



# EDGE **A2-400**

MANUAL

## Table of Content

Safety Instructions	5	Practice of sound	15
Quick Setup	6	Operating the EDGE A2-400	17
Placing the unit	7	19" rack mounting	18
AC Power (220V / 110V)	7	Technical Specifications	22
Connections (Noise issues)	7		
Inputs & Outputs	8		
Bridged Operation (BTL)	12		

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### XTZ Values

Our basic philosophy is to recreate a balanced and natural sound with an optimum relation between price, performance and quality. This enables you to listen to your favorite music or movie with full joy and experience the sound like it was intended by the producer.

Our concept:

- Extensive development for advanced products
- Cost-effective manufacturing and sales strategy
- Meticulous quality controls
- Reduction of intermediaries

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ICEpower is a registered trademark of ICEpower A/S

# Important Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. This apparatus was evaluated for use in an operating ambient temperature of 50 °C.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.



See markings  
on the bottom  
of the product.

13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. The appliance coupler is used as the disconnect device and shall remain readily operable.



**WARNING!** To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.



**WARNING!** This apparatus shall not be exposed to dripping or splashing, and no objects filled with liquids, such as vases, shall be placed on the apparatus.



**DANGER!** No user serviceable parts inside. Service is to be performed only by XTZ.



The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electrical shock to persons.



The exclamation point, within an equilateral triangle, is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

## Introduction

We would like to thank you for buying a product in the XTZ EDGE series. The electrical design of the EDGE series offers the ultimate sound reproduction. In order to utilize your new device in the best possible way, please read this manual carefully before using it for the first time. It often takes some effort and patience to make a HiFi system sound its best. If you do not have any previous experience from this kind of installation, please feel free to contact our free of charge support and we will help you.

- Series name

EDGE

- Power Amplifier  
- Two channels

**A2**

- Power level

**400**

## Safety instructions

Switch off your amplifier before connecting the speakers. Make sure that the speaker wires are tightened and have a strong connection to the speaker terminal and amplifier terminal.

Make sure that the electronics are not exposed to direct sunlight or strong artificial light. Listening to high sound pressure levels over a longer period of time may harm your hearing. To avoid hearing damage do not listen to high sound pressure levels over a longer period of time.

## Quick Setup

The initial setup of a XTZ product is relatively easy. Please take your time reading the guidelines and more detailed instructions on the following pages of this manual after completing the first four steps as listed below.

1. Connect your speakers to the SPEAKER-OUTPUT terminals of the EDGE A2-400.
2. Connect your pre-amplifier's PRE OUT to the EDGE A2-400 rear panel's INPUT port.
3. Make sure to set your pre-amplifier's volume level to minimum.
4. Connect the AC cord to the EDGE A2-400 AC power input and then plug into an AC outlet.
5. Set the switches in the on the back of the EDGE A2-400 as you wish. If the device is used in "AUTO ON" mode, it will detect incoming signals and automatically switch from STANDBY to ON. If used in "ALWAYS ON" mode, the device will always be in ON mode. There is also the option of using "TRIGGER" if your pre-amplifier has 12V trigger output.
6. Set the POWER switch on the rear panel to "ON" in order to turn the EDGE A2-400 to standby mode. The standby LED indicator on the front panel will illuminate red in case you use the device in "AUTO ON" mode and green in case you use it in "ALWAYS ON" mode.

## Placing the unit

Allow adequate ventilation. Do not place the unit on a soft surface like a carpet. Do not place it in an enclosed position such a bookcase or cabinet that may impede the air-flow through the ventilation slots.

## AC Power (220V / 110V)

To power the unit, connect the supplied power cord to the unit and a standard AC power outlet. The unit recognizes the prevailing voltage automatically so you don't need to adjust it to your local voltage level. In standby mode the EDGE A2-400 consumes less than 0.3 Watts (EU mains).

## Connections (Noise issues)

To always ensure safe use of the amplifier and speakers, only connect and disconnect signal cables and speaker cables when the amplifier is shut off via the main power switch on the back. Always use signal cables and speaker cables that are as short as possible and of good quality. Long signal cables of poor quality work as antennas, and might in some cases create noise. Always connect using the correct phase, from the plus (+) pole on the amplifier to the plus (+) pole on the loudspeaker and respectively for the minus (-) pole.

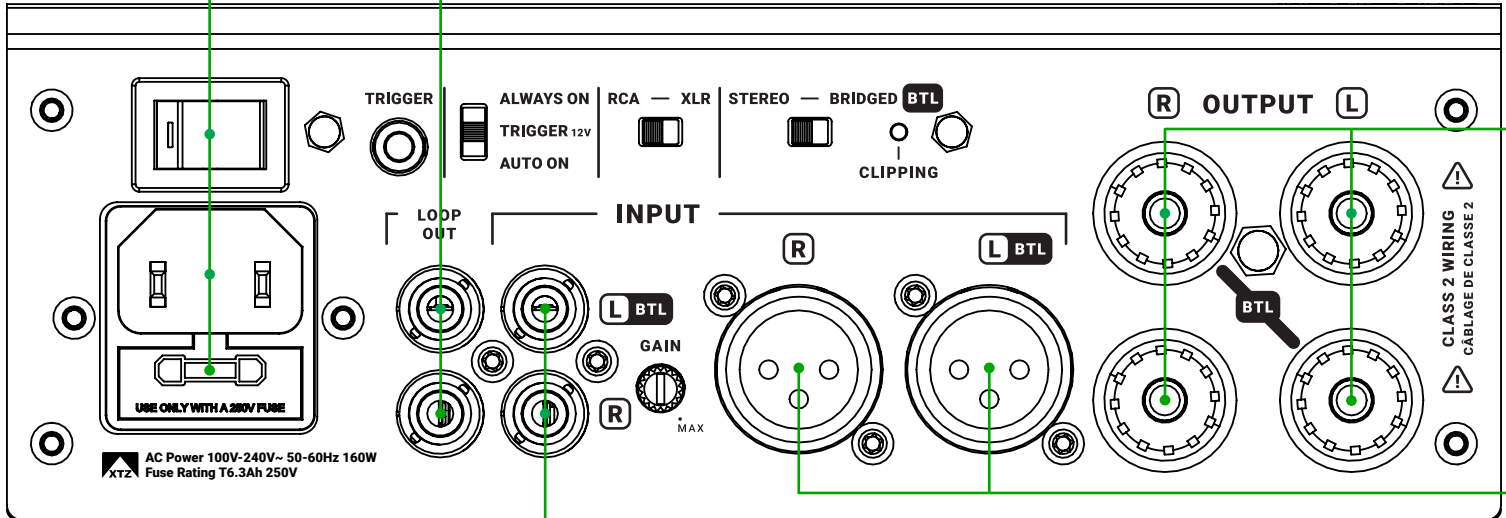
Earth ground is often used to reduce noise from electrical interference from outside the casing, however in some cases several electrical devices which are connected to the same grounding grid can create loops that pick up interference i.e. ground loops. There are a couple of ways to fix this problem:

- Use the same power strip / power outlet for the interfering equipment.
- Use as short as possible signal cables of high quality to minimize resistance and impedance.

## Cleaning the product

Switch off all components in your system when cleaning any of the m. Clean the surfaces with a soft dry cloth only.

# Inputs & Outputs (1 / 2)



### ● **POWER**

- POWER SWITCH Main power switch (toggle).
- AC POWER INLET CLASS II AC power input.
- FUSE Do only replace with "T6.3Ah 250V" rated fuse.

### ● **LOOP OUT**

- L RCA loop out from Left channel input.
- R RCA loop out from Right channel input.

### ● **OUTPUT**

- L Plus (+) pole and Minus (-) pole output connector for Left channel.
- R Plus (+) pole and Minus (-) pole output connector for Right channel.



### **IMPORTANT: CLASS 2 WIRING**

EDGE A2-400 power amplifier requires Class 2 output wiring.  
Turn the main power switch off when connecting or disconnecting the speaker wires.

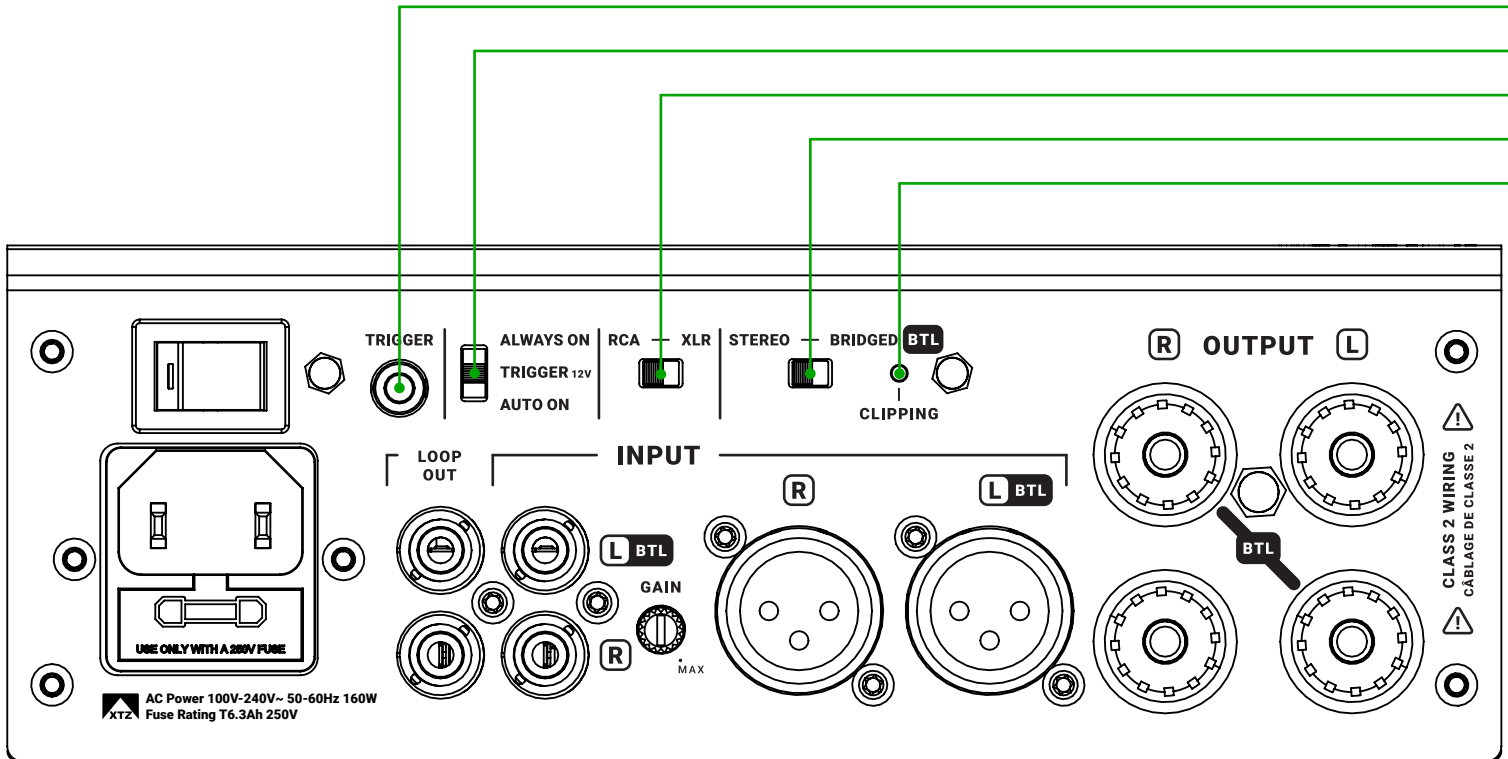
### ● **XLR INPUT: Balanced**

- L Balanced input for the Left amplification channel.
- R Balanced input for the Right amplification channel.

### ● **RCA INPUT: Unbalanced**

- L Unbalanced input for the Left amplification channel.
- R Unbalanced input for the Right amplification channel.

## Inputs & Outputs (2 / 2)





### **TRIGGER 12V**

#### **- TRIGGER**

3.5 mm mono jack for pre-amplifiers that support trigger out.

### **AUTO START SELECTOR**

#### **- ALWAYS ON**

The amplifier will never go into standby, it will always be on.

#### **- TRIGGER 12V**

The amplifier will go into standby in absense of 12V trigger signal.

#### **- AUTO ON**

The amplifier will go into standby in absense input signals.

### **INPUT SELECTOR**

#### **- RCA**

Set when using RCA unbalanced input audio cables.

#### **- XLR**

Set when using XLR balanced input audio cables.

### **STEREO or BRIDGED**

#### **- STEREO**

Regular stereo amplification mode.

#### **- BRIDGED/BTL**

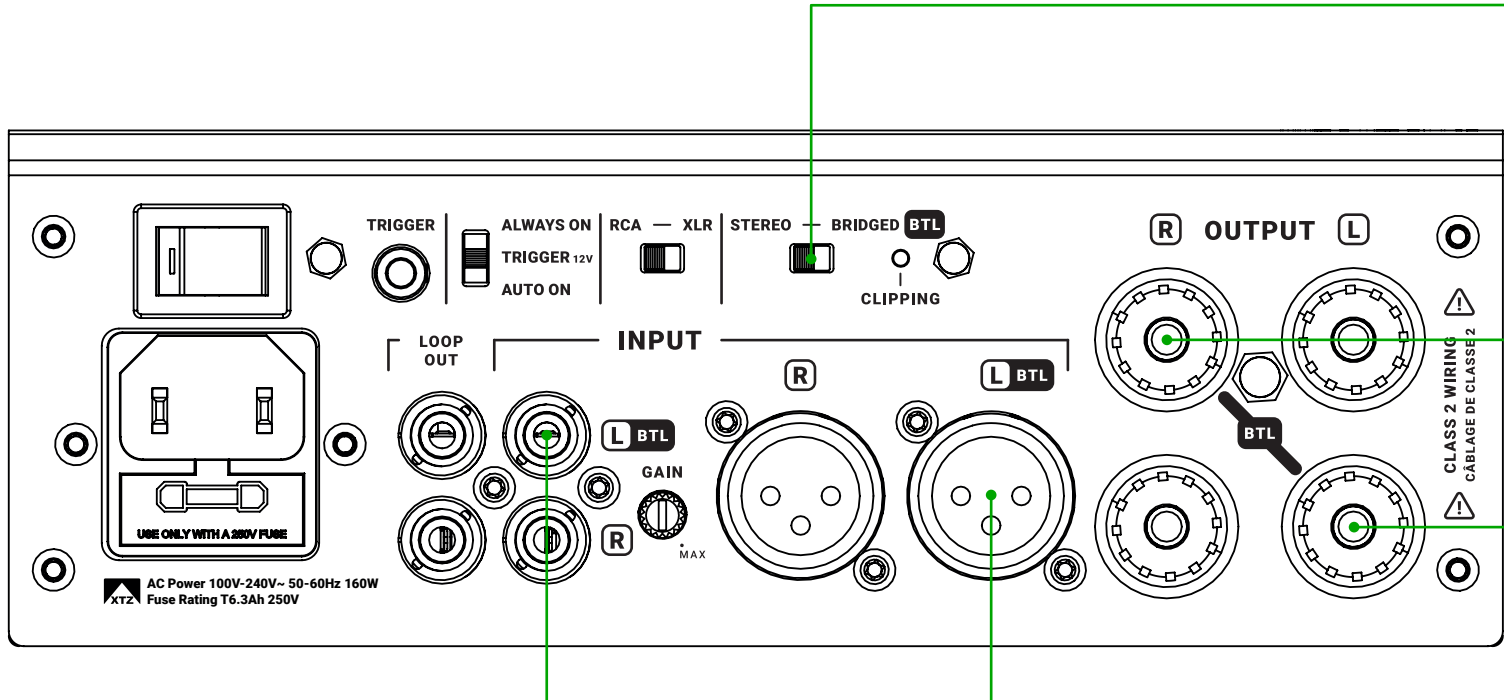
Bridged mono (bridge-tied load) amplification mode.

### **CLIPPING LED**

#### **- CLIPPING**

Blue clipping indicator LED (blinking).

# Bridged operation, BTL



## STEREO or BRIDGED

- BRIDGED/BTL Set to Bridged/BTL for bridged mono operation.



### IMPORTANT: CLASS 2 WIRING

EDGE A2-400 power amplifier requires Class 2 output wiring.  
Turn the main power switch off when connecting or disconnecting the speaker wires.

## OUTPUT +

- BTL Plus (+) pole output connector when in bridged/BTL mode.

## OUTPUT -

- BTL Minus (-) pole output connector when in bridged/BTL mode.

## INPUTS

- RCA Use single RCA when input signal is unbalanced RCA.
- XLR Use single XLR when input signal is balanced XLR.



◦

#### **FRONT LED**

- RED      Amplifier is in Standby mode, waiting for a signal to power up.
- GREEN      The amplifier is ON.
- BLUE      Clipping indicator (blinking).

# Practice of sound / Installation and placement tips

The following points contain common information on loudspeaker placement and installation. These are general rules, so there are exceptions.

How do I achieve the best sound?

No matter how good the equipment is, in the wrong listening environment it will inevitably sound bad. There are some basic rules concerning a proper loudspeaker installation:

Reflections

Carpets, curtains and soft furniture absorb mid-range and high frequency sounds, and this is normally preferable. Big empty areas, on the contrary, reflect the sound which might lead to blurry and unprecise sound. Apart from coloring the sound, also the perspective of the sound will deteriorate. Reflections in the room can roughly be compared to the reflections that cause ghost pictures on a TV screen.

Amplification of bass frequencies

A loudspeaker that is placed near a wall, ceiling or floor will amplify lower frequencies in a sometimes not desirable way (since it may lead to an indistinct sound reproduction). This amplification becomes even more obvious if the loudspeaker is placed near a corner. Thus, for a sound as clear as possible, the loudspeaker should be placed at least 30 cm (~12 inches) away from the wall. Though some speaker designs are constructed to be placed close to a wall.

Furniture

Be aware that furniture may vibrate creating bad sound at loud bass levels.

Room dimensions

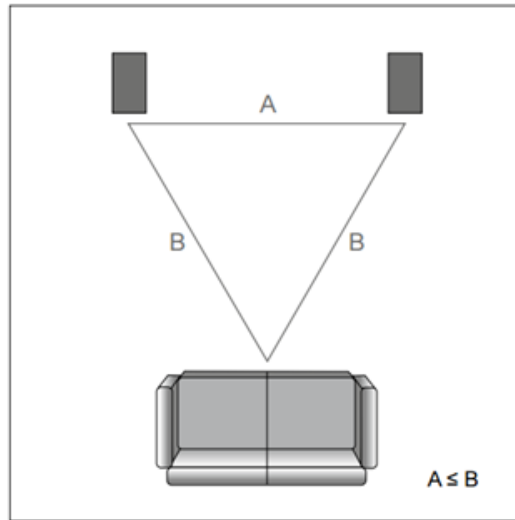
Quadratic rooms or rooms where the length is exactly twice as long as the width should be avoided, since they may create unwanted resonances.

Cables

Try to keep the cables as short as possible. By its electrical parameters, a long cable will have a bigger influence on the sound than a short one. The cable can also work as an antenna picking up various signals that may result in constant noise. Make sure that all connections are clean and free from oxidation. All connections should be mechanically stable, both power, signal and loudspeaker cables. Signal cables should be separated from other cables.

## Speaker Placement

To achieve the best results the front speakers should be placed symmetrically in front of the listener. The distance between the front speakers should be about 80% of the distance to the listener. In other words, the recommended angle for the front speakers is 45°.



Finally

Please remember that good sound is a matter of taste, so you have to experiment to obtain your favorite sound. We wish you best of pleasure.

# Operating the EDGE **A2-400**

The EDGE A2-400 is designed to deliver high performance with easy management.

## Auto On / Trigger

When the unit is set to "Auto On" mode, the amplifier requires a constant signal to stay on. In absence of a signal the amplifier switches to standby mode after > 10 minutes.

If set to "Trigger" the amplifier will stay in standby mode until it detects a +12V trigger signal on the trigger minijack input connector.

## Standby

In standby mode the whole unit consumes less than 0.3 W (EU mains) which surpasses the requirements of the "one watt initiative 2013" by IEA "International Energy Agency".

## Front LED

**Red LED:** Device is in standby mode and waiting for an input signal or trigger signal to turn on.

**Green LED:** Device is on.

**Blue LED:** Clipping indicator (blinking).

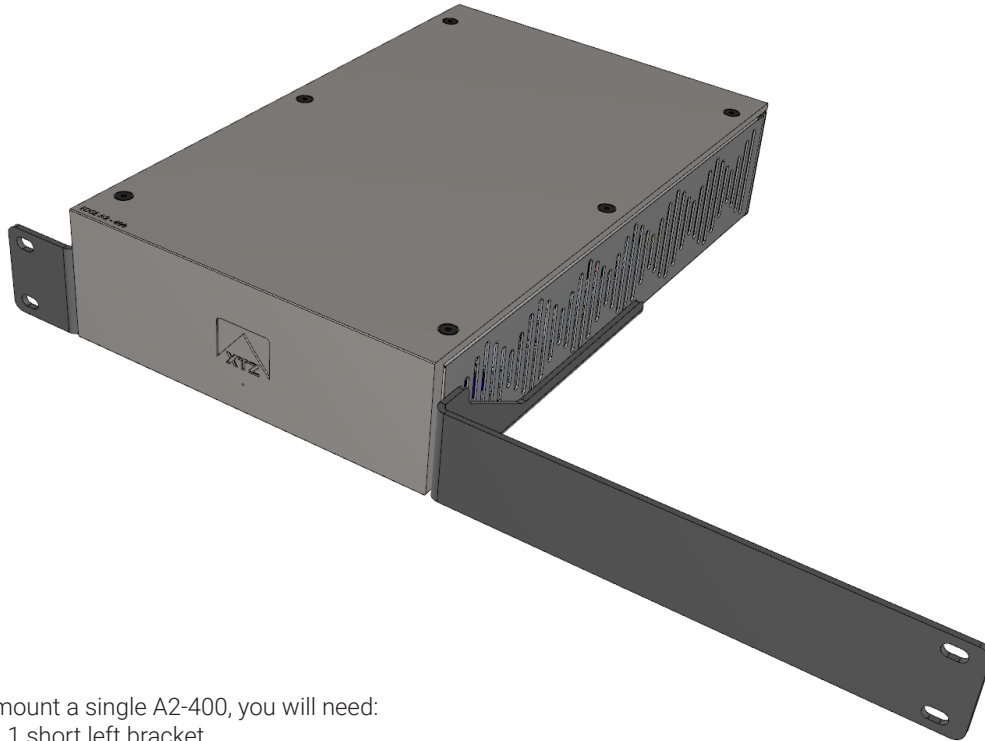
## Adjustable Gain

The gain control can be used to match the total output level with other amplifiers and/or other speakers in your system. Using the adjustable gain will limit the maximum output level of the device and possibly protect your speakers from damage when playing loud.

## Stereo / Bridged

- Use the stereo mode when using the amplifier in a regular stereo system.
- Use the bridged/BTL mode when using the amplifier with a single speaker.

## 19" Rack mounting



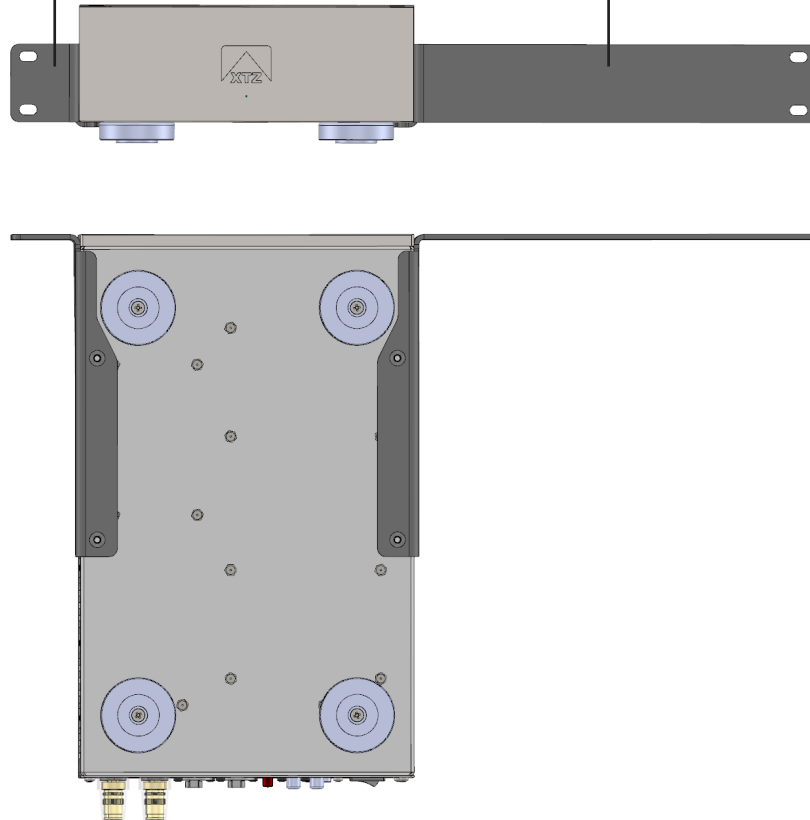
To mount a single A2-400, you will need:

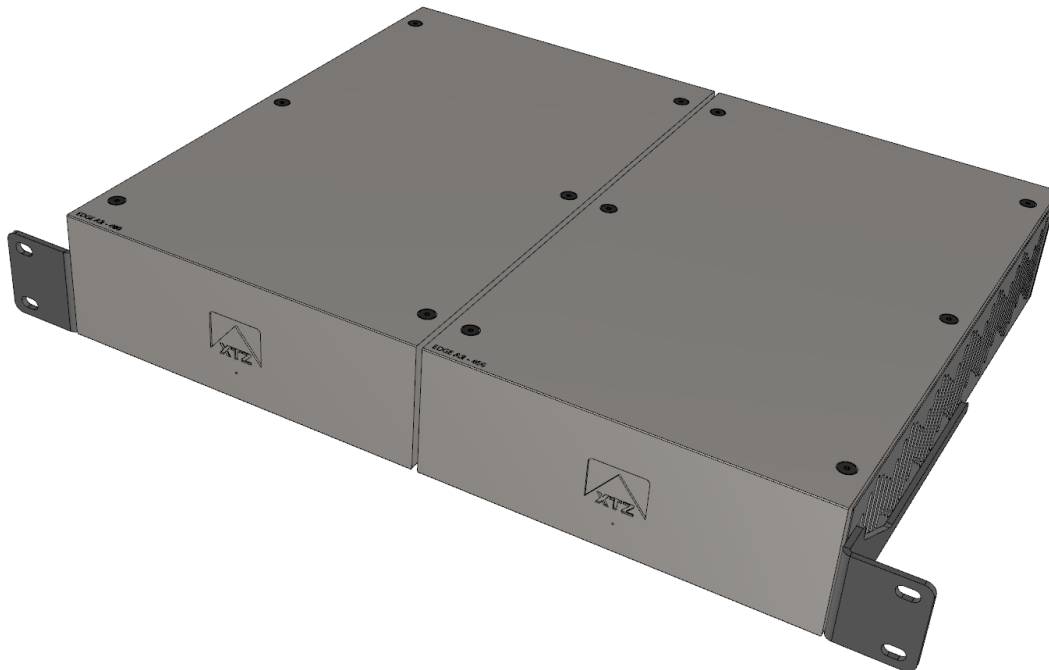
- 1 short left bracket
- 1 long right bracket

(These brackets are sold separately)

Short Left Bracket

Long Right Bracket





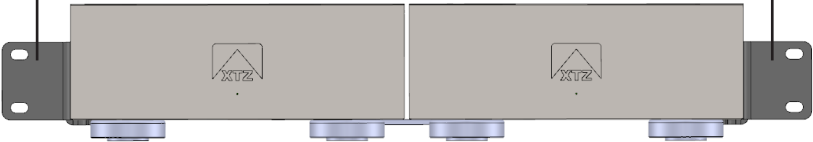
To mount two A2-400, you will need:

- 1 short left bracket
- 1 short right bracket
- 1 middle bracket

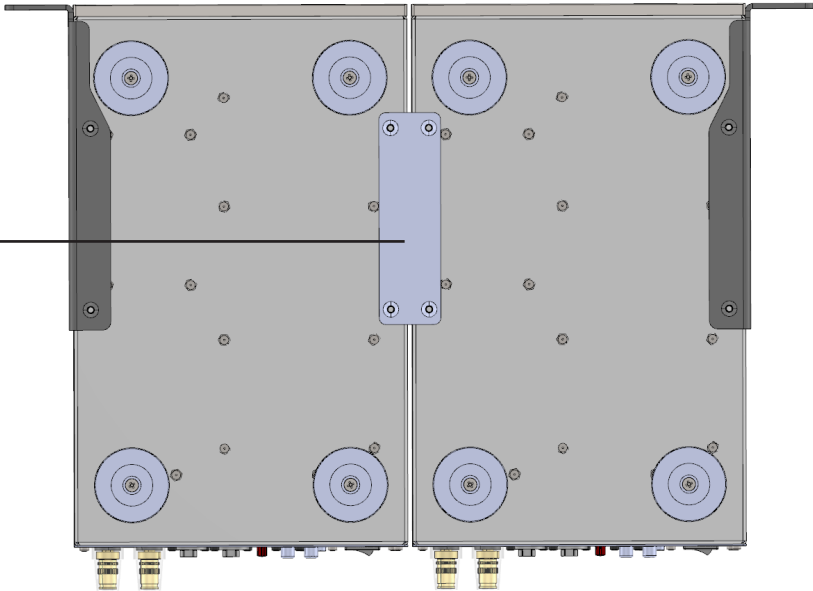
(These brackets are sold separately)

Short Left Bracket

Short Right Bracket



Middle Bracket



# Technical Specifications

## EDGE **A2-400**

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<b>Amplification type</b>	ICEpower® - ICEedge CLASS D Amplifier
<b>Power</b>	2 x 420 W (1% THD, 4 Ω) 2 x 220 W (1% THD, 8 Ω) 1 x 800 W (1% THD, 8 Ω, BTL)
<b>Max output voltage / current</b>	59Vp / 20Ap, 4 Ω (116Vp, 8 Ω, BTL)
<b>Minimum load (SE   BTL)</b>	3.5 Ω   7 Ω
<b>Nominal voltage gain (SE   BTL)</b>	29.4 dB   35.4 dB
<b>Frequency response</b>	20 Hz – 20 kHz (±0.5 dB)
<b>Bandwidth limit</b>	3 Hz – 80 kHz (-3 dB ref.)
<b>Distortion</b>	<0.004% THD+N (1 kHz, 10-180 W 4 Ω, max gain)   <0.005% THD+N (1 kHz, 1-180 W, 4 Ω, lowered gain)
<b>Damping factor</b>	>600 (8 Ω, 20 – 500 Hz)
<b>Dynamic range</b>	>113 dB S/N, (A-weighted at 2x400 W, 4 Ω)
<b>Standby power consumption</b>	US mains: 0.19 W, EU mains: 0.25 W
<b>Idle power consumption</b>	US mains: 18.4 W, EU mains: 17.5 W
<b>Auto on trigger level</b>	3 mV
<b>Standby mode timer</b>	>10 minutes
<b>Input sensitivity (SE   BTL)</b>	~1.99 Vp (~1.41 Vrms)   ~1.97 Vp (~1.39 Vrms)
<b>Inputs (RCA   XLR)</b>	High Quality RCA Connections   NEUTRIK A-Series Connectors
<b>Input impedance (RCA   XLR)</b>	>25 kΩ   >25 kΩ
<b>Outputs (RCA) loop out</b>	High Quality RCA Connections
<b>Outputs (binding posts)</b>	High Quality Copper binding posts (CMC®)
<b>Output impedance</b>	<18 mΩ, (20 - 2000 Hz)
<b>Dimensions (W x D x H)</b>	200 x 352 x 69(*80) mm   7.9 x 13.9 x 2.7(*3.1) inches (*with feet)
<b>Weight</b>	3.1 kg   6.3 lbs

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# Accessories

Short Left 19" Bracket  
EAN: 7340030420212  
Article: 20057



Short Right 19" Bracket  
EAN: 7340030420229  
Article: 20058



Middle 19" Bracket  
EAN: 7340030420236  
Article: 20059



Long Right 19" Bracket  
EAN: 7340030420243  
Article: 20060



# Notes



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