GRAS 12AG

8-Channel Power Module with gain and filters

Connection: Traditional 200 V
Channel(s): 8

The GRAS Power Module 12AG is an 8-channel power supply for preamplifiers used with condenser microphones. It is for use in multichannel acoustic measurements in both laboratory and field.

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Typical applications and use

- General-purpose measurements
- Precision measurements
- Sound-power measurements
- Multi-channel measurements

Design

Each channel has the following signal conditioning settings:

- linear-response
- A-weighting
- high-pass filtering

The 12AG can be powered either from a mains/line supply or from an external DC supply (12 V - 18 V), e.g. a car battery. It is built into a sturdy anodized aluminium cabinet.

The supply and polarization voltages are set by two pairs of switches, one common to channels 1 - 4 and one common to channels 5 - 8. The polarization voltage in each group can be set to 0 V — for prepolarized microphones, or 200 V — for externally polarized microphones

And the voltage supply for the preamplifiers can be set to 120 V — for maximum dynamic range, or 28 V — for minimum power consumption; may be important when using an external DC power supply.

The input to each channel is a 7-pin LEMO socket on the front panel which is wired up for GRAS microphone preamplifiers, e.g. 26AB, 26AC, 26AJ and 26AK, but is also compatible with other available makes of microphone preamplifiers.

The output of each channel is via a standard BNC connector also on the front panel as well as via one of the 4-channel VXI outputs on the rear panel.

Each channel has two overload indicators; one instantaneous, and one latched which can be reset by a common push button. The gain in each channel can be set from 0 dB to + 50 dB in steps of 10 dB.

The standard A-weighting filter in each channel complies with IEC Standard 60651: Sound levelmeters Type 0. The high-pass filter in each channel is a 3-pole Butterworth filter with a – 1 dB cut-off at a frequency of 20 Hz. This filter is for reducing unwanted low-frequency signals, e.g. caused by wind-induced noise on the microphone.

The preamplifier signal in each channel can be coupled directly to the output of the 12AG by selecting direct output. This makes the output of the preamplifier available free of any signal conditioning.

The cabinet of the 12AG is 1/2" of a standard 19-inch rack; meaning that 2 of these Power Modules can be mounted in a standard 19-inch rack using the AK0040 Rack-mounting System.

Warranty

All GRAS products are made of high-quality materials that will ensure life-long stability and robustness. The 12AG 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.

Specifications

CONDITIONING		.
Frequency response (±1.0 dB) @ Gain ≤40 dB	Hz	2 to 200 k
Frequency response (±1.0 dB) @ Gain 50 dB	Hz	2 to 100 k
Frequency response (±0.2 dB)	Hz	20 to 20 k
Output channel(s)		8
Output impedance	Ω	30
Direct coupling input to output		Yes
Inherent noise, LIN (20 Hz to 20 kHz), grounded input	µVrms	<4
Inherent noise, A-weighted, (20 Hz to 20 kHz), grounded input	µVrms	<2.8
Inherent noise, A-weighted with dummy preamplifier (20 Hz to 20 kHz),	µVrms	<4
Inherent noise, LIN with dummy micophone (20 Hz to 20 kHz)	µVrms	<5.6
Gain settings, 10 dB steps	dB	0 to + 50
Gain error	dB	< 0.2
A-weighting filter according to		IEC 60651 type 0
High-pass filter		3-pole Butterworth, -1 dB @ 20 Hz
Linear mode		Yes
SysCheck level @ 1 kHz	Vrms	1
Type		Traditional power supply (LEMO)
Input channel(s), traditional power supply		8
Channel separation (20 Hz to 20 kHz)	dB	>65
Preamplifier supply	V	28 / 120
Polarization voltage	V	0 / 200
Overload indication		Yes
PC controlable		No
POWER AMPLIFIER		.
External filter option		No

Power amplifier overload detection		No
Power supply, external (±10 %)	Vac	110 to 240
Power supply, external	Vdc	12 to 18
Power consumption	mA	100
Battery low indication		No
Fuse	mA	1250 (slow)
Temperature range, operation	°C / °F	-10 to +50 / 14 to 122
Weight with batteries	g / oz	2.5 k / 88.185
Weight	g / oz	2500.00 / 88.18

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

Ordering Info

GRAS AK0040	19″ Rack mounting System

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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 and related equipment for industries where acoustic measuring accuracy and repeatability are of the utmost importance. This includes applications and solutions for customers within the fields of aerospace, automotive, audiology, consumer electronics and other highly demanding industries. GRAS microphones are designed to live up to the high quality, durability and accuracy that our customers have come to expect, trust and require.
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

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