

# GRAS 12AX

4-Channel CCP Power Module with Gain



Connection: CCP Channels: 4  
Gain: 0, 20, 40 dB

The GRAS 12AX CCP (Constant Current Power) Supply is a low-noise 4-channel power supply for CCP microphone sets.

## Introduction

The GRAS 12AX is a constant current power module for powering 4 CCP preamplifiers/microphone sets.

It is optimized for integration into a production environment. The anodized enclosure is sturdy and offers good protection against dirt, dust, and moisture.

Except for the power switch, it has no external user controls. In this way unintended change of the gain settings is avoided.

## Design

As the 12AX is a 4-channel unit, it has 8 BNC connectors, 4 for the input from the microphones and 4 for the output to the analyzer. All connectors are mounted on the rear panel.

It provides 5 mA of constant current at +28 VDC compliance voltage level.

The gain is selectable individually for each channel by means of jumpers. These are accessible by removing a cover at the top plate. The gain can be set to 0, 20 or 40 dB. The chosen gain is indicated by green LEDs on the front panel.

It has error detection at the input and overload detection at the output. The error detection at the input warns against a DC error, typically a short or a broken connection. The overload detection is applied at the output. If the signal exceeds 22 VAC<sup>P-P</sup>, the overload detection will warn about it. DC error and overload are indicated by red LEDs on the front panel, one for each channel.

It has a low noise floor and a wide frequency range: At 0 dB gain, the noise is 1.5  $\mu$ V and the frequency range from 1 to 300 kHz (+1/-3 dB).

It can handle long cables without significant

degradation of the frequency performance.

It operates from 9 - 18 VDC from a mains voltage adapter which is included.

## Warranty

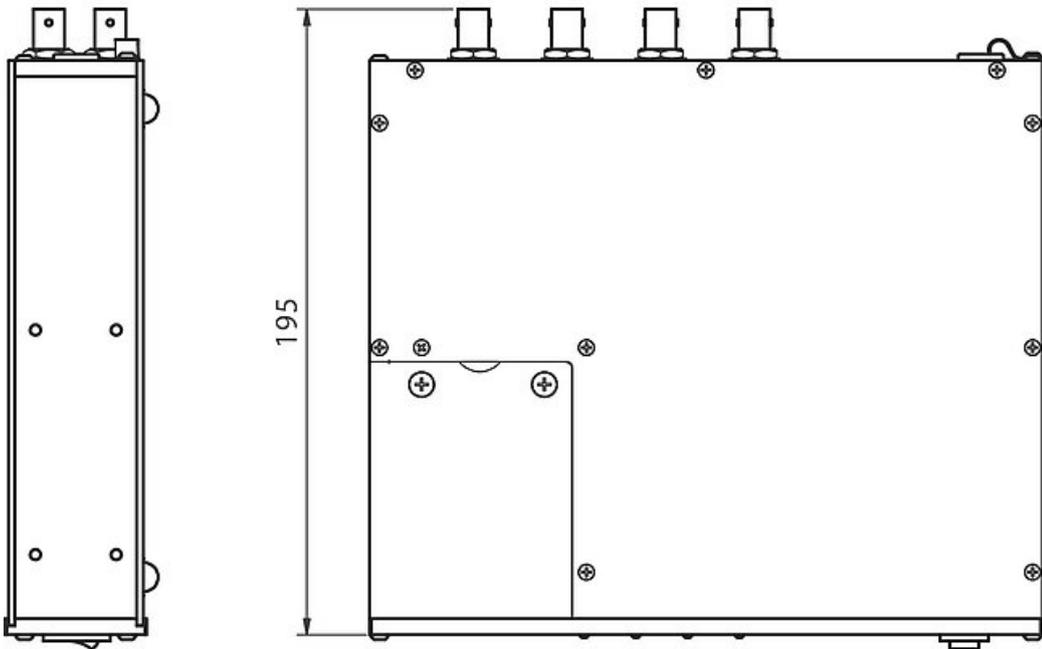
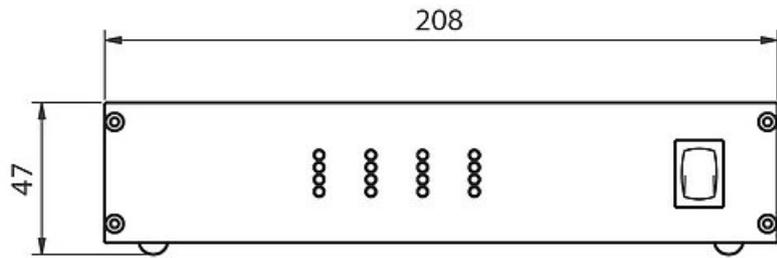
All GRAS products are made of high-quality materials that will ensure life-long stability and robustness. The 12AX is delivered with a 2-year warranty. The warranty does not cover products that are damaged due to negligent use.

## Service and Repairs

All repairs are made at GRAS International Support Center located in Denmark. Our Support Center is equipped with the newest test equipment and staffed with dedicated and highly skilled engineers. Upon request, we make cost estimates based on fixed repair categories. If a product covered by warranty is sent for service, it is repaired free of charge, unless the damage is the result of negligent use or other violations of the warranty.

Frequency response (+1,-3 dB) @ Gain = 0 dB	Hz	1 to 300 k
Frequency response (+1,-3 dB) @ Gain = 20 dB	Hz	1 to 200 k
Frequency response (+1,-3 dB) @ Gain = 40 dB	Hz	1 to 70 k
Output channel(s)		4
Output impedance	$\Omega$	75
Direct coupling input to output		No
Inherent noise (20 to 20 kHz) @ Gain = 0 dB	$\mu\text{Vrms}$	1.5
Inherent noise (20 to 20 kHz) @ Gain = 20 dB	$\mu\text{Vrms}$	15
Inherent noise (20 to 20 kHz) @ Gain = 40 dB	$\mu\text{Vrms}$	150
Gain settings, 20 dB steps	dB	0, 20 and 40
Gain error	dB	$\pm 0.15$ dB
Linear mode		Yes
Type		Constant Current Power (CCP)
Input channel, CCP		4
CCP preamplifier supply @ +28 V	mA	5
Overload indication		Yes
PC controlable		No
External filter option		No
Power amplifier overload detection		No
Power supply, external	Vdc	9 to 18
Battery low indication		No
Temperature range, operation	$^{\circ}\text{C} / ^{\circ}\text{F}$	-10 to +50 / 14 to 122
Weight	g / oz	1100 / 38.8

GRAS Sound & Vibration reserves the right to change specifications and accessories without notice.



GS0716  
12AX

All dimensions in mm.



## Included Items

One of these Power Supplies:	(Depending on country)
GRAS AB0002	Power supply 230 VAC to 15 VDC. EU-connector
GRAS AB0006	Power supply 230 VAC to 15 VDC. UK-connector
GRAS AB0003	Power supply 120 VAC to 15 VDC. USA-connector

## Optional items

RA0321	Rack Mounting Kit (for mounting 2 x 12AX side by side)
<a href="#">12AX-S20</a>	12AX Power Module (Excluding Power Supply)

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# GRAS Worldwide

Subsidiaries and distributors in more than 40 countries

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## About GRAS Sound & Vibration

GRAS is a worldwide leader in the sound and vibration industry. We develop and manufacture state-of-the-art measurement microphones to industries where acoustic measuring accuracy and repeatability is of utmost importance in R&D, QA and production. This includes applications and solutions for customers within the fields of aerospace, automotive, audiology, and consumer electronics. GRAS microphones are designed to live up to the high quality, durability and accuracy that our customers have come to expect and trust.

GRAS Sound & Vibration is represented through subsidiaries and distributors in more than 40 countries and is part of Axiometrix Solutions, a leading test solutions provider comprised of globally recognized measurement brands. Read more at [www.GRASacoustics.com](http://www.GRASacoustics.com)

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