessions use a moderate amount of plugin processing, you may be able to find a Buffer setting that's low enough that latency isn't a problem but high enough that processing is completed without issues.

Direct Monitoring

Direct Monitoring, aka Low Latency Mixing - When the processing demands of your session require a higher Buffer setting that causes disruptive latency, Direct monitoring lets performers hear themselves through a separate mixer running on hardware DSP and controlled in Desktop Control software. The Direct mixer avoids the latency-inducing round trip through the DAW. To avoid double monitoring, the DAW must be configured so incoming audio to be recorded is NOT monitored through the DAW.



- Pros - Low latency and maximum plugin power - the DAW IO Buffer may be set to its maximum value for the greatest number of native plugins without an effect on latency. Latency remains virtually non-existent through the direct monitoring mixer.
- Cons - With many audio interface systems, it's necessary to toggle between your DAW window and a separate direct monitoring mixer app. Adding non-destructive plugins while Direct monitoring can become unwieldy. Apogee's proprietary DualPath monitoring workflow, described [here](#), addresses these disadvantages, so you benefit from the advantages without suffering the disadvantages.

Plugin Processing Workflows

Symphony Desktop also includes flexible and powerful onboard DSP processing that supports a wide range of innovative workflows - 1) Apogee Alloy mic preamp emulation; 2) Print FX; 3) Monitor FX (DualPath Monitoring); and 4) Native operation.

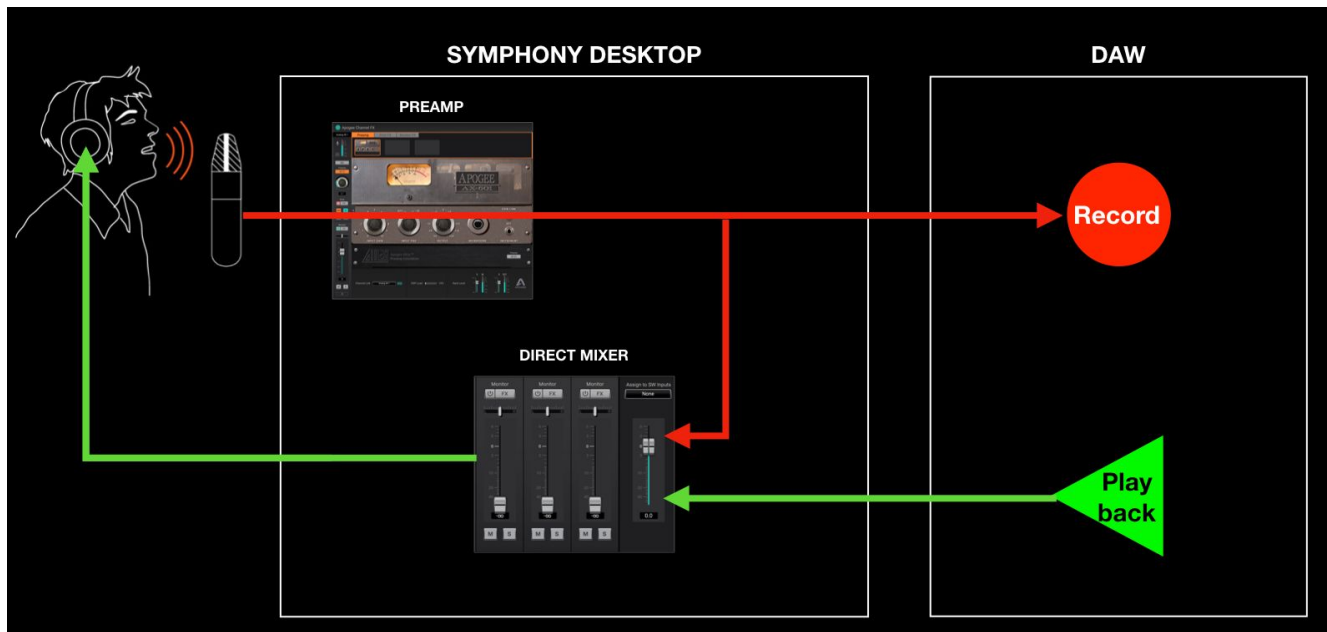
Plugin Processing workflows are independent of your monitoring workflow, with the exception of DualPath monitoring, which is Apogee's revolutionary approach to Direct monitoring with plugins.

Apogee Alloy Mic Preamp Emulation

Apogee Alloy mic preamp emulation employs circuitry found in Symphony Desktop's Analog inputs plus onboard hardware DSP to bring the warmth and character of classic mic preamps to your recordings.

The analog circuitry is a key component of the emulation processing, so mic pre emulation is available only on Analog In 1 & 2 mic, line and instrument inputs.

Mic preamp emulation is inserted into the signal path before the direct monitoring mixer and the "send" to your DAW, as shown below. Emulation processing is printed, i.e. it permanently modifies the audio signal, regardless of your monitoring workflow (Software or Direct monitoring). Of course, a hardware mic preamp would also permanently change the audio as well!



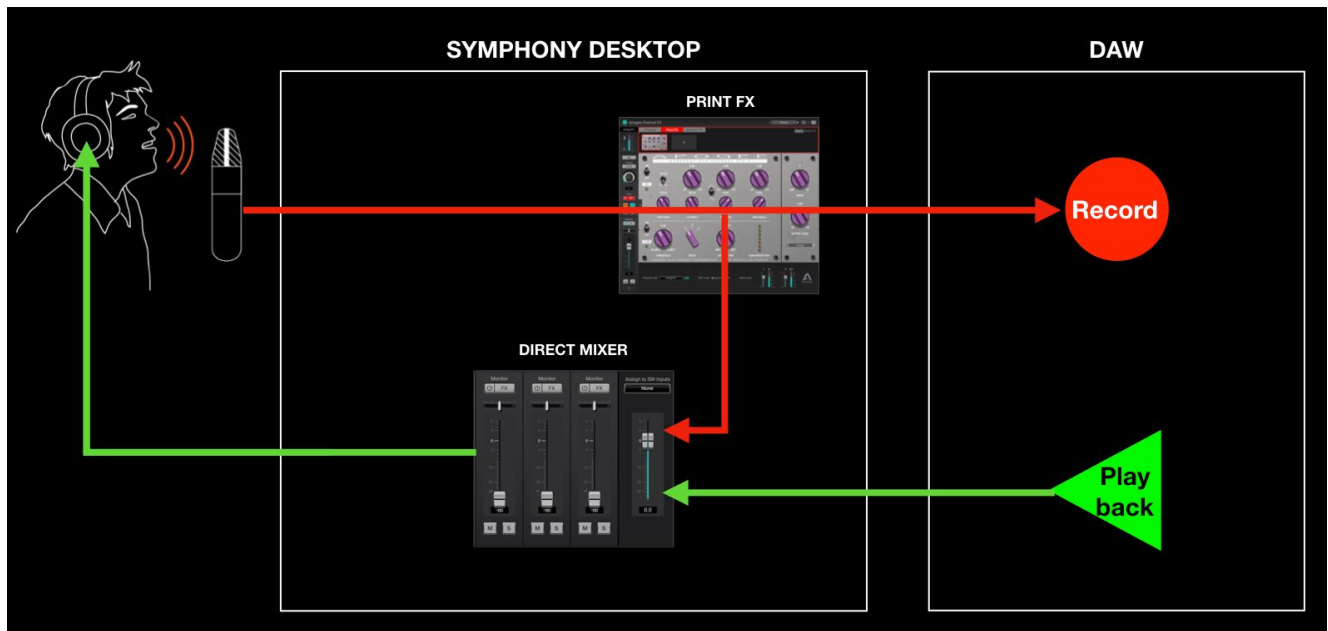
To apply Alloy mic preamp emulation, open the Channel FX on the DAW channel(s) you're recording on. Set the Channel Link setting to match the DAW channel input setting as described [here](#) - now the Preamp, Print FX and Monitor FX tabs appear at the top of the plugin. Click Preamp and choose your preferred emulation.

Print FX

With Print FX, you can shape your sound as you record it using up to 6 Apogee FX EQ, compression and saturation plugins running on Symphony Desktop hardware DSP.

Print FX processing may be applied to analog and optical inputs.

Print FX plugins are inserted in the signal path before the direct monitoring mixer and the “send” to your DAW, as shown below. Like mic preamp emulation, Print FX processing permanently modifies the audio signal regardless of your monitoring workflow (Software or Direct monitoring).



To apply Print FX processing, open the Channel FX on the DAW channel(s) you're recording on. Set the Channel Link setting to match the DAW channel input setting as described [here](#) - now the Preamp, Print FX and Monitor FX tabs appear at the top of the plugin. Click the Print FX tab, then load up to 6 Apogee FX plugins.

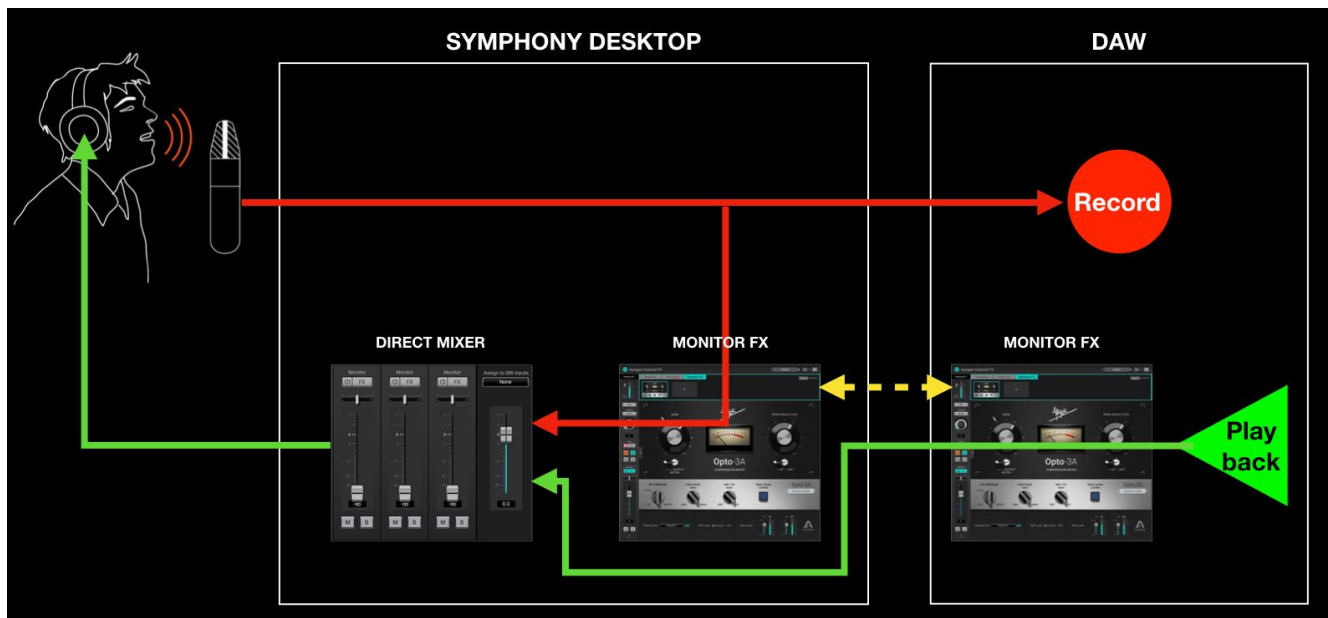
Monitor FX & DualPath Monitoring

With Monitor FX and DualPath monitoring, users experience workflow benefits that have previously only been available with Avid Pro Tools HD - 1) very low latency, even when the DAW IO Buffer size is high 2) simple, non-destructive plugin workflow - open a single plugin in your DAW that processes monitoring and playback 3) control from a single app window - your DAW.

When you open Monitor FX plugins in a DAW Channel FX plugin and set Channel Link, the plugins are actually inserted in two *different* signal paths - 1) in the DAW Playback signal path and 2) before the direct monitoring mixer but *after* the “send” to your DAW, as shown below.

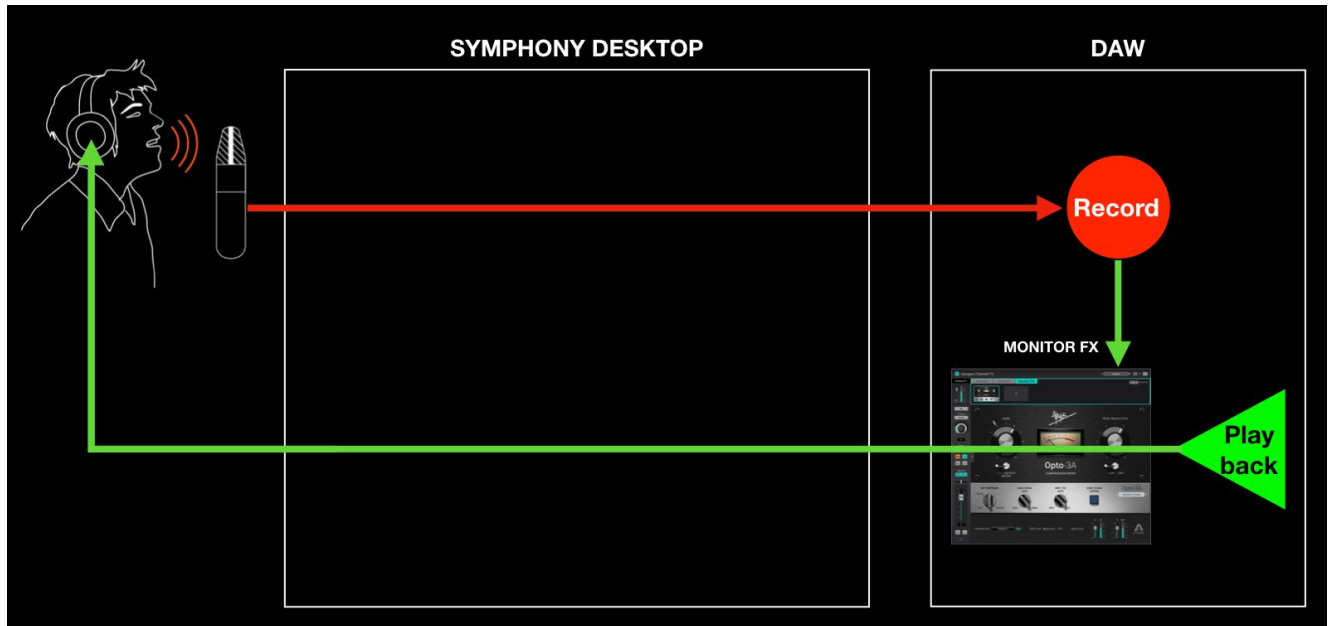
When recording, the performer hears himself through Monitor FX running on hardware DSP; playback, on the other hand, is heard through Monitor FX running natively in your DAW. Most importantly, the two plugins are control-linked, so settings made in one Channel FX plugin are mirrored to the other Channel FX plugin.

All this happens automatically and transparently when you open the Channel FX plugin in your DAW and link it to a hardware input. We call this revolutionary workflow **DualPath Monitoring**.

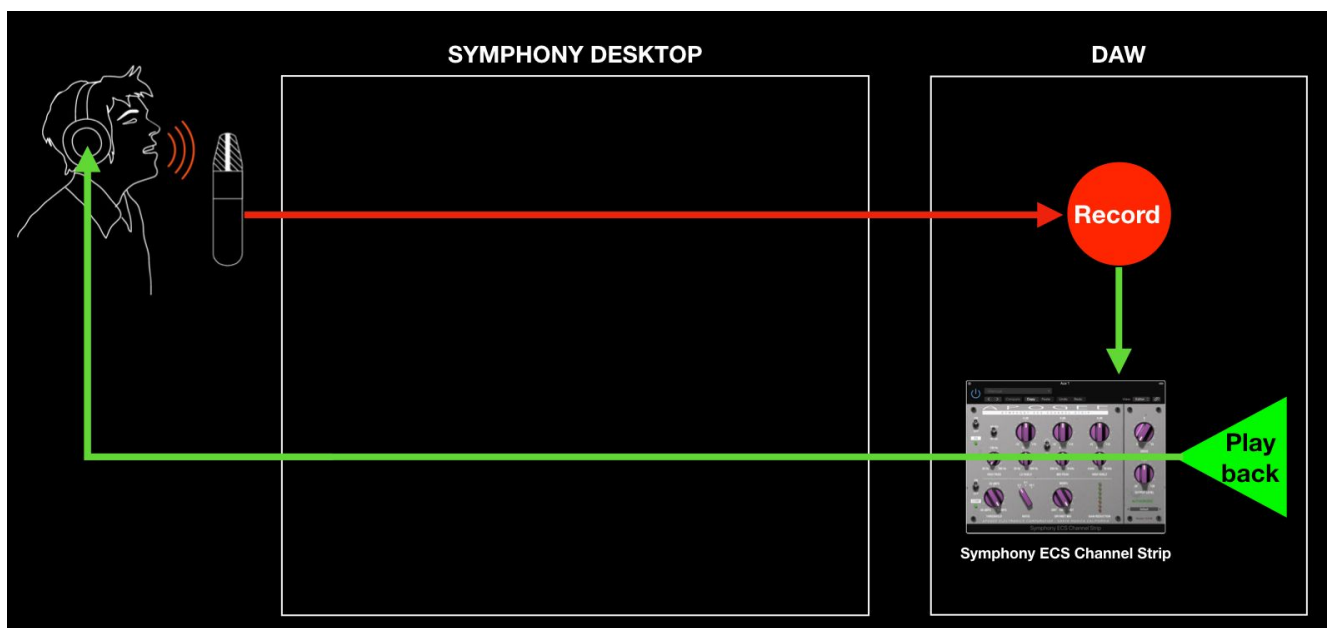


Monitor FX & Software Monitoring

If you've configured your system for Software monitoring, you can still benefit from Monitor FX, even when Symphony Desktop isn't connected to your computer. Plugins opened in the Monitor FX tab in your DAW are powered natively by your computer's CPU, so they work even when you're using Built-In headphone outputs or other audio hardware.



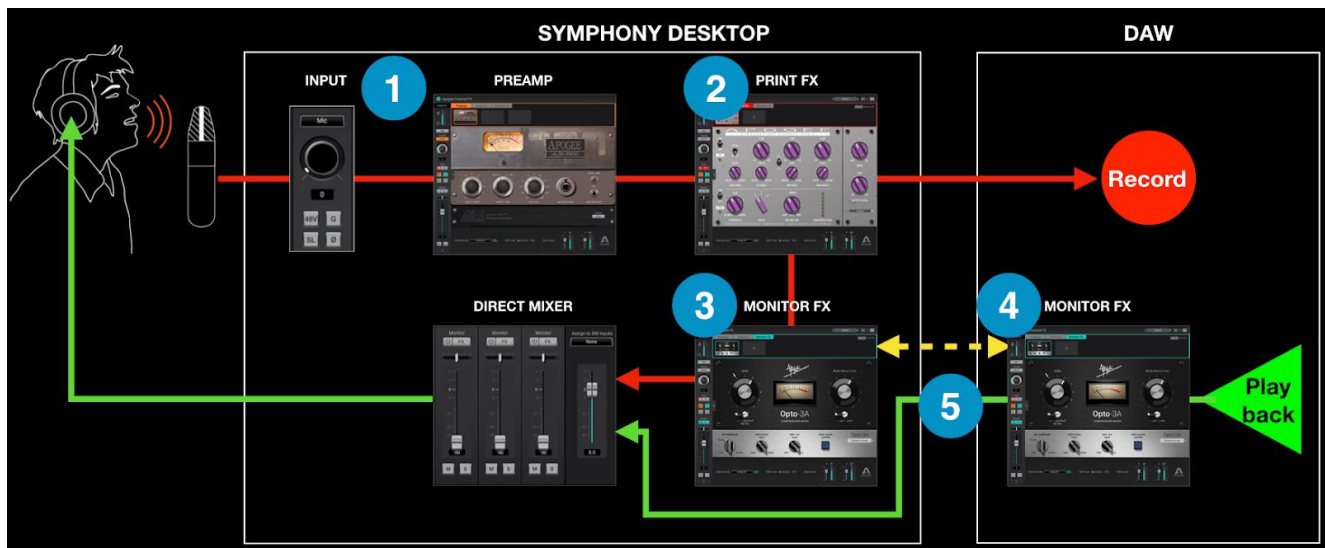
Of course, all Apogee FX plugins may be run directly in your DAW, without opening them in the Channel FX plugin. These plugins are powered natively by your computer's CPU, so they work even when you're using Built-In headphone outputs or other audio hardware.



Using the Apogee Channel FX Plugin

The Apogee Channel FX plugin provides access to all Symphony Desktop DSP processing, and includes two unique capabilities to unlock the wide range of processing workflows:

- The Channel FX plugin can be opened both in the Desktop Control app (where plugins run on Apogee hardware DSP) and natively in your DAW (where the plugins run on your computer's CPU). This means that DSP processing may be applied at several points in the typical overdubbing signal path:



1. Apogee Alloy Mic Preamp Emulation (including Analog In settings), processed in hardware DSP.
 2. Print FX - Up to 6 Apogee FX plugins, processed in Hardware DSP.
 3. Direct Mixer Monitor FX - Up to 6 Apogee FX plugins, processed in Hardware DSP.
 4. DAW Monitor FX - Up to 6 Apogee FX plugins, processed in Native (computer) CPU.
- When the DAW Channel FX plugin is linked (see 5 above) to a hardware input, then the entire range of hardware DSP and native processing may be controlled from *either* Channel FX - the plugins are mirrored. Regardless of where Apogee processing is applied in the signal chain - at the hardware analog inputs, the direct monitor mixer or in your DAW running natively - settings may be controlled from the Channel FX plugin in your DAW. There's no need to open the Channel FX plugin in Desktop Control in the vast majority of circumstances.



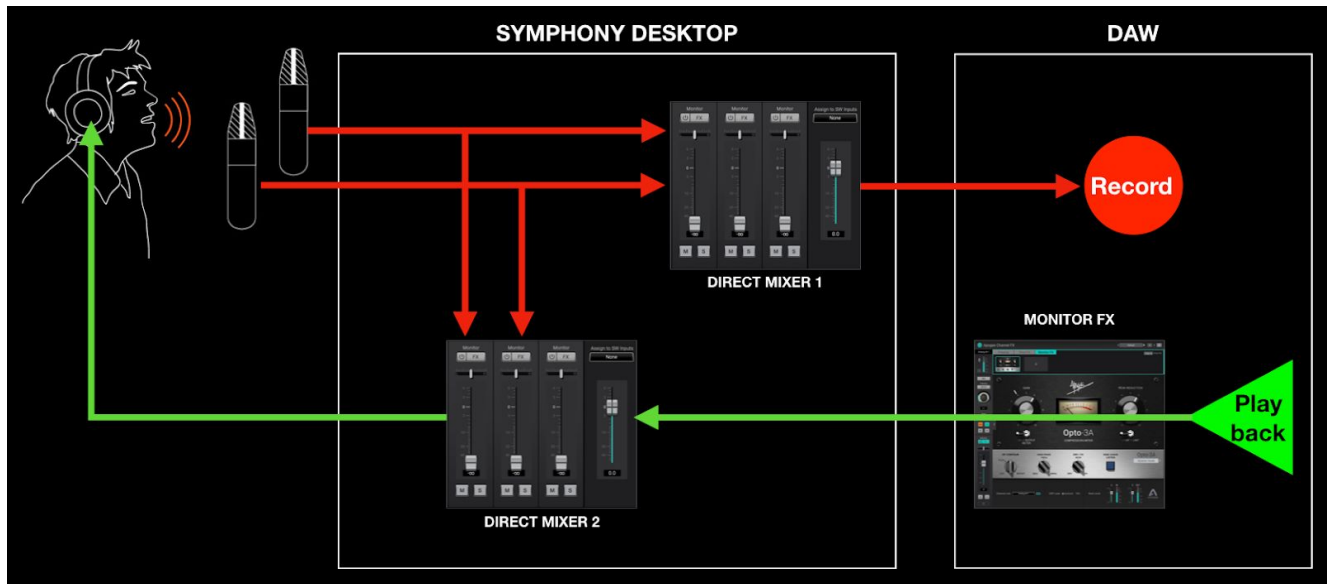
To set up the Channel FX plugin, open it in your DAW and link it to a hardware input:

1. Match the Channel Link setting to the DAW Input dropdown list setting
2. Once linked, all Analog IN 1 hardware controls, including Analog Level, Gain, Input settings, Direct Mixer Channel fader and pan may be controlled from the Channel FX plugin.
3. Mic preamp emulation selection and settings may be made from the Preamp tab.
4. Apogee FX plugin selection and settings to be permanently “printed” with the recorded audio track may be made from the Print FX tab.
5. Apogee FX plugin selection and settings to be inserted in *both* the direct monitoring signal path *and* the DAW playback path may be made from the Monitor FX & DualPath Monitoring [here](#).

Additional Workflows

Mix Inputs Before Recording

You can use the Symphony Desktop Mixer to mix hardware inputs and record the mixed output: 1) use two mics to capture an instrument and record a blend to one DAW track; 2) pan one input to the center of a stereo output for audio apps without panning functionality.



In this workflow, Direct Mixer 1 is used to mix hardware inputs which are then routed to DAW channel inputs. Direct Mixer 2 is used for Direct monitoring, to mix hardware inputs with Playback outputs from the DAW. It looks complicated, but once configured it's pretty straightforward.

CAUTION - If Mixer 1 Playback inputs are active, you may create a feedback loop that results in a loud and potentially damaging oscillation. MUTE the Mixer's Playback inputs.

Configuring Your DAW

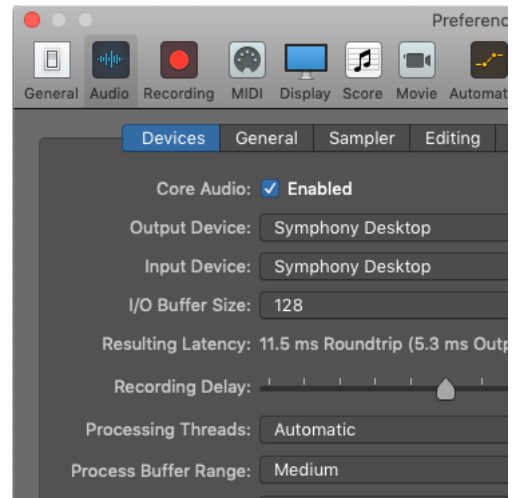
Find below detailed information to configure Symphony Desktop with popular DAWs:

- Configure the DAW to use Symphony Desktop
- Configure the DAW for Direct or Software monitoring
- Access Symphony Desktop inputs & outputs in the DAW
- Additional DAW-specific notes

Apple Logic Pro

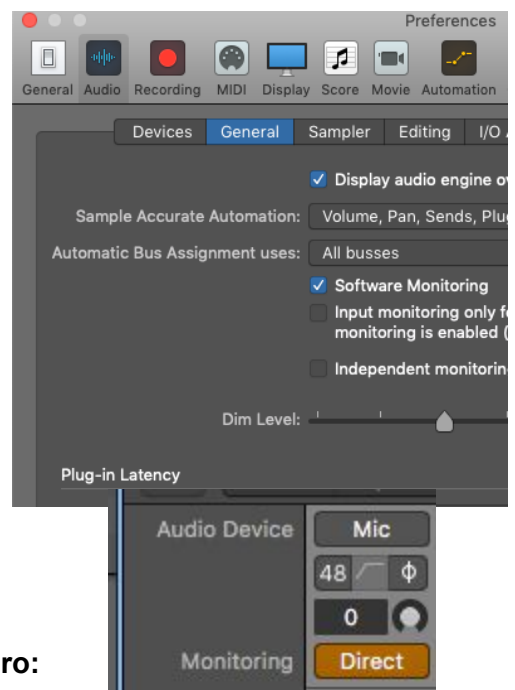
To configure Apple Logic Pro to use Symphony Desktop:

1. In the Logic Pro menu bar, choose Logic Pro > Preferences > Audio in the menu bar, then click the Device tab.
2. Check the Core Audio checkbox; set Output Device and Input Device to Symphony Desktop.
3. Set I/O Buffer Size to 128 or higher.
4. Click Apply.



To configure Logic Pro for Direct or Software Monitoring Workflow:

1. In the Logic Pro menu bar, choose Logic Pro > Preferences > Audio, then click the General tab.
2. Check the Software Monitoring checkbox *regardless* of Software or Direct monitoring.
3. In Logic Pro, the monitor setting is configurable for each channel.
 - On the Logic channel strip, click the Direct button to engage Direct monitoring.
 - For Software monitoring, leave the Direct button off.
4. On the touch screen System Settings Page 1 or in Desktop Control, set Main and Headphone Sources to Playback 1-2 *regardless* of Software or Direct monitoring.



To access Symphony Desktop inputs & outputs in Logic Pro:

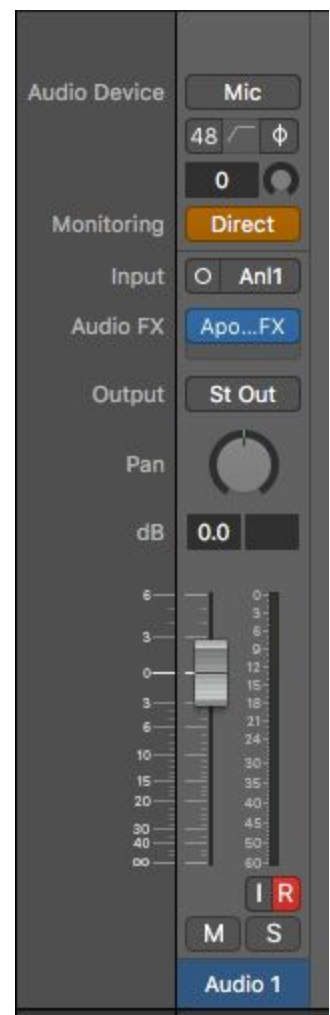
1. From the Logic Pro menu bar, choose Mix > I/O Labels.
2. Choose the Provided by Driver labels by clicking on the first label, dragging your mouse down until all Symphony Desktop labels are highlighted, then unclick.
3. Close the I/O labels window.
4. Select Symphony Desktop inputs and outputs in any Logic Pro Channel Strip.

Direct Monitoring with Apogee FX plugins - Logic Pro and Symphony Desktop:

Thanks to the proprietary integration between Symphony Desktop and Logic Pro, Direct monitoring with Apogee FX plugins is incredibly simple.

In the Logic channel strip, select the desired Symphony Desktop Input(s) and Output.

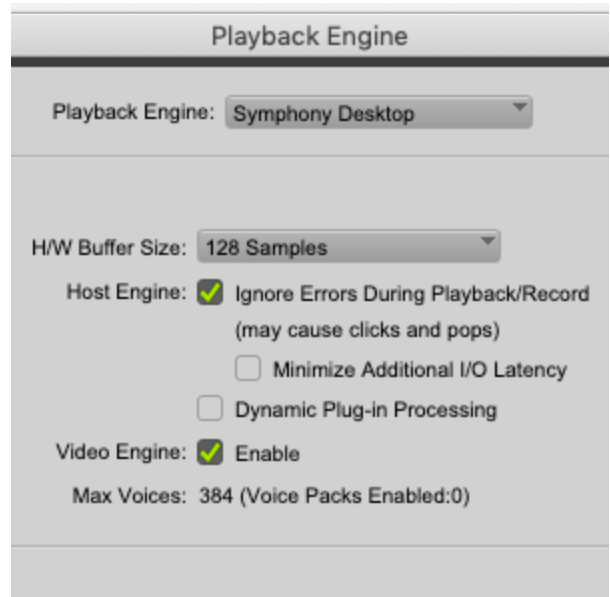
1. Click the Direct button to engage Direct monitoring between the channel's Input and Output, with no other settings required. If you're experiencing significant latency, click the Direct button and it just disappears.
2. There's no separate Direct mixer to adjust - the channel strip fader and pan control both the direct monitoring and playback level and pan transparently.
3. To add reverb, create a channel strip bus and instantiate a reverb like Clearmountain's Spaces on the automatically created Aux channel strip.
4. To add Apogee DSP processing like Alloy mic preamp emulation and Channel FX plugins, open an Channel FX plugin in the channel strip and link it to the hardware input as described [here](#).



Avid Pro Tools

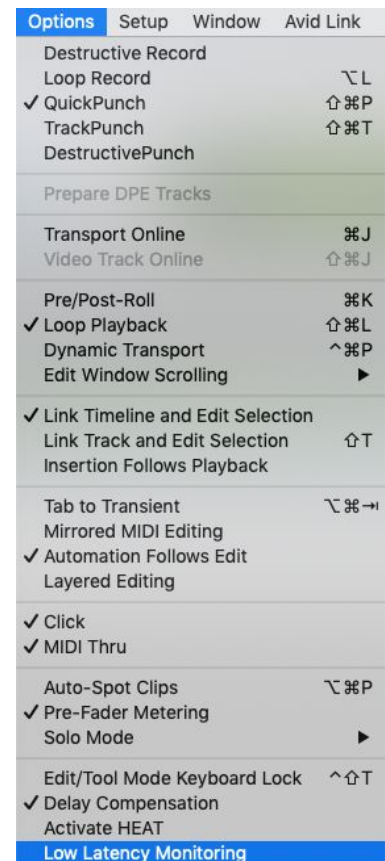
To configure Avid Pro Tools to use Symphony Desktop:

1. Open Pro Tools, then choose Setup > Playback Engine in the menu bar.
2. Set Playback Engine to Symphony Desktop.
3. Set H/W Buffer Size to 128 to start, adjust for lower latency or more plugin power.



To configure Pro Tools for Direct or Software Monitoring Workflow:

1. In the Pro Tools menu bar, set Options > Low Latency Monitoring.
 - Uncheck Low Latency Monitoring for Software monitoring.
 - Check Low Latency Monitoring for Direct monitoring.
2. In Desktop Control, set Mixer View in the System Settings column.
 - Set to Off for Software monitoring.
 - Set to On for Direct monitoring.
3. On the touch screen System Settings Page 1 or in Desktop Control, set Main and Headphone Sources.
 - Set to Playback 1-2 for Software monitoring.
 - Set to Mixer 1 for Direct monitoring.



To set channel Input & Output list labels:

1. In the Pro Tools menu bar, choose Setup > I/O.
2. In the IO Setup window, click the Input tab.
3. Select all inputs in the Name column, then click Delete Path. Then, click Default to reset the Names to Desktop defaults.
4. Repeat in the Output and Bus tabs.

Pro Tools Preference Setting

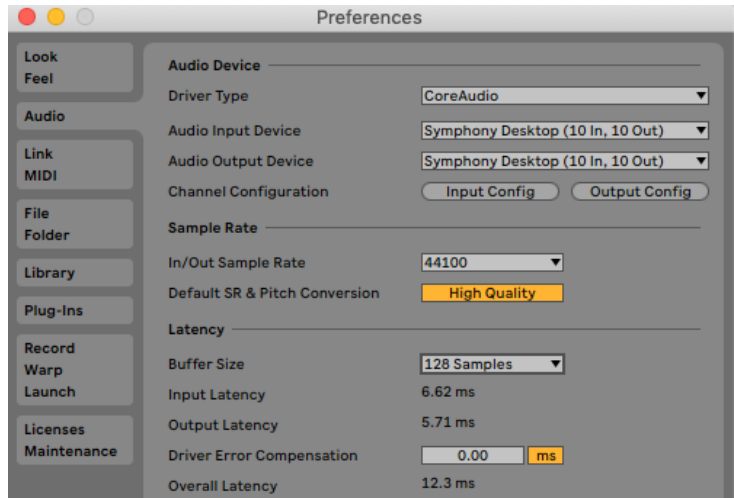
1. To use native reverb while Direct monitoring, choose Pro Tools > Preferences to open the Preferences window; click the Mixing tab, then check “Allow Sends to persist during LLM” under Setup.
2. When checked, Pro Tools channels behave in the following manner that’s crucial to the DualPath workflow and other operations of the Channel FX plugin.
 - When Record or Input is activated on the channel, the plugin interface remains active including level meters.
 - Bus sends remain active, so the channel’s input signal may be sent to native reverbs even though the channel’s input is not routed to the session Master output (because Low Latency has been checked).



Ableton Live

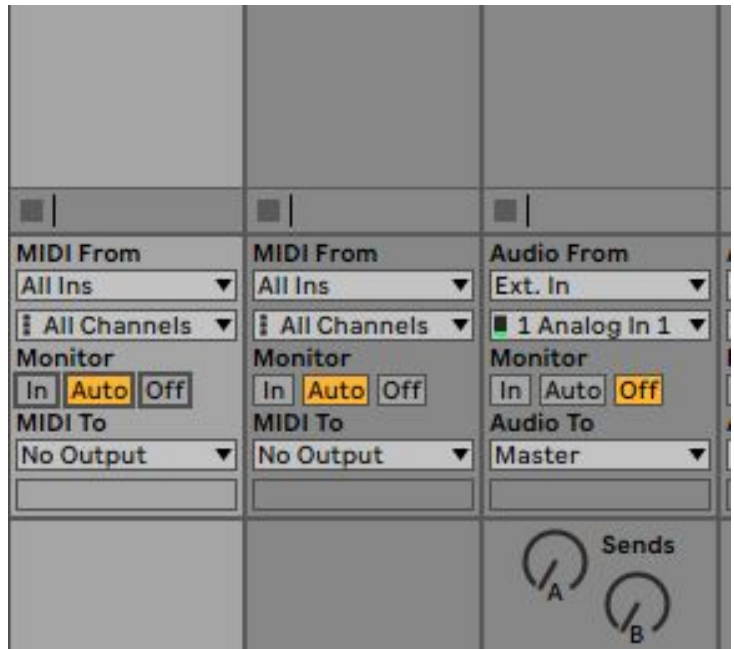
To configure Ableton Live to use Symphony Desktop:

1. In the Live menu bar, choose Live > Preferences and click the Audio tab.
2. Mac - set Driver Type to CoreAudio; Windows - set Driver Type to Apogee ASIO Driver.
3. Set Audio Input Device and Audio Output Device to Symphony Desktop.
4. Set Buffer Size to 128 Samples to start, adjust for lower latency or more plugin power.



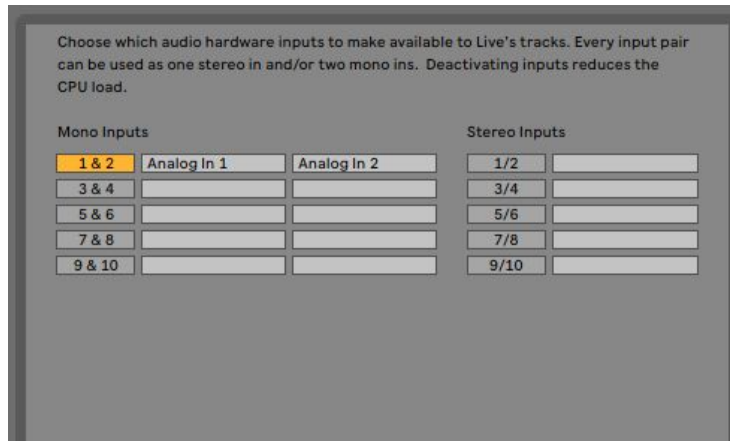
To configure Ableton Live for Direct or Software Monitoring Workflow:

1. Monitor settings in Ableton Live are configured for each channel individually.
2. In the Ableton menu bar, choose View and verify that In/Out is checked.
3. In each channel, set Monitor to Auto for Software monitoring or Off for Direct monitoring.
4. On the touch screen System Settings Page 1 or in Desktop Control, set Main and Headphone Sources.
 - Set to Playback 1-2 for Software monitoring.
 - Set to Mixer 1 for Direct monitoring.



To set channel Input & Output list labels:

- Choose Live > Preferences and click the Audio tab.
- Under Audio Device, click the Input Config and Output Config buttons.
- Activate inputs & outputs by clicking the numbered buttons. Once activated, enter your preferred label, i.e. Analog IN 1, Playback 1-2.



Additional Notes

When using the Channel FX plugin linked to a hardware input, plugin metering is only displayed during playback, when Ableton channel Monitor is set to Off.

Troubleshooting

For more information

- Apogee KnowledgeBase and FAQs
- Informational Videos
- Apogee Product Registration
- How to contact Apogee Technical Support

Please visit:

www.apogeedigital.com/support

Specifications

System Requirements

Computer

- MacOS 10.13 or greater
- Windows 10 Anniversary update or later
- iOS 13 or greater
- Memory: 4GB RAM minimum, 8GB recommended
- Connection: Any available USB 2 or 3 port
- Power: DC Power supply included

Compatible Software:

- All major DAW applications on Mac, Windows 10 and iOS
- Recommended apps: Logic Pro, Pro Tools, Ableton Live, Garageband, MainStage, Final Cut Pro, Digital Performer, Studio One, Cubase and Nuendo, FL Studio, Reaper.

Preamps, Inputs, and Outputs	
Mic Preamps	Gain: Up to 75 dB and advanced stepped gain circuit design Selectable 48v phantom power, Soft Limit and polarity invert EIN: 129dB (un-weighted) @ 60dB, 150 Ohm input Max input level: +20dBu Input impedance: 150 - 4K Ohm (default) Max Hi-Z input level: 14dBu Hi-Z input impedance: 220k/470k/>20M Ohm
A/D Conversion:	Max input level (+4dBu ref/Mic): +20dBu Max input level (-10dBV ref): +6dBV Input impedance: 4KOhm Freq resp 10 Hz -20Khz: > +/-0.2dB (@44.1Khz) Rel. THD + N: -113dB Dyn. Range: 123dB (A-weighted)
D/A Conversion:	Max output level (+4dBu ref): +20dBu Max output level (-10dBV ref): +6dBV Line output impedance: 50 Ohm Freq resp 10Hz -20 Khz: > +/- 0.05dB (@44.1Khz) Rel. THD+N : -114dB Dyn Range: 129dB (A-weighted) Headphone Max output level: <ul style="list-style-type: none"> • 520mW into 30 Ohm • 90mW into 600 Ohm Headphone Rel THD+N: -111 dB with 600 Ohm load Headphone Dyn Range: 128dB (A-weighted) Headphone output impedance <0.5 Ohm
Weights and Dimensions	

Warranty Information and Legal Notices

APOGEE ELECTRONICS CORPORATION warrants this product to be free of defects in material and manufacture under normal use for a period of 12 months. The term of this warranty begins on the date of sale to the purchaser from an authorized Apogee dealer (proof of purchase in the form of a receipt may be required). Units returned for warranty repair to Apogee or an authorized Apogee warranty repair facility will be repaired or replaced with a functional equivalent product that is new or refurbished at the manufacturer's option, free of charge. Please note this guarantee may be subject to other conditions as dictated by the customer's legal warranty rights under the applicable national legislation governing the sale of consumer goods.

Apogee reserves the right to change or improve design at any time without prior notification. Design changes are not implemented retroactively, and the incorporation of design changes into future units does not imply the availability of an upgrade to existing units. This warranty is void if Apogee determines, in its sole business judgment, the defect to be the result of abuse, neglect, alteration or attempted repair by unauthorized personnel. The buyer acknowledges and agrees that in no event shall the company be held liable for any special, indirect, incidental or consequential damages, or for injury, loss or damage sustained by any person or property, that may result from this product failing to operate correctly at any time.

Warranty details are subject to change. For the latest warranty information please visit www.apogeedigital.com.

Declarations of Conformity

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference and (2) This device must accept any interference received, including interference that may cause undesired operation. This equipment has been tested and found to comply with the limits of a Class B digital device, pursuant to Part 15 of the FCC Rules.

CAUTION: Changes or modifications not expressly approved by Apogee Electronics Corporation compliance could void the user's authority to operate the equipment.

Rating: 5V 400mA USB 2.0

Industry Canada Notice

This Class B digital apparatus meets all requirements of the Canadian

Interference-Causing Equipment Regulations. Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

Declaration of Conformity – CE

Apogee Electronics Corporation hereby declares that the product, Symphony Desktop, to which this declaration relates, is in material conformity with the following standards or other normative documents:

(EN50081-1/EN55022; 1995) and (EN50082-1/IEC 801-2, 3, 4; 1992)

following the provisions of: (73/23/EEC – Low Voltage Directive) and (89/336/EEC – EMC Directive)

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following the provisions of: (73/23/EEC – Low Voltage Directive)

and (89/336/EEC – EMC Directive)

Declaration of Conformity – Japan Apogee Electronics Corporation hereby declares that Symphony Desktop, to which this declaration relates, is in material conformity with the VCCI Class A standard.

Declaration of Conformity – Australia

Apogee Electronics Corporation hereby declares that Symphony Desktop is in material conformity with AN/NZS standard requirements.

User's Guide Version 1.0g