

1/4-inch Preamps. Types 26AA, -AB, -AC, -AL, AN & -TC

Product Data and Specifications

Typical applications

- **High frequency measurements**
- **High pressure measurements**
- **Sound intensity measurements**
- **Near-field measurements**

The G.R.A.S. 1/4-inch Preamplifiers Types 26AA, 26AB, 26AC, 26AL and 26TC 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.

Preamplifier Type 26AB (Fig. 2) is integrated with a 7-pin LEMO series 1B plug (Fig. 5) and includes an adaptor (AF0008) for G.R.A.S. 1/2-inch microphones. A 3 m cable, AA0008, is available with 7-pin to 7-pin LEMO plugs. Other lengths are also available and special lengths can be made to order.

Preamplifier Type 26AC (Fig. 1) is provided with a 3 m lightweight cable terminating in a 7-pin LEMO series 1B plug (Fig. 5). The cable is only 2.5 mm in diameter and will withstand temperatures from -40°C to +150°C. An adaptor (GR0010) for G.R.A.S. 1/2-inch microphones is included.

Preamplifier Type 26AN is similar to 26AB but with insert-voltage calibration facility for determining open-circuit sensitivity of condenser microphones.



Fig. 1 1/4-inch preamplifiers with cable; Types 26AA, 26AC, 26AL and 26TC



Fig. 2 1/4-inch preamplifiers with integrated plug; Type 26AB and (above) adaptor for G.R.A.S. 1/2-inch microphones

Preamplifier Type 26AL is similar to 26AC 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.

Preamplifier Type 26AA is similar to Type 26AC but is supplied with 30 cm cable terminating with a 4-pin LEMO FGG.0B.304 plug (Fig. 6). It is for use with the G.R.A.S. Sound Intensity Probe Type 50 AI. An extension cable AA 0007 is available with a 4-pin LEMO connector at one end and a 7-pin LEMO series 1B plug at the other end.

Preamplifier Type 26TC is similar to 26AC 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

G.R.A.S.
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¼-inch Preamplifier Type 26AA, 26AB, 26AC, 26AL 26AN and 26TC

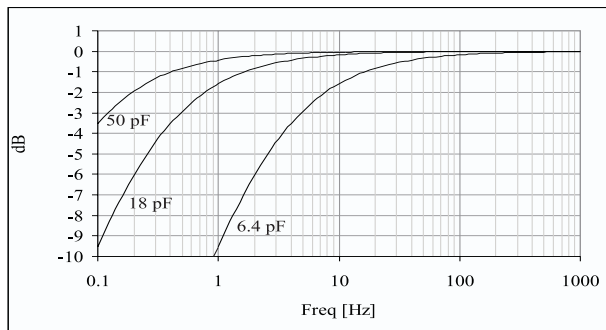


Fig. 3 Low frequency response for various microphone capacities

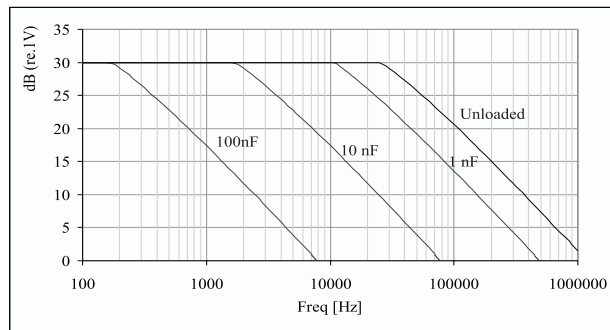


Fig. 4 Max. rms output signal for various cable loads with 120 V supply

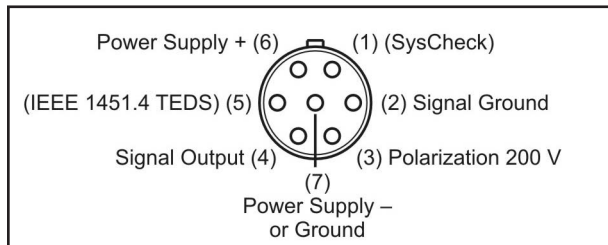


Fig. 5 7-pin LEMO plug 1B male (ext. view)

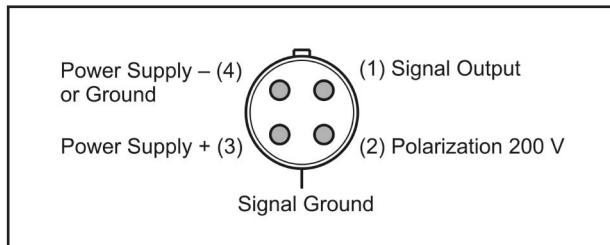


Fig. 6 4-pin LEMO plug 0B male (ext. view)

Specifications

Frequency response (18pF/small signal):

2 Hz - 200 kHz ± 0.2 dB

Input impedance:

20 G Ω , 0.4 pF

Output impedance (Cs = 20 pF, f=1000Hz):

Typical 55 Ω

Noise (measured with 20 pF ½-inch dummy mic.):

A-weighted: ≤ 2.2 μ V rms
(typically 1.8 μ V rms)

Linear (20 Hz - 20 kHz): ≤ 6 μ V rms
(typically 3.5 μ V rms)

Gain:

Typical: -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: 26AA , 26AC, 26AL and 26TC

Diameter: 6.35 mm (¼-inch)

Length: 43 mm (1.7 inches)

Weight (without cable): 6 g (0.2 oz)

Dimensions: 26AB and 26AN:

Diameter: 12.0 mm (0.47 inches)

Length: 67.6 mm (2.66 inches)

Weight: 22 g (0.8 oz)

Accessories available:

AA0007: 2m extension cable for 26AA (4-pin 0B LEMO - 7-pin 1B LEMO)

AA0008: 3m exten. cable for 26AB/C /L/TC (7-pin 1B LEMO - 7-pin 1B LEMO)

AA0009: 10m exten. cable for 26AB/C /L/TC (7-pin 1B LEMO - 7-pin 1B LEMO)

GR0010: ¼-inch to ½-inch adaptor for use with Types 26AA /C /L /TC and G.R.A.S. ½-inch microphones (GR0010 included with 26AC /L/TC)

RA0001: ¼ to ½-inch right angle adaptor for use with 26AA /B /C /L /TC and ½-inch IEC 1094 Type WS2 microphones

RA0003: ¼-inch to ½-inch straight adaptor for use with 26AA /B /C/TC and ½-inch IEC 1094 Type WS2 microphones

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

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