

Overview

A game streaming audio mixer that provides a highly immersive gaming experience.



Features

- Intuitive volume control designed for gamer and game streamer
- High resolution (24-bit, 48 kHz) USB audio recording and playback
- Flexible volume control with dedicated drivers that are recognized by Windows/Mac as virtual multiple devices
- ZG Sound Processing (ZG SURROUND, FOCUS MODE/EQ, 3D CHAT SPACE, Voice changer, Transceiver/Radio voice effect... and more)
- Effect button x 6 (3 for voice effects, 3 for game sound effects)
- HDMI connection port x 3 (2-in/1-out, Audio out: 2ch 24-bit/48 kHz fixed, Video signal: Pass-through)
- MIC input for condenser mics with +48 phantom power and mute button
- Independent inputs and outputs for headset/ microphone with headphones or desktop speakers
- 4-pole mini input/output (TRRS) for smartphones
- ZG Controller (Windows/Mac) for precise parameter control
- Windows/Mac support by USB-C connection
- iOS and Android supported by 4-pole mini input/output (TRRS)
- USB-C Power input (5 V DC, 1.5 A)

Specifications

Analog Input Characteristics

0 dBu is referenced to 0.775 Vrms. 0 dBV is referenced to 1 Vrms.

Input Terminals	PAD	GAIN Trim	Actual Load Impedance	For Use with Nominal	Input level	Jack	Balanced / Unbalanced
					Max. before Clip		
HEADSET MIC IN (TS) MIC IN (Combo)	-	+52 dB	1.5 kΩ (TS)	1.6 kΩ (TS)	-40 dBu (7.75 mV)	TS (3.5 mm) Combo *1	Unbalanced (TS) Balanced (Combo)
		+8 dB	3.3 kΩ (Combo)	50-600 Ω (Combo)	+4 dBu (1.23 V)		
AUX IN	-	-	20 kΩ	600 Ω	-4 dBu (489 mV)	TRRS (3.5 mm) *2	Unbalanced

*1 XLR: 1=GND, 2=HOT, 3=COLD, TRS: Tip=HOT, Ring=COLD, Sleeve=GND

*2 Tip=LEFT, Ring1=RIGHT, Ring2=GND, Sleeve=MIC

* All A/D converters work with 24-bit bit depth and 48-kHz sampling.

* +48V DC (phantom power) is supplied to MIC INPUT XLR type connector.

Analog Output Characteristics

0 dBu is referenced to 0.775 Vrms. 0 dBV is referenced to 1 Vrms.

Output Terminals	Actual Source Impedance	For Use with Nominal	GAIN SW	Output Level	Jack	Balanced / Unbalanced / Impedance Balanced
				Max. before Clip		
HEADSET PHONES OUT	88 Ω	40 Ω	-	6 mW	TRS (3.5 mm) *1	Unbalanced
LINE OUT	600 Ω	20 kΩ	-	+8.2 dBu (2 V)	TRS (3.5 mm) *1	Unbalanced
AUX OUT	150 Ω	1.5 kΩ	-	-10 dBu (245 mV)	TRRS (3.5 mm) *2	Unbalanced

*1 Tip=LEFT, Ring=RIGHT, Sleeve=GND

*2 Tip=LEFT, Ring1=RIGHT, Ring2=GND, Sleeve=MIC

* All D/A converters work with 24-bit bit depth and 48-kHz sampling.

Digital Input Characteristics

Terminal	Format	Connector	Audio	Connector
HDMI IN	1	HDMI v2.0 HDCP 2.3	PCM 24bit, 192 kHz, 8ch (Max.)	VGA, 480i (60Hz), 576i (50Hz), 480p (60Hz), 576p (50Hz), 720p (60Hz, 50Hz), 1080i (60Hz, 50Hz), 1080p (60Hz, 50Hz, 30Hz, 25Hz, 24Hz), 4K (60Hz, 50Hz, 30Hz, 25Hz, 24Hz)
	2			

Digital Output Characteristics

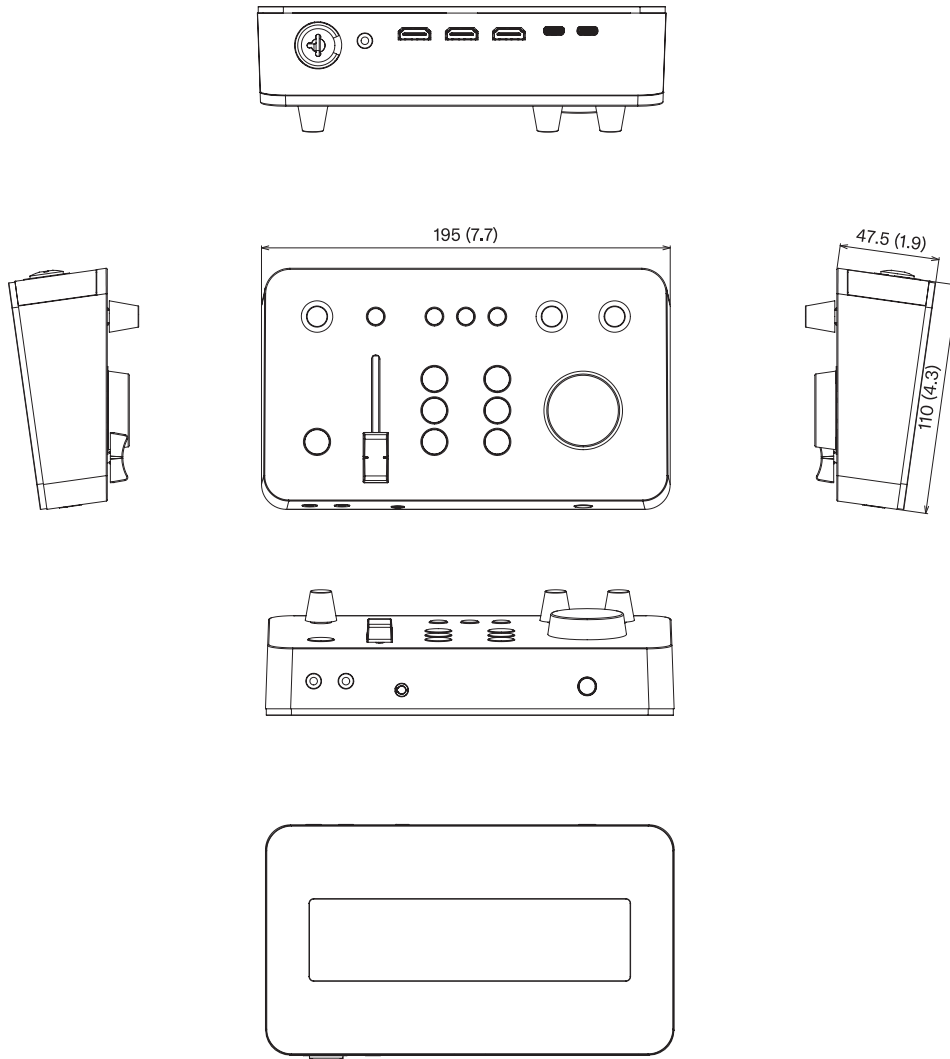
Terminal	Format	Connector	Audio	Connector
HDMI OUT	HDMI v2.0 HDCP 2.3	HDMI Type A	PCM 24bit, 48 kHz, 2ch (Fixed)	VGA, 480i (60Hz), 576i (50Hz), 480p (60Hz), 576p (50Hz), 720p (60Hz, 50Hz), 1080i (60Hz, 50Hz), 1080p (60Hz, 50Hz, 30Hz, 25Hz, 24Hz), 4K (60Hz, 50Hz, 30Hz, 25Hz, 24Hz)

Computer Interface Characteristics

Terminal	Format	Connector	Audio
USB	USB2.0	USB Type C	PCM 24bit, 48 kHz, 8ch

Dimensions

Unit: mm (inch)



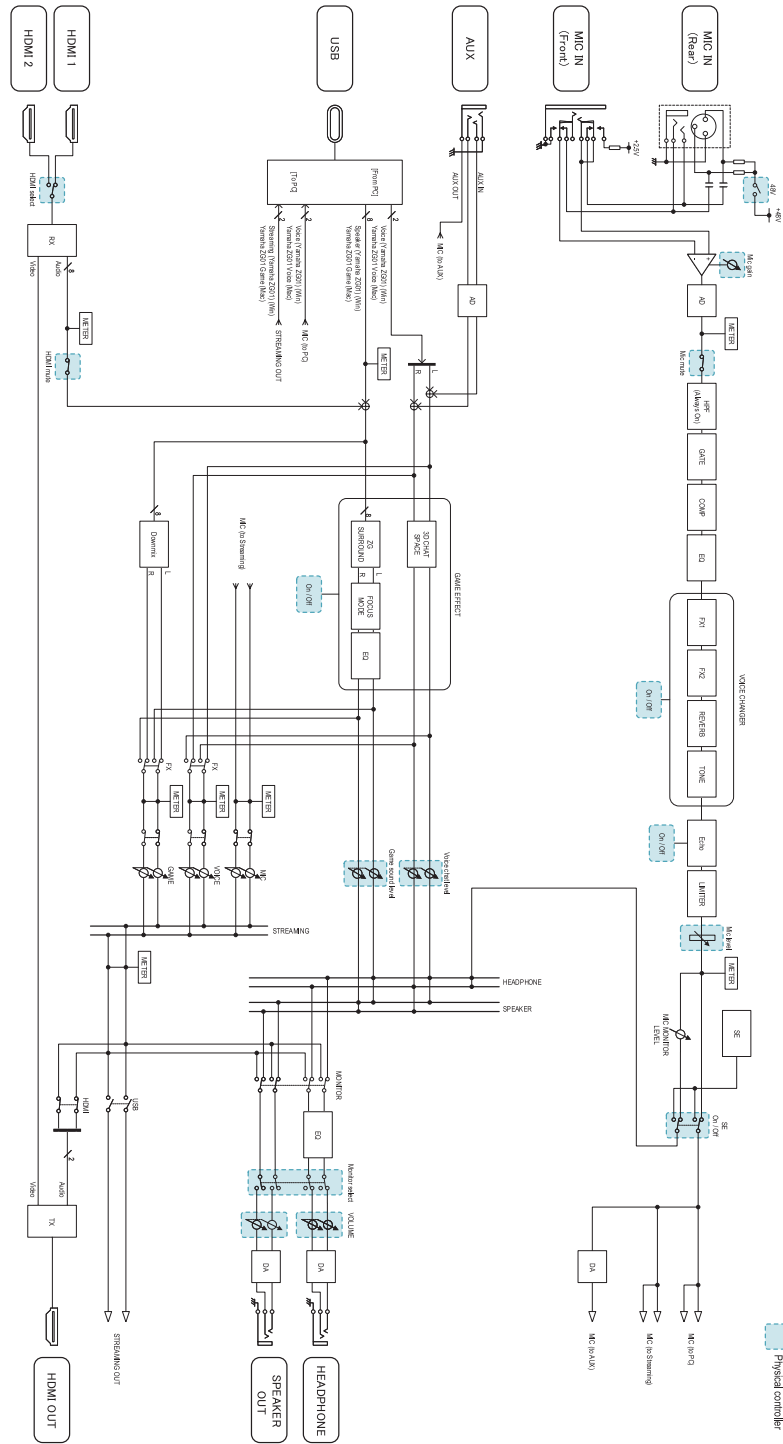
Software

- ZG Controller

Architectural and Engineering Specifications

The Yamaha ZG01 shall be a Game Streaming Mixer that provides audio mixing and processing functionality for voice chat and game streaming applications. The ZG01 shall have three audio inputs. The main audio input shall be accessed via a combo connector that accepts monaural line input or microphone input with switchable 48-volt phantom power, or a 3.5 mm stereo mini jack that accepts input from a plug-in powered headset microphone. A 4-pole mini jack (TRRS) shall be provided for smartphone input/output connection. Digital audio connectivity with Mac or Windows computers shall be provided via a bus-powered USB-C connector, and a second USB-C connector shall be provided for 5V DC power input when bus power is not available. Stereo monitor output shall be provided by a 3.5 mm mini stereo jack output for connection to speakers, and a 3.5 mm mini stereo jack output for headphones. The ZG01 shall include 2-in/1-out HDMI connectors for direct connection to computer game consoles. The HDMI connectors shall also function as a 2-in HDMI switcher and HDMI conversion adapter with audio extraction (thru out). The ZG01 shall provide DSP effects for the user's voice: a voice changer, transceiver/radio voice effect, masking beep, and 1-Touch Echo. ZG Surround processing shall provide surround sound for listeners using headphones, a 3D Chat Space function shall provide spatial separation of voice chat and game audio, and Focus Mode/EQ shall provide enhanced game audio. Six physical selector buttons for effect presets shall be provided: three for voice effects and three for game effects. A ZG Controller app for tablets and smartphones shall be available, providing detailed controlled of ZG01 volume and effect functions. The ZG01 shall be equipped with a 24-bit/48-kHz USB digital audio interface for 4-track recording and playback. The ZG01 shall be powered via USB bus power from a Mac or Windows computer. Dimensions shall be 195 (W) x 110 (D) x 47.5 (H) mm. Weight shall be 0.8 kg.

Block Diagrams



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 Created in May, 2022

Overview

A studio-quality headset.



Features

- Lightweight and comfortable to wear
- Combination of light weight (260 g) and high-quality sound
- Mesh earpads
- Studio-quality headphones
- High-quality condenser microphone
- A flat design that fits a variety of applications

Specifications

General Specifications

Headphones	Type	Closed-back
	Frequency Response	20 Hz - 20,000 Hz
	Impedance	35 Ω
	Sound Pressure Level	94.4 dB/mW
	Maximum Input Power	1,000 mW
Microphone	Type	Electret Condenser Microphone
	Polar Pattern	Uni Polar
	Frequency Response	250 Hz - 15,000 kHz
	Sensitivity	-39 dB (0 dB = 1 V/Pa)
	Maximum Input SPL	100 dB SPL
Common	Power Requirements	Plug-in Power
	Connector	ϕ 3.5 mm (1/8") stereo mini plug, 4 pole (CTIA)
	Cable	2 m
	Net Weight	Approx. 240 g (not including cable)

None of the values above are guaranteed.

Architectural and Engineering Specifications

The Yamaha YH-G01 shall be a headset for gaming voice chat and teleconferencing applications, comprising a high-performance condenser microphone and headphones. The YH-G01 shall weigh no more than 260 grams and be comfortable during long hours of use. The condenser microphone shall be plug-in powered electret condenser type with pickup characteristics optimized for clear voice reproduction. The headphones shall have a frequency response of 20 Hz to 20,000 Hz, sensitivity of 94.4 dB/mW, and an impedance of 35 ohms. Headset connection shall be made via a 2-meter cable terminated in a 3.5 mm stereo mini plug (4 pole, CTIA). Weight without cable and plug shall be approximately 240 g.

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YAMAHA CORPORATION
P.O.BOX 1, Hamamatsu Japan
www.yamaha.com/proaudio/