½-inch Preamps. Types 26AG, -AH, -AJ, -AK, AM & -TK

Product Data and Specifications

Typical applications

- ***Precision measurements***
- ***Low-pressure measurements***
- ***General-purpose preamplifiers***

The G.R.A.S. ½-inch Preamplifiers Types 26AG, 26AH, 26AJ, 26AK, 26AM and 26TK are small robust units optimised for acoustic measurements using condenser microphones. They have a very low inherent noise level, a wide dynamic range and a frequency response from below 2 Hz to above 200 kHz.

All G.R.A.S. microphone preamplifiers are based on a small ceramic thick-film substrate with a very high input impedance. The ceramic substrate is shielded by a guard ring to minimise the influence of stray capacitance and microphonic interference. The casing is made of stainless steel for maximum strength and durability. The small dimensions of these preamplifiers ensure reliable operation under humid conditions owing to the heat generated by internal power dissipation.

These preamplifiers are compatible with ½-inch microphones as defined in international standard IEC 1094 *Measurement Microphones, Part 4: Specifications for working standard microphones*. The mounting thread (11.7 mm - 60 UNS-2) is compatible with other available makes of similar microphone preamplifiers.

Preamplifier Type 26AM (Fig. 1) is provided with a 3 m high-quality cable terminating with a 7-pin LEMO series 1B plug (Fig. 5).

Preamplifier Type 26AH is similar to 26AM but has a built-in SysCheck capability. This enables *in-situ* checks of the complete measurement chain from microphone to analyser. The SysCheck technique works by modulating the microphone polarisation voltage.

Fig. 1 ½-inch preamplifiers with cable; Types 26AH and 26AM

Fig. 2 ½-inch preamplifiers with integrated plug; Types 26AG, 26AJ, 26AK and 26TK

Preamplifier Type 26AK (Fig. 2) is integrated with a 7-pin LEMO series 1B plug.

Preamplifier Type 26AJ is similar to 26AK but comes with the SysCheck facility.

Preamplifier Type 26AG is similar to type 26AK but comes with an insert-voltage calibration facility for determining the open-circuit sensitivity of condenser microphones.

Preamplifier Type 26TK is similar to 26AK but comes with a built-in TEDS* chip, and can be programmed as a single unit with a microphone fitted.

* Transducer Electronic Data Sheet - as proposed by IEEE-P1451.4

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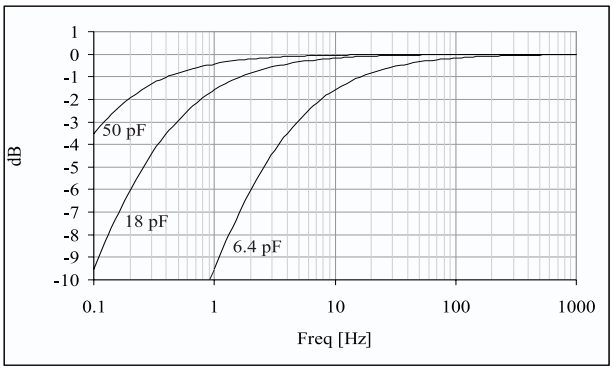

Fig. 3 Low frequency response for various microphone capacities

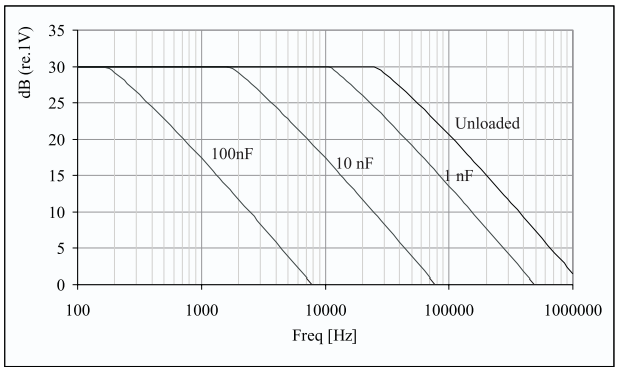

Fig. 4 Max. rms output signal for various cable loads with 120 V supply

Cables for Types 26AK, 26AG, 26AJ and 26TK, and extension cables for Types 26AH and 26AM are available in lengths of: 3 meters (AA0008), 10 meters (AA0009), 30 meters (AA0012) and 100 meters (AA0014). Special lengths (AA0020-xx) can be made to order.

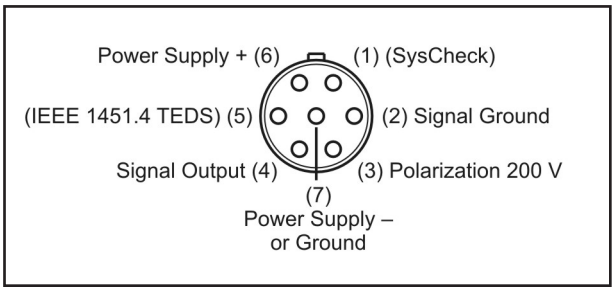

Fig. 5 7-pin LEMO plug 1B male (ext. view)

Specifications

Frequency response*:
2.5 Hz - 200 kHz . . . . . ±0.2 dB

Input impedance
26AH, 26AJ:. . . . . 20 GΩ, 0.65 pF
26AK, 26AM:. . . . . 20 GΩ, 0.4 pF

Output impedance*:
Typical . . . . . 75 Ω

Noise*:
A-weighted: . . . . . ≤2.5 µV rms
(typically 1.8 µV rms)
Linear (20 Hz - 20 kHz):. . . . . ≤6 µV rms
(typically 3.5 µV rms)

Gain*:
Typical 26AH, 26AJ: . . . . . -0.35 dB
Typical 26AK, 26AM: . . . . . -0.25 dB

Power supply:
Single:. . . . . 28 V (0.7 mA) to 120 V (2.5 mA)
Dual:. . . . . ±14 V (0.7 mA) to ±60 V (2.5 mA)

Maximum signal-output voltage (peak):
from ±10 V to ±50 V

Temperature:
Operation:. . . . . -30 °C to +70 °C
Storage:. . . . . -40 °C to +85 °C

Relative humidity:
Operation:. . . . . 0 to 95 %
Storage:. . . . . 0 to 95 %

Dimensions (ex. cable):
Diameter: . . . . . 12.7 mm (½-inch)
Length: . . . . . 77.5 mm (3.05 inches)
Weight: . . . . . 33 g (1.1 oz)

Accessories available:
AA0008:. . . . . 3 m extension cable (7-pin 1B LEMO)
AA0009:. . . . . 10 m extension cable (7-pin 1B LEMO)
AA0012:. . . . . 30 m extension cable (7-pin 1B LEMO)
AA0014:. . . . . 100 m extension cable (7-pin 1B LEMO)
RA0017: . . . . 1-inch to ½-inch adaptor for use with G.R.A.S. 1-inch microphones
RA0019: . . . . ¼-inch to ½-inch adaptor for use with G.R.A.S. ¼-inch microphones

* Measured with 20 pF ½″ dummy microphone

G.R.A.S. Sound & Vibration reserves the right to change specifications and accessories without notice

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