

# GRAS 12AN

4-Channel Power Module



Connection: Traditional 200 V  
Channel(s): 4

The GRAS 12AN 4-Channel Power Module is a four-channel power module with 7-pin LEMO 1 B connectors for externally polarized measurement microphone sets. The inputs are AC-coupled directly to the outputs for a flat frequency response down to 0.05 Hz. It provides the basic features for powering condenser measurement microphones. The polarization voltage can be selected to 200 V for externally polarized microphones or 0 V for prepolarized microphones. The supply voltage for the preamplifiers is  $\pm 15$  V.

## Typical Applications and Use

The special features of the 12AN Power Module make it suitable for general use.

The 12AN Power Module is for general use in acoustic measurements both in the laboratory and in the field. If you are looking for a cost-effective solution or a multi-channel power module with direct coupling (no filters) to the output, the 12AN Power Module is a logical choice.

The input signal is coupled to the output without any filtering or A-weighting network.

Because of this, the 12AN Power Module is ideally suited for infra-sound measurements. The low-frequency cut-off at 0.05 Hz is so low that it will not be the limiting factor in infra-sound measurements. A suitable microphone system for this application is the combination of the [GRAS 40AN 1/2" Free-field microphone, low frequencies](#), and the matching preamplifier, the [GRAS 26HG 1/4" Preamplifier, High Impedance](#).

The polarization voltage is very stable and the sensitivity of the microphone is therefore kept very stable. For this reason, the 12AN Power Module is well suited for microphone calibration.

The 12AN Power Module has four channels for multi-channel measurements and calibration setups requiring more than one channel. You can operate the 12AN Power Module on batteries or an external DC power supply. A battery indicator monitors the battery condition.

## Compatibility

The 12AN Power Module can be used with all standard, externally polarized microphone sets and standard frontends or data acquisition units.

However, when setting up a measurement chain

with the 12AN Power Module, you need to ensure proper matching of the components so that signal levels and cable lengths do not interfere with the validity of your measurements.

## Quality and warranty

The 12AN Power Module is built into a sturdy, anodized aluminum case and built to high-quality standards which enables GRAS to offer 2 years warranty against defective materials and workmanship.

## Service

Before leaving the factory, all GRAS products are tested. Should a power module become defective, it can be sent to GRAS for repair.

|  |                                       |                                 |
|--|---------------------------------------|---------------------------------|
| CONDITIONING                               |                                       |                                 |
| Frequency response ( $\pm 0.2$ dB)         | Hz                                    | 0.05 to 200 k                   |
| Output channel(s)                          |                                       | 4                               |
| Direct coupling input to output            |                                       | No                              |
| Linear mode                                |                                       | No                              |
| Type                                       |                                       | Traditional power supply (LEMO) |
| Input channel(s), traditional power supply |                                       | 4                               |
| Preamplifier supply                        | V                                     | $\pm 15$                        |
| Polarization voltage                       | V                                     | 0 / 200                         |
| Overload indication                        |                                       | No                              |
| PC controlable                             |                                       | No                              |
| External filter option                     |                                       | No                              |
| Power amplifier overload detection         |                                       | No                              |
| POWER SUPPLY                               |                                       |                                 |
| Power supply, battery                      |                                       | 4 x LR6 (AA)                    |
| Power supply, external                     | Vdc                                   | 6 to 20                         |
| Power consumption                          | mA                                    | 130                             |
| Battery life                               | h                                     | 25                              |
| Battery low indication                     |                                       | Yes                             |
| Fuse                                       | mA                                    | 160                             |
| Temperature range, operation               | $^{\circ}\text{C} / ^{\circ}\text{F}$ | -10 to +50 / 14 to 122          |
| Weight                                     | g / oz                                | 1,200 / 42,329                  |

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

## Extension cables with 7-pin LEMO connectors

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|                             |                             |
|-----------------------------|-----------------------------|
| <a href="#">GRAS AA0008</a> | 3 m                         |
| <a href="#">GRAS AA0009</a> | 10 m                        |
| GRAS AA0012                 | 30 m                        |
| GRAS AA0014                 | 100 m                       |
| GRAS AA0020-XX              | Custom, XX length in metres |

## Extension cables with BNC connectors

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|                             |                             |
|-----------------------------|-----------------------------|
| GRAS AA0034                 | 2 m                         |
| <a href="#">GRAS AA0035</a> | 3 m                         |
| GRAS AA0036                 | 5 m                         |
| <a href="#">GRAS AA0037</a> | 10 m                        |
| GRAS AA0038                 | 30 m                        |
| GRAS AA0039-XX              | Custom, XX length in metres |

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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