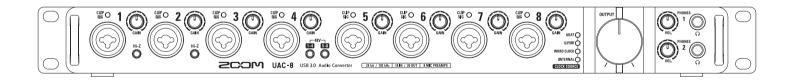


# USB 3.0 Audio Converter UAC-8

## **Operation Manual**



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## Introduction

Thank you very much for purchasing a ZOOM **UAC-8** USB 3.0 Audio Converter.

The **UAC-8** has the following features.

#### 18-in/20-out USB3.0 Audio Converter

The **UAC-8** is an audio converter with a SuperSpeed USB3.0 interface.

In addition to supporting Windows and Mac, using class compliant mode it can also be connected to an iPad. Since it also supports recording and playback at up to 24-bit/192kHz, it can also be used for the playback of high-resolution sound sources delivered with superior audio quality over the Internet.

#### Attention to audio performance

An asynchronous transfer system that is not impacted by computer jitter is used. The latest AD/DA converter, which supports 192 kHz, is used. So, the entire system reproduces the original audio faithfully.

#### **Built-in high-performance mic preamps**

The high-performance mic preamps are based on those developed for our H Series. Hi-Z input is supported. The gain can be raised by up to 60 dB, and +48V phantom power can be supplied.

# Flexible built-in mixer and dedicated UAC-8 MixEfx mixer application

The **UAC-8** has a built-in mixer that allows you to freely route up to 20 output channels from among the 18 input channels and 20 computer playback channels. By using the **UAC-8 MixEfx** application designed for this interface, you can make settings for the built-in mixer and monitoring effects from a computer.

For details about **UAC-8 MixEfx**, see the ZOOM website (http://www.zoom.co.jp/downloads/).

Please read this manual carefully to fully understand the functions of the **UAC-8** so that you can make the most of it for many years. After reading this manual, please keep it with the warranty in a safe place.

## **Usage and Safety Precautions**

#### **Safety Precautions**

In this operation manual, symbols are used to highlight warnings and cautions that you must read to prevent accidents. The meanings of these symbols are as follows.



Something that could cause Warning serious injury or death



Something that could cause injury or damage to the equipment

Other symbols used



An action that is mandatory



An action that is prohibited

#### **∕\Warning**

#### Alterations

O Do not open the case or modify the product.

#### Operation using an AC adapter

- Never use any AC adapter other. than a 700M AD-19
- Always hold the AC adapter itself when disconnecting it from an outlet

#### **∧** Caution

#### Product handling

- Do not drop, bump or apply excessive force to the unit.
- Be careful not to allow foreign objects or liquids to enter the unit.

#### Operating environment

- O Do not use in extremely high or low temperatures.
- O Do not use near heaters, stoves and other heat sources.
- O Do not use in very high humidity or where it could be splashed by water.
- O Do not use in places with frequent vibrations.
- O Do not use in places with much dust or sand.

#### Connection cables and input/ output jacks

- Always turn the power OFF for all equipment before connecting any cables.
- Always disconnect all connection cables and the AC adapter before moving the unit.

#### Volume

O Do not use at a loud volume for a long time.

#### **Usage Precautions**

#### Interference with other electrical equipment

In consideration of safety, the UAC-8 has been designed to minimize its

emission of electromagnetic waves and to suppress interference from external electromagnetic waves. However, equipment that is very susceptible to interference or that emits powerful electromagnetic waves could result in interference if placed nearby. If this occurs, place the **UAC-8** and the other device farther apart.

With any type of electronic device that uses digital control, including the **UAC-8**, electromagnetic interference could cause malfunction, corrupt or destroy data and result in other unexpected trouble. Always use caution.

#### Rack mounting

If you are unable to mount the UAC-8 in the rack you are using, remove the rubber feet from its bottom panel.

#### Cleaning

Use a soft cloth to clean the exterior of the unit if it becomes dirty. If necessary, use a damp cloth that has been wrung out well to wipe it.

Never use abrasive cleansers, wax or solvents such as alcohol, benzene or paint thinner.

#### Temperature considerations

Continuous use of this interface for long periods of time, for example, might cause it to become warm. This is normal as long as it does not become too hot to touch.

#### Breakdown and malfunction

If the UAC-8 should malfunction or operate abnormally, disconnect it immediately. Contact the store where you bought the unit or ZOOM service with the following information: product model, serial number and specific symptoms of breakdown or malfunction, along with your name, address and telephone number.

#### Copyrights

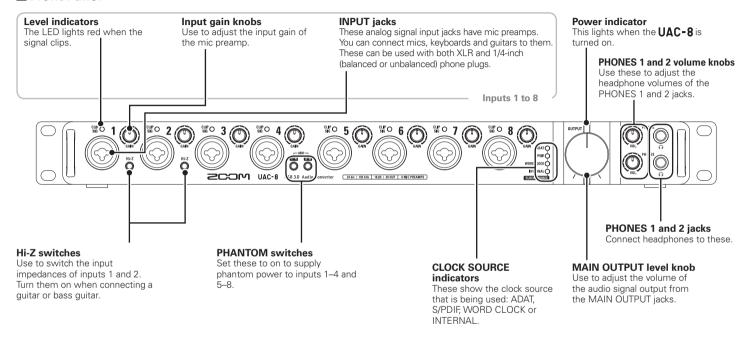
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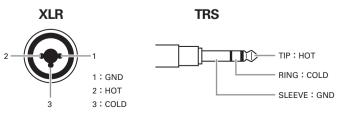
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## **Names of Parts**

#### **■** Front Panel



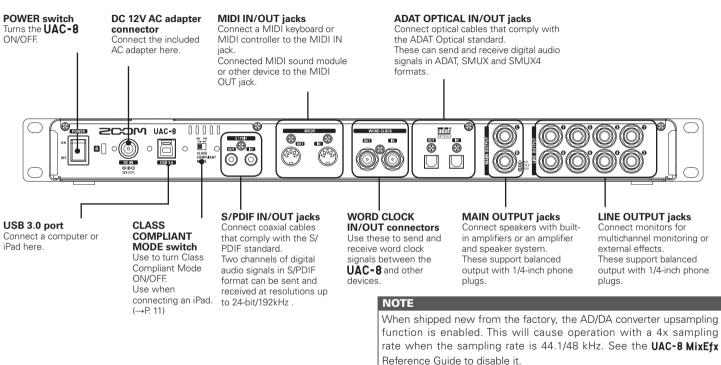


#### Standalone mode (→P. 10)

The **UAC-8** will function as an eight-channel mic preamp and digital input/output device in standalone mode if its power is turned on when it is not connected to a computer.

When used in standalone mode, operation is set in advance using the **UAC-8 MixEfx** mixer application.

#### ■ Rear Panel



#### Sampling rates and inputs/outputs

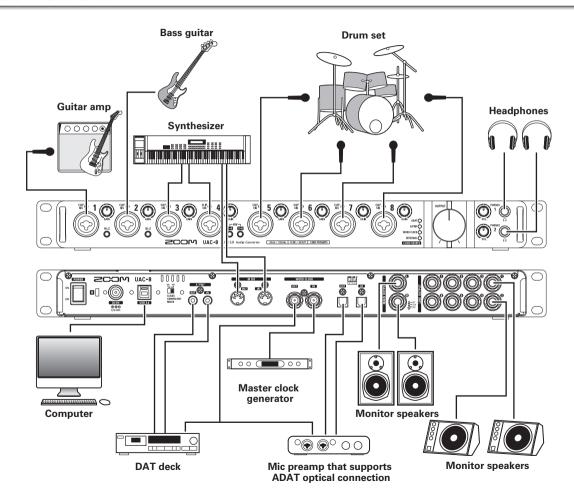
Sampling rate	Analog inputs/ outputs	S/PDIF inputs/ outputs	ADAT inputs/ outputs	Total inputs/ outputs
44.1 or 48kHz	8/10	2/2	8/8	18/20
88,2 or 96kHz	8/10	2/2	4/4	14/16
176.4 or 192kHz	8/10	2/2	2/2	12/14

<sup>\*</sup>Except when in Class Compliant Mode. ( $\rightarrow$  P. 11)

#### Upsampling

When the original sampling rate is 44.1 kHz or 48 kHz, internal processing can allow operation at 176.4 kHz or 192 kHz (enabled when shipped new from the factory). This eliminates aliasing noise from the sound during A/D conversion and makes the sound with D/A conversion even clearer than before.

## **Basic Connections**



## **Installing the Driver**

#### NOTE

Do not connect the **UAC-8** until installation completes.

**1.** Download the "ZOOM UAC-8 Driver" from http://www.zoom.co.jp/downloads/ to the computer.

#### NOTE

- You can download the latest "ZOOM UAC-8 Driver" from the above website.
- Download the driver for the operating system that you are using.

**2.** Launch the installer and install the driver.

Follow the instructions that appear on screen to install the ZOOM UAC-8 Driver.

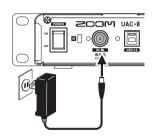
#### NOTE

• See the Installation Guide included in the driver package for detailed installation procedures.

## **Turning the Power On and Off**

#### ■Turning the Power On

- 1. Minimize the volume of output devices connected to the UAC-8.
- 2. Plug the AD-19 adapter designed for this unit into an outlet.



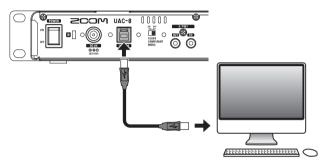
3. Set CLASS COMPLIANT to OFF.



#### NOTE

Connection to a computer is not possible when the CLASS COMPLIANT MODE switch is set to ON.

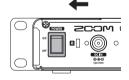
**4.** Use a USB cable to connect the **UAC-8** and the computer.



#### NOTE

Although also compatible with USB 2.0, connection using USB 3.0 enables operation with even higher performance.

**5.** Set on to ON.



#### NOTE

If the driver is not installed on the connected computer, the **UAC-8** will not be recognized. (→P.7)

**6.** Confirm that the power indicator is lit.



#### NOTE

**UAC-8** startup and connection with the computer takes time, and the power indicator might blink longer sometimes.

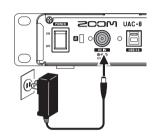
If it continues to blink even after waiting some time, try turning the power off and on again.

## ■Turning the Power Off

- Minimize the volume of devices connected to the UAC-8.
- **2.** Turn off connected amps and monitor speakers, for example.
- 3. Set to OFF

## Independent mic preamp function (standalone mode)

- Minimize the volume of output devices connected to the UAC-8.
- 2. Plug the AD-19 adapter designed for this unit into an outlet.



3. Disconnect the USB cable.



#### NOTE

The **UAC-8** detects the USB connection status and switches the mode automatically as follows.

- · When connected to a computer:
- $\rightarrow$  The **UAC-8** will function as an audio interface. ( $\rightarrow$  P.08)
- When not connected to a computer:
- → The **UAC-8** will function in standalone mode.
- **4.** Set 10 to ON

In standalone mode, the unit operates by itself according to the settings made in **UAC-8 MixEfx**.



**5.** Confirm that the power indicator is lit.

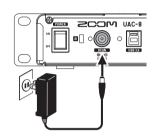


#### HINT

In standalone mode, the power will automatically turn off after 10 hours. If you want the power to always stay on, set the **UAC-8 MixEfx** power management function to OFF (refer to the software reference guide).

## iPad connection (class compliant mode)

- Minimize the volume of output devices connected to the UAC-8.
- 2. Plug the AD-19 adapter designed for this unit into an outlet.



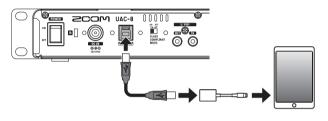
3. Set CLASS to ON.



#### NOTE

- Connection to an iPad is not possible when the CLASS COMPLIANT MODE switch is set to OFF.
- Turn the power OFF before changing the CLASS COMPLIANT MODE switch setting. If the power is already ON, changing the CLASS COMPLIANT MODE switch will have no effect.

**4.** Connect the **UAC-8** and the iPad using an Apple iPad Camera Connection Kit or Lightning to USB Camera Adapter.



**5.** Set to ON.



**6.** Confirm that the power indicator is lit.



#### NOTE

When in Class Compliant Mode, the 8 ANALOG input and 10 ANALOG output channels are available.

## **Setting Input and Output Devices**

#### NOTE

Settings must be made in DAW software to use the **UAC-8** with it for recording and playback.

1. Select the **UAC-8** as the computer sound device.

#### NOTE

- See the Installation Guide included in the driver package for procedures to set the sound device in different operating systems.
- **2.** Select the **UAC-8** as the audio input and output device in the DAW software.

The **UAC-8** inputs correspond to the ports as follows.

#### NOTE

You can use  ${\bf UAC-8~MixEfx}$  to route output signals to output jacks freely.

For details, see the UAC-8 MixEfx Reference Guide.

#### HINT

See the owner's manual for the DAW software that you are using for instructions about how to set the input and output devices.

#### Input device

Device name	Port name	Corresponding input
ZOOM UAC-8	1	INPUT1
	2	INPUT2
	3	INPUT3
	4	INPUT4
	5	INPUT5
	6	INPUT6
	7	INPUT7
	8	INPUT8
	9	S/PDIF L
	10	S/PDIF R
	11	ADAT1
	12	ADAT2
	13	ADAT3
	14	ADAT4
	15	ADAT5
	16	ADAT6
	17	ADAT7
	18	ADAT8

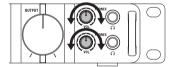
## **Adjusting Headphone and Speaker Volume**

#### ■ Adjusting Headphone Volume

**1.** Connect headphones to PHONES 1 or PHONES 2.



**2.** Turn the of for PHONES 1 or PHONES 2 to adjust the headphone volume.

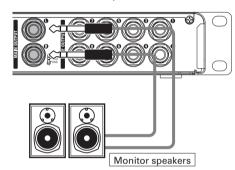


#### NOTE

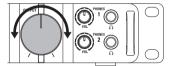
- The same signals are output from PHONES 1 as the MAIN OUTPUT jacks.
- For PHONES 2, you can use **UAC-8 MixEfx** to set the output signal to MAIN OUTPUT or LINE OUTPUT 1/2, 3/4, 5/6 or 7/8. By default, the same signals are output as the MAIN OUTPUT jacks. For details, see the **UAC-8 MixEfx** Reference Guide.

## ■ Adjusting Speaker Volume

1. Connect monitor speakers to the MAIN OUTPUT jacks.



**2.** Turn the to adjust the speaker volume.



#### NOTE

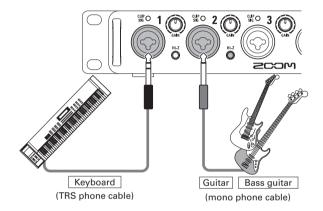
The OUTPUT volume only affects the MAIN OUTPUT. Use **UAC-8 MixEfx** to adjust other output volumes.

For details, see the UAC-8 MixEfx Reference Guide.

## **Using Instruments and Mics**

#### **■** Connecting Instruments

Connect instruments to INPUTS 1 to 8 using TRS/mono phone cables.



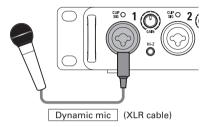
#### NOTE

#### Using the Hi-Z function

- When using a passive guitar or bass guitar, connect it to INPUT 1 or 2, and push that input's button so that it lights.
- When connecting a keyboard or other instrument to INPUT 1 or 2, press its so that it becomes unlit.

## **■** Connecting Mics

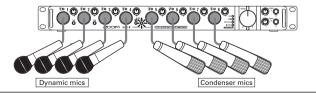
Using XLR cables, connect mics to INPUTS 1 to 8.

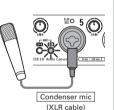


#### NOTE

#### Using Phantom Power

- To use a condenser mic, press for the connected INPUT so that it lights. Phantom power is supplied when this switch is lit.
- When the corresponding switch is lit, phantom power is supplied to INPUTS 1-4 or INPUTS 5-8 at the same time.
- To use dynamic mics and condenser mics at the same time, consider the use of phantom power when connecting them to the inputs.





## ■ Adjusting the Input Gain

You can adjust the gain of each INPUT.

**1.** Check  $\frac{\text{CLIP}}{\text{SIG}}$  O to see the status of an input signal.

Lit green: Input signal present. Lit red: Input signal is clipping.



2. Turn (1) to adjust the input gain.



#### HINT

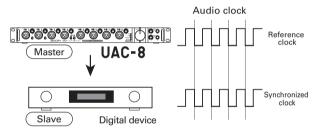
Set it so that the level indicator does not light red.

## **Using Digital Audio Equipment**

## ■ About Digital Audio Clock

When the **UAC-8** is connected to other digital audio equipment, audio clock must be synchronized in order to transfer audio data between them. If they are not synchronized, noise and various other problems will occur.

To synchronize audio clock, one device must operate as the master, which sets the reference clock, and the other must operate as a slave.



The **UAC-8** is operating as the master, and the audio clock of the **UAC-8** and the other digital device are synchronized.

## **■** Connecting S/PDIF Devices

**1.** Minimize the volume of output devices connected to the **UAC-8**.

#### HINT

When connected, noise might occur until clock synchronizes.

2. Set the same sampling rates for the UAC-8 and the connected device.

#### NOTE

For instructions about how to change the sampling rate of the **UAC-8**, see the **UAC-8 MixEfx** Reference Guide.

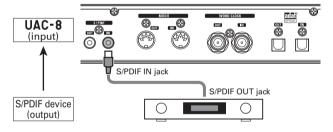
#### ► Inputting an S/PDIF signal to the UAC-8

**3.** Use **UAC-8 MixEfx** to set CLOCK SOURCE to S/PDIF.

The S/PDIF CLOCK SOURCE indicator will blink.



**4.** Connect the S/PDIF device to the S/PDIF IN jack.



**5.** The S/PDIF CLOCK SOURCE indicator will light, confirming synchronization.



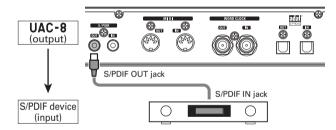
#### ► Outputting a S/PDIF signal from the UAC-8

3. Use UAC-8 MixEfx to set CLOCK SOURCE to INTERNAL.

The INTERNAL CLOCK SOURCE indicator will blink.



**4.** Connect the S/PDIF device to the S/PDIF OUT jack.



#### NOTE

- To synchronize audio clock, the UAC-8 and the connected device must have the same sampling rate settings.
- When using an S/PDIF device with a word clock function, you can connect the UAC-8 WORD CLOCK OUT connector to the S/PDIF device word clock input connector and synchronize them. (→P.20)
- If CLOCK SOURCE is set to S/PDIF, but synchronization with an S/PDIF device is not possible, the CLOCK SOURCE indicator will blink. In this case, the UAC-8 will operate using its internal clock.

## Using Digital Audio Equipment (continued)

## ■ Connecting ADAT Optical Devices

 Minimize the volume of output devices connected to the UAC-8.

#### HINT

When connected, noise might occur until clock synchronizes.

2. Set the same sampling rates for the UAC-8 and the connected device.

#### NOTE

For instructions about how to change the sampling rate of the **UAC-8**, see the **UAC-8** MixEfx Reference Guide.

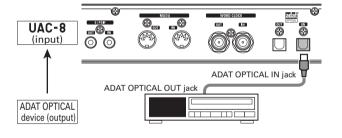
#### ► Inputting an ADAT optical signal to the UAC-8

3. Use UAC-8 MixEfx to set CLOCK SOURCE to ADAT.

The ADAT CLOCK SOURCE indicator will blink.



**4.** Connect the ADAT optical device to the ADAT OPTICAL IN jack.



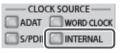
**5.** The ADAT CLOCK SOURCE indicator will light, confirming synchronization.



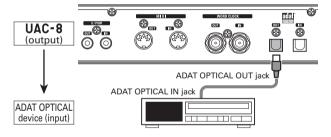
#### ► Outputting an ADAT Optical signal from the UAC-8

3. Use UAC-8 MixEfx to set CLOCK SOURCE to INTERNAL.

The INTERNAL CLOCK SOURCE indicator will blink.



Connect the ADAT Optical device to the ADAT OPTICAL OUT jack.



#### NOTE

- To synchronize audio clock, the **UAC-8** and the connected device must have the same sampling rate settings.
- When using an ADAT Optical device with a word clock function, you can connect the UAC-8 WORD CLOCK OUT connector to the ADAT Optical device word clock input connector and synchronize them. (→P.20)
- If CLOCK SOURCE is set to ADAT, but synchronization with an ADAT Optical device is not possible, the CLOCK SOURCE indicator will blink. In this case, the **UAC-8** will operate using its internal clock.

## Using Digital Audio Equipment (continued)

## ■ Connecting the WORD CLOCK Connectors

Use the WORD CLOCK connectors when you want to synchronize with a master clock generator, for example.

 Minimize the volume of output devices connected to the UAC-8.

#### HINT

When connected, noise might occur until clock synchronizes.

2. Set the same sampling rates for the UAC-8 and the connected device.

#### NOTE

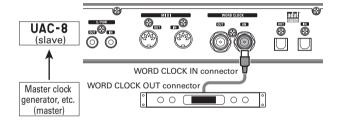
For instructions about how to change the sampling rate of the **UAC-8**, see the **UAC-8** MixEfx Reference Guide.

- ▶ Using the connected device as the master clock
- **3.** Use **UAC-8 MixEfx** to set CLOCK SOURCE to WORD CLOCK.

The WORD CLOCK CLOCK SOURCE indicator will blink



4. Connect the other device to the WORD CLOCK IN connector.



**5.** The WORD CLOCK CLOCK SOURCE indicator will light, confirming synchronization.



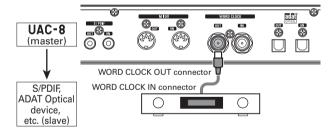
## ► Using the UAC-8 as the master clock

3. Use UAC-8 MixEfx to set CLOCK SOURCE to INTERNAL.

The INTERNAL CLOCK SOURCE indicator will blink.



4. Connect the other device to the WORD CLOCK OUT connector.



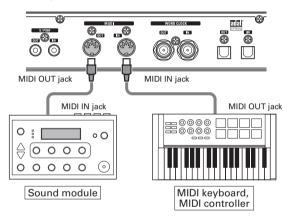
#### NOTE

- To synchronize audio clock, the **UAC-8** and the connected device must have the same sampling rate settings.
- •If CLOCK SOURCE is set to WORD CLOCK, but synchronization with the connected device is not possible, the CLOCK SOURCE indicator will blink. In this case, the **UAC-8** will operate using its internal clock.

## Using Digital Audio Equipment (continued)

#### **■** Connecting MIDI Devices

 Use MIDI cables to connect MIDI devices to the MIDI IN and OUT jacks.



#### NOTE

When using a MIDI port with a DAW, for example, follow the instructions below when making settings.

The **UAC-8** or **UAC-8 MixEfx** might not function properly otherwise.

<Windows>

Use [ZOOM UAC-8 MIDI]. Do not use [MIDI IN/OUT 2 (ZOOM UAC-8 MIDI)].

<Mac>

Use [ZOOM UAC-8 MIDI I/O Port]. Do not use [ZOOM UAC-8 Reserved Port].

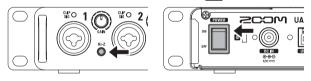
## **Restoring Factory Default Settings**

Follow these instructions to initialize settings, restoring them to the factory defaults.

 Plug the AD-19 adapter designed for this unit into an outlet.

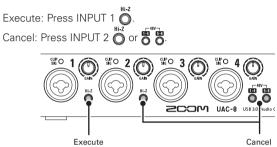


2. While pressing INPUT 1 turn ON.



The INPUT 1 and power indicators will blink.

**3.** Initialize the settings.



## **Troubleshooting**

If you think that the **UAC-8** is operating strangely, check the following items first.

#### Cannot select or use the UAC-8 device

- Confirm that the **UAC-8** is connected to the computer correctly.
- Confirm that the UAC-8 CLASS COMPLIANT MODE switch is set to OFF.
- Quit all the software that is using the UAC-8, and use the POWER switch to turn the UAC-8 off and on again.
- Reinstall the driver.
- Connect the UAC-8 directly to a USB port on the computer. Do not connect it to a USB hub.

#### Cannot use with an iPad

•Turn the **UAC-8** power off, and set the CLASS COMPLIANT MODE switch to ON. Then, turn the power on again.

#### Playback sound cannot be heard or is quiet

- Check the speaker connections and volume settings on the speakers.
- Adjust the **UAC-8** MAIN OUTPUT and/or PHONES 1/2 volume.
- Use UAC-8 MixEfx to check the built-in mixer settings.
- Confirm that the Sound setting of the computer that you are using is set to "ZOOM UAC-8".

#### Recorded audio is too loud, too quiet or silent

- Adjust the **UAC-8** input gain levels
- When using a condenser mic, turn phantom power on.
- Confirm that the Sound setting of the computer that you are using is set to "ZOOM UAC-8".

#### The sound of the device connected to the input jack is distorted

• Confirm that the level indicators are not lighting red. If they are lighting red, lower the input levels.

#### Sound skips during playback or recording

- If you can adjust the audio buffer size of the software that you are using, increase the buffer size.
- •Turn the automatic sleep function and other computer power saving settings OFF.
- Connect the UAC-8 directly to a USB port on the computer. Do not connect it to a USB hub.

#### Cannot play or record

- Confirm that the Sound setting of the computer that you are using is set to "ZOOM UAC-8".
- Confirm that UAC-8 is set for input and output in the software that you are using.
- Confirm that the **UAC-8** is connected to the computer correctly.
- Quit all the software that is using the UAC-8, and disconnect and reconnect the USB cable connected to the UAC-8.

#### Sound skips during digital input or output

- Confirm that the device used for audio clock synchronization is connected correctly.
- If the UAC-8 is the master, confirm that audio clock is synchronized on the connected device.
- If the UAC-8 is the slave, use UAC-8 MixEfx to confirm that the CLOCK SOURCE is set to the connection used for audio clock synchronization.
- If the UAC-8 is the slave, confirm that the CLOCK SOURCE indicator is not blinking.

# Specifications

ANALOG INPUT	INPUT 1–8	Connectors	XLR/TRS combo jacks
			(XLR: 2 hot, TRS: TIP hot)
		Input gain	0-60 dB (1 dB steps)
		Input impedance	5 kΩ
			1 M $\Omega$ (When IN1/IN2 Hi-Z on)
		Maximum input level	+13 dBu (XLR at 0 dBFS)
			+21 dBu (TRS at 0 dBFS)
		Phantom power	+48 V
ANALOG OUTPUT	MASTER OUTPUT L/R	Connectors	TRS jacks (balanced)
	LINE OUTPUT1-8	Maximum output level	+14 dBu (at 0 dBFS)
		Output impedance	150 Ω
	PHONES 1/2	Connectors	Standard stereo phone jacks
			20 mW $\times$ 2 (into 32 $\Omega$ load)
		Maximum output level	+10 dBu
		Output impedance	33 Ω
DIGITAL IN/OUT	ADAT OPTICAL	Connectors	ADAT lightpipe
			8 IN/OUT: 44.1 kHz/48 kHz
			4 IN/OUT: 88.2kHz/96kHz S/MUX compatible
			2 IN/OUT: 176.4kHz/192kHz S/MUX4 compatible
	S/PDIF	Connectors	RCA (coaxial)
		Supported sampling	44.1/48/88.2/96/176.4/192 kHz
		frequencies	
	WORD CLOCK	Connectors	BNC
		Supported sampling	44.1/48/88.2/96/176.4/192 kHz
		frequencies	
		Output impedance	75 Ω
Frequency			44.1 kHz: –1.0 dB, 20 Hz–20 kHz
characteristics			96 kHz: -1.0 dB, 20 Hz-40 kHz
			192 kHz: -1.0 dB, 20 Hz-60 kHz
Input conversion noise			Measured EIN: 125 dB (IHF-A)
			at 60dB, 150Ω input
Dynamic range			AD: 120 dB typical (IHF-A)
			DA: 120 dB typical (IHF-A)

## Specifications (continued)

Number of recording and playback channels	Audio interface/ standalone mode	Recording: 18 channels (ANALOG: 8, S/PDIF: 2, ADAT Optical: 8) Playback: 20 channels (ANALOG: 10, S/PDIF: 2, ADAT OPTICAL: 8) at 44.1 kHz and 48 kHz  Recording: 14 channels (ANALOG: 8, S/PDIF: 2, ADAT Optical: 4) Playback: 16 channels (ANALOG: 10, S/PDIF: 2, ADAT OPTICAL: 4)		
		at 88.2 kHz and 96 kHz  Recording: 12 channels (ANALOG: 8, S/PDIF: 2, ADAT Optical: 2)  Playback: 14 channels (ANALOG: 10, S/PDIF: 2, ADAT OPTICAL: 2)  at 176.4 kHz and 192 kHz		
	CLASS COMPLIANT mode	Recording: 8 channels (ANALOG: 8) Playback: 10 channels (ANALOG: 10) at 44.1kHz, 48kHz, 88.2kHz, 96kHz, 176.4kHz and 192kHz		
Sampling frequencies		192 kHz, 176.4 kHz, 96 kHz, 88.2 kHz, 48 kHz, 44.1 kHz		
Bit depth		24-bit		
Interface		USB3.0 / 2.0		
MIDI IN/OUT		5-pin DIN jacks		
Power supply		AD-19 DC12V 2A AC adapter		
External dimensions		157.65 mm (D) × 482.6 mm (W) × 46.03 mm (H)		
Weight (main unit only)		2.02 kg		

Note: 0 dBu = 0.775 Vrms

#### FCC regulation warning (for U.S.A.)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- · Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

#### For EU Countries -



**Declaration of Conformity:** 

This product complies with the requirements of Low Voltage Directive 2006/95/EC and EMC Directive 2004/108/EC and ErP Directive 2009/125/EC and RoHS Directive 2011/65/EU



#### **Disposal of Old Electrical & Electronic Equipment**

(Applicable in European countries with separate collection systems)

This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact your local city office, your household waste disposal service or the shop where you purchased the product.



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