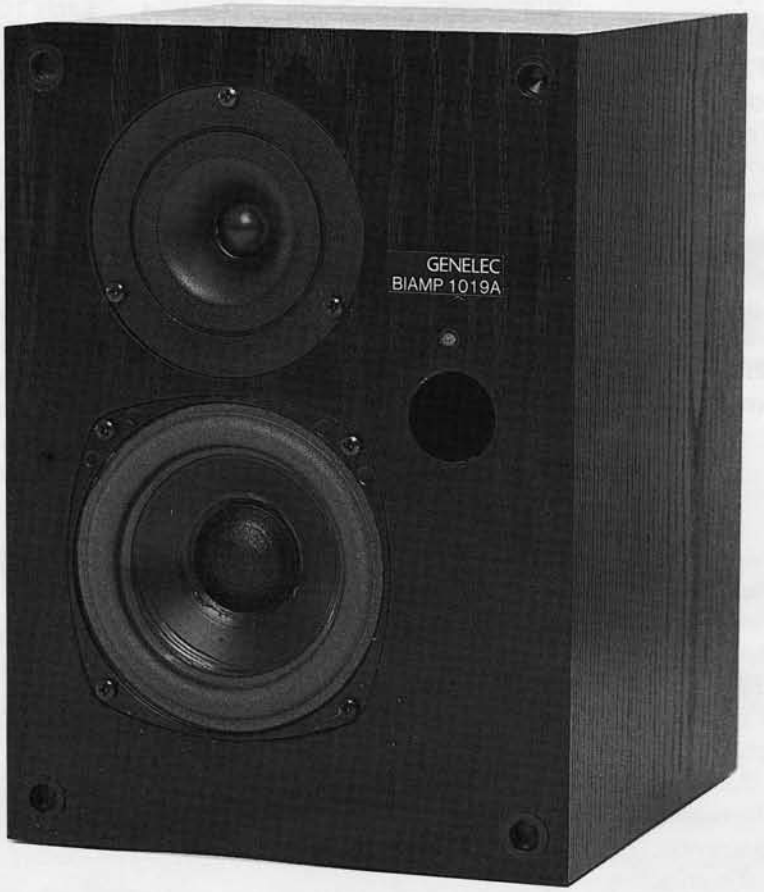
Genelec Biamp 1019A Monitoring Speakers

Operating Manual



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1. General Description

System

The GENELEC 1019A is a two way active monitor, combining drivers, amplifiers and an active crossover in a single unit. The 1019A is designed as a compact Near Field monitor for use in OB-vans, in small control rooms, continuity studios, video editing suites, etc, where space is limited. The 1019A is aimed at high quality sound reproduction where there is less demand for high SPL's.

Drivers

The bass and midrange frequencies are reproduced by a 125mm cone driver loaded in a 7 litre vented cabinet. The lower -3 dB point lies at 60 Hz but the low frequency response extends as far as 40 Hz.

A 21mm soft dome tweeter loaded in a short horn is used for high frequency reproduction. The upper -3 dB point lies at 20 kHz and the high frequency response extends to 22 kHz. The crossover frequency is 3.5 kHz.

Crossover

The active crossover network consists of two parallel bandpass filters. Acoustically the filters are complementary and the driver roll-off is of 24 dB/octave. Filters include delay compensation for the tweeter. Bass and treble tone controls with 2 dB increments are included in the crossover to balance the monitor in different acoustic environments. The crossover network contains an active input stage, a volume control and an optional mic input may be added.

Amplifier

The bass and treble amplifiers produce 35 and 20 watts respectively of peak power. The amplifiers are capable of driving the system to peak acoustic levels of 115 dB SPL (per pair). Electronic drivers protection is incorporated to protect the tweeter driver against overload. Continuous output powers are limited to protection levels of 7 V RMS for the treble driver. Both IM and THD distortions are kept to a minimum within the amplifier (< 0.2 %). The power consumption of the amplifiers when idling and at full output are 5 and 40 VA respectively.

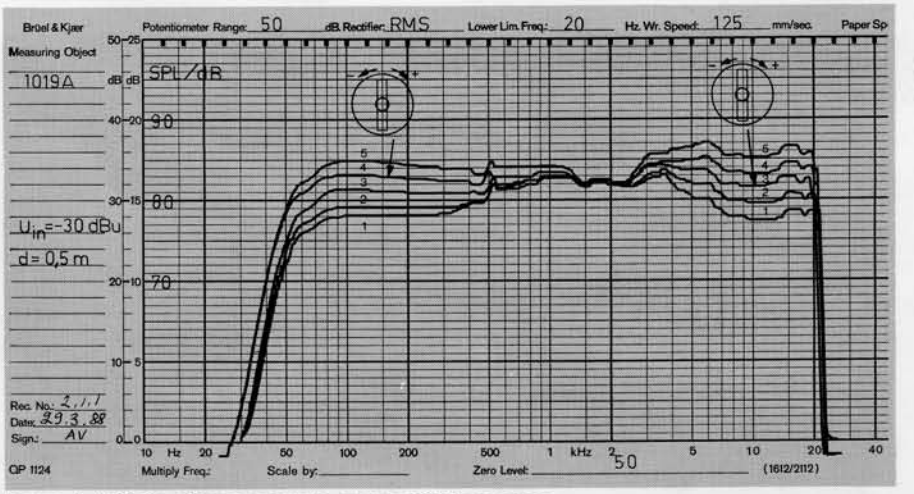

Figure 1. Effects of tone controls on tree field response

Integrated construction

Maintenance of the 1019A is minimised by its highly integrated and rugged construction. The amplifier unit is mounted to the speaker enclosure on quick release hinges, giving easy access to the circuit board.

2. Installation

Each 1019A active monitor is supplied with an integrated amplifier unit, a mains cable, a speaker grille and an operating manual. Once unpacked, place the loudspeaker in its required listening position, taking note of the line of the listening axis (see figure 2).

Before connecting up, ensure that the mains supply is switched off (see figure 5) and that the mains supply matches that required by the speaker, nominally 220V 50 Hz, unless otherwise stated. Audio input is made via a 10k Ohm

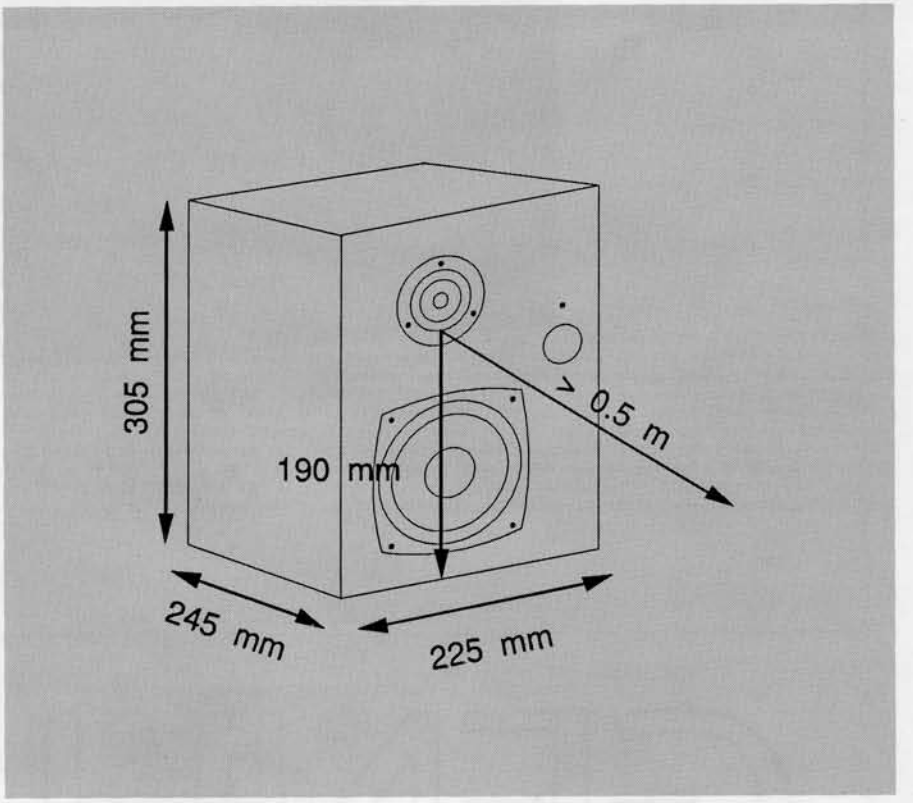

Figure 2. Speaker acoustic axis and dimensions

balanced XLR, but unbalanced leads may be used as long as pin 3 is grounded to pin 1 in the XLR (see figure 3).

Once connection has been made, the speakers are ready to be powered-up. Adjustment of the input sensitivity can be made to match that of the mixing desk, by use of the input level control on the rear panel of the amplifier.

The acoustic response of the system may also be adjusted to match the acoustic environment. This is done by using the bass and treble tone controls which equip the BIAMP 1019A. A flat free field response is achieved by tone control settings as follows: bass (bass curve No.5) and treble (treble curve No.3) . This setting is recommended for use when the speaker is free standing, far from reflecting walls or other surfaces. When the speakers are mounted near a reflecting wall or for example are being used for near field listening above a mixing desk, a decrease of bass level of approximately 3-6 dB is often necessary. This corresponds to a bass control setting according to curves No.2 or 3. A corner mounted speaker will often result in a bass level setting according to curve No.1 to achieve the flattest response. For the treble adjustment it is seldom necessary to make adjustment of more than ± 2 dB (ie. one increment). See figure 4 for tone control positions.

3. Maintenance

No user serviceable parts are to be found within the amplifier unit. Any maintenance or repair of the 1019A unit should only be undertaken by qualified service personnel. Ensure that if fuse replacement is required, only fuses of the appropriate voltage and current ratings are used. REMEMBER to disconnect the power supply by removal of the mains cable, before fuse replacement.

4. Safety Considerations

Although the 1019A has been designed in accordance with international safety standards, to ensure the safe operation and to maintain the instrument under safe operating conditions, the following warnings and cautions should be observed. Servicing and adjustment should only be performed by qualified service personnel. Opening the amplifier unit is strictly prohibited except by qualified service personnel who are aware of the hazards involved. It is forbidden to use this product with an unearthed mains cable, which may lead to personal injury.

WARNING! This equipment is capable of delivering Sound Pressure Levels in excess of 90 dB, which may cause permanent hearing damage.

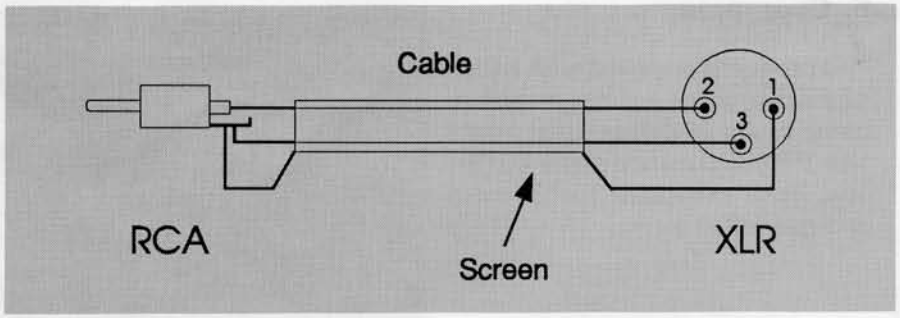

Figure 3 . XLR connection if unbalanced output is required.

5. Accessories

Several additional options are available for the 1019A:

Opt 01 -Flight case
Opt 02 -Mic Pre-amp
Opt 04 -Wall mount
Opt 05 -Floor stand
Opt 10 -Soft carrying case

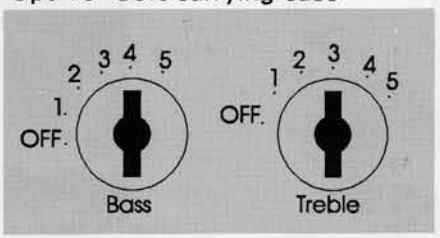

Figure 4. Tone controls

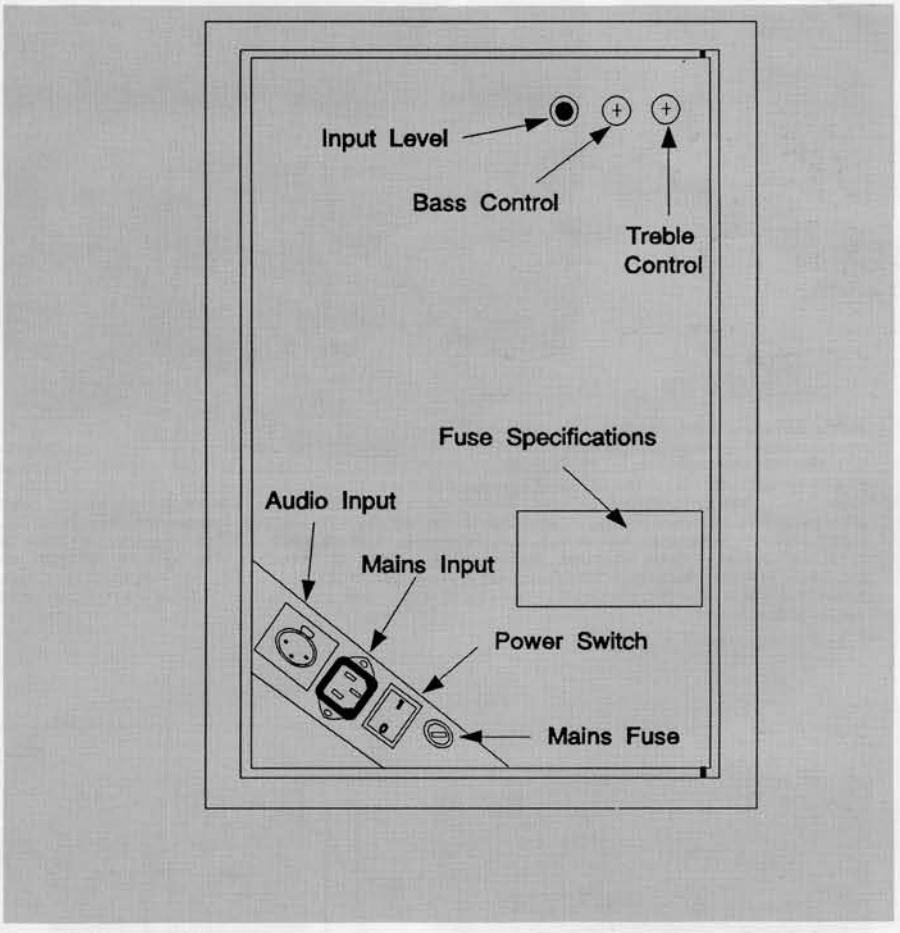

Figure 5. Rear panel layout.

6. Guarantee

This product is supplied with a ONE YEAR guarantee against manufacturing faults or defects that might alter the performance of the 1019A unit. Refer to supplier for full sales and guarantee terms.

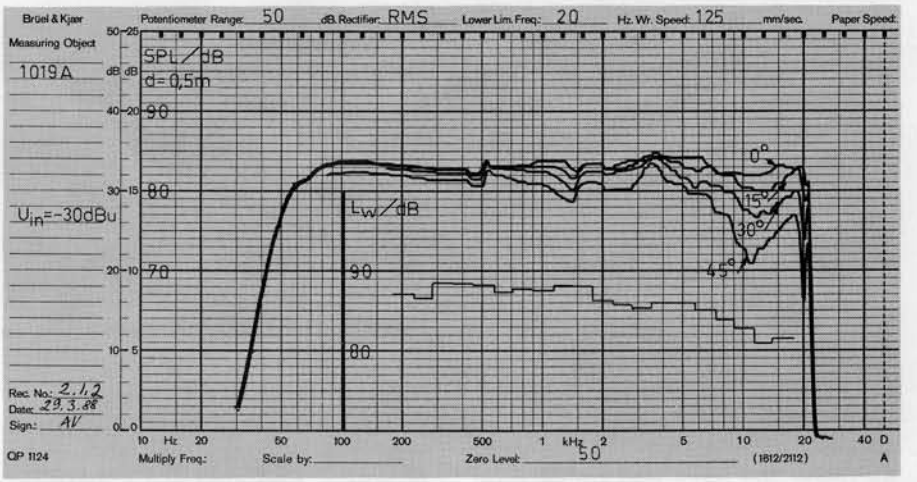

Figure 6. 1019A Directivity characteristic and power response

Speaker position	Bass	Treble
Free Field (factory setting)	4	3
Corner mounting	1	2-4
Near field	2/3	2-4

Figure 7. Suggested tone control settings.

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