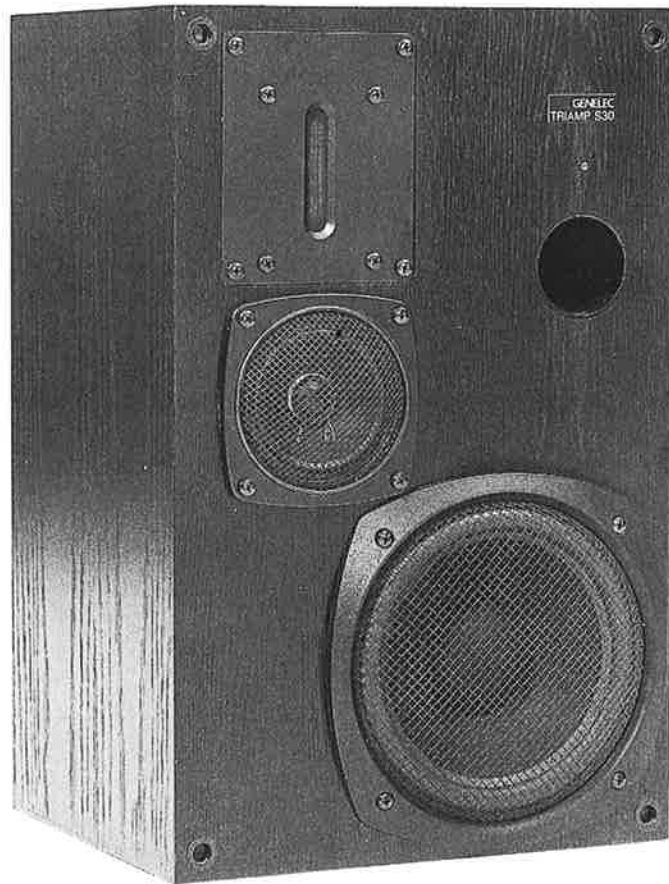


**Operating  
Manual**

**Genelec S30 Series  
Monitoring Speakers**



**GENELEC®**

# 1. General description

## System

The GENELEC S30 series is a range of three-way monitors, combining drivers, amplifiers and active cross-overs in a single unit. The S30 series is designed for use in small to medium sized locations where sound quality at moderately high SPL's is essential. The S30B is a higher power model of the S30. Both types are available in nearfield configuration. The S30's are used as free standing monitors in studios, broadcasting, post production facilities, at work stations and in mobile vans.

## Drivers

Low frequencies are reproduced by an 8" long-throw woofer, loaded in a 24 litre vented cabinet. The bass driver uses a very large magnet and high power handling capability to reach low frequencies and high acoustic output (SPL) in a small enclosure. The -3 dB point lies at 42 Hz and the low frequency response extends to 35 Hz.

The midrange frequencies are reproduced by a carefully designed 80 mm cone driver, impregnated to minimise coloration. As a result, the midrange drivers response actually extends well beyond the range required by the crossover. The entire driver is sealed in a cast aluminum alloy housing to prevent chassis ringing and interference with other drivers.

The high frequency driver is an in-house designed and produced direct radiating ribbon tweeter. It has a moving mass of only 8 mg, a total flux of 1 milliWeber, and a frequency response which extends far into the ultrasonic range. The upper -3 dB point lies at 25 kHz. The S30B employs a small Directivity Control Waveguide (DCW) to improve the tweeters sensitivity and overall directivity.

## Crossover

The active crossover network consists of three parallel bandpass filters. The crossover frequencies are 380 Hz and 4 kHz and the driver

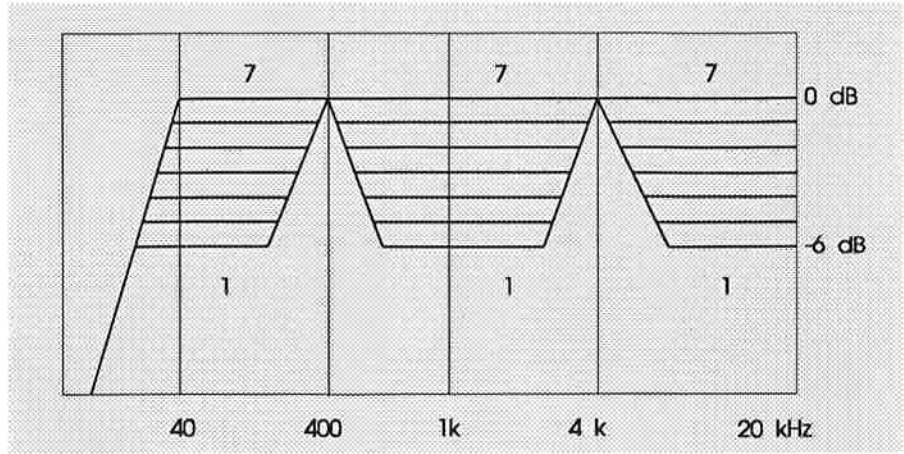


Figure 1. Schematic diagram of effects of tone controls on free field response.

roll-off is of 18 dB/octave. Bass, midrange and treble balance can be varied to match the acoustic environment by the use of three tone controls, using 1 dB increments. The low frequency roll-off control (located within the amplifier unit), which is effective below 43 Hz, has four 2 dB increments to allow refined equalization for differing loud-

speaker locations. The crossover network also contains an active balanced input stage and an input level control.

## Amplifier

The bass, midrange and treble amplifiers, of the S30 produce 65, 65 and 50 watts, respectively, of peak power (110, 110 and 90 watts for B models). The amplifiers are capable of driving the system to peak acoustic levels of 122 and 125 dB SPL (per pair), for the S30 and S30B respectively. Electronic driver protection is incorporated to protect the midrange and tweeter drivers against overload. Continuous output powers are limited for the midrange and tweeter to protection levels of 5 (7 V RMS for B model) and 14 V RMS respectively. Both THD and IM distortion are kept to a minimum within the amplifier (< 0.1%). The power consumption when idling and at full output are 30 and 200 VA (220 VA for B model) respectively.

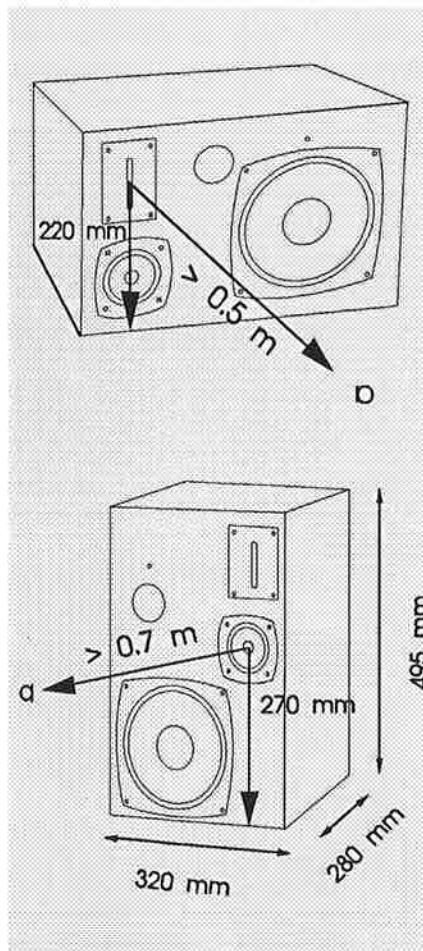


Figure 2. Speaker acoustic axis and dimensions for Near Field and Standard models.

## Integrated construction

Maintenance of the S30 is minimised by its highly integrated and rugged simple construction. The amplifier unit is mounted to the speaker enclosure on quick release hinges, giving easy access to both sides of the circuit board. A shortened version of this manual is printed on the rear panel of the amplifier.

## 2. Installation

Each S30 monitor is supplied with an integrated amplifier unit, a mains cable, a cover 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 switch is off (see figure 4) and that the mains supply matches that required by the speaker, nominally 220 V 50 Hz, unless otherwise stated. Audio input is made via a 10k Ohm balanced XLR, but unbalanced leads may be used as long as pin 3 is grounded to pin 1 of the XLR (see figure 3).

Once connection has been made, the speakers are ready to be powered-up. Adjustment of the input sensitivity of each speaker can be made to match that of the mixing desk, by use of the input level control on the rear panel (see figure 4). The acoustic response of the system may also have to be adjusted to match the acoustic environment. This is done by adjusting the three tone controls on the rear panel of the amplifier. The manufacturer's settings of these controls is 7,7,7 to give a flat anechoic response. A table on the rear panel of the S30 shows suggested settings for differing environments. Figure 1 shows the effects of the controls on the anechoic response.

## 3. Maintenance

No user serviceable parts are to be found within the amplifier unit. Any maintenance or repair of the S30 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 S30 has been designed in accordance with international safety standards, to ensure safe operation and to maintain the instrument under safe operating

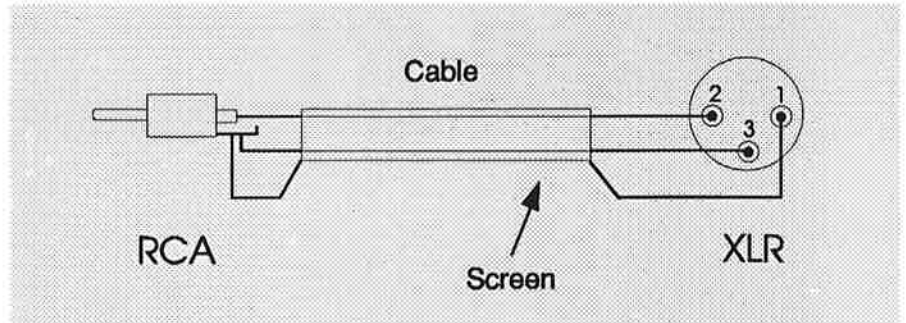


Figure 3 . XLR connection if unbalanced output is required.

conditions, the following warnings and cautions should be observed. Servicing and adjustment should only be performed by qualified service personnel.

Opening the amplifiers rear panel 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.

## 5. Accessories

Several additional options are available for the S30:

- Opt 01 - Flight case
- Opt 04 - Wall mount
- Opt 05 - Floor stand
- Opt 06 - Handles

## 6. Guarantee

This product is supplied with a ONE YEAR guarantee against manufacturing faults or defects that might alter the performance of the S30 unit. Refer to supplier for full sales and guarantee terms.

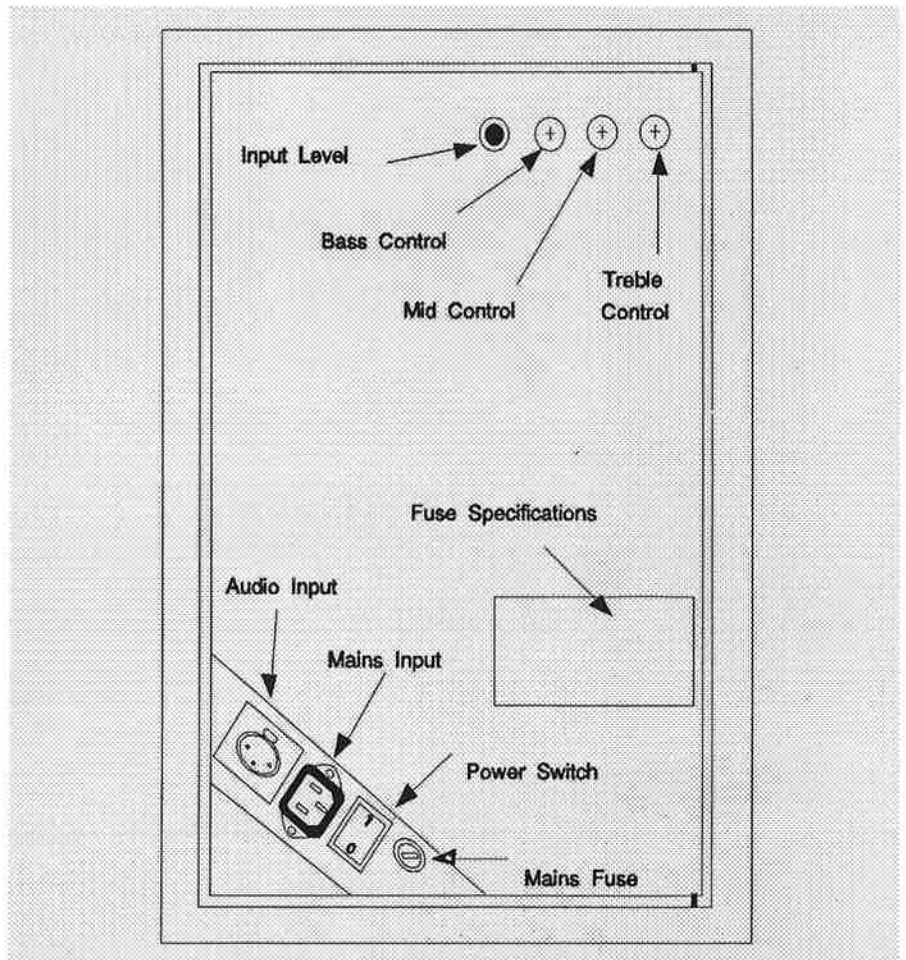


Figure 4. Rear panel layout.

Figure 5. Typical S30 free field response.

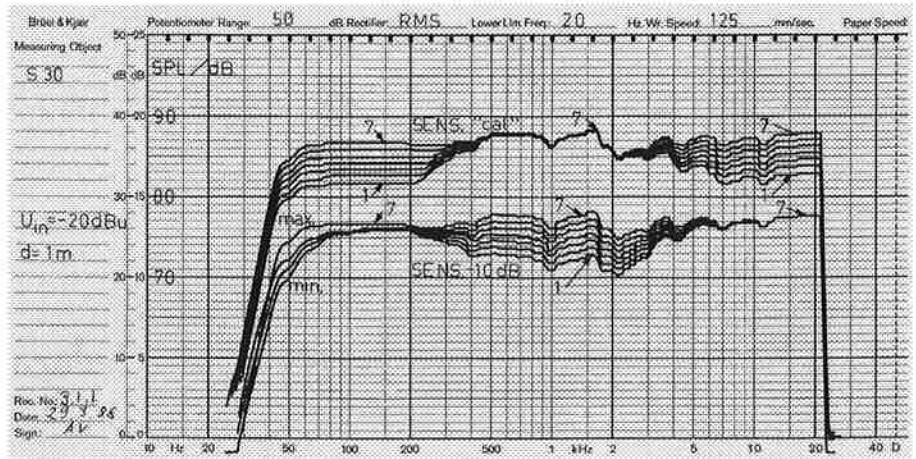
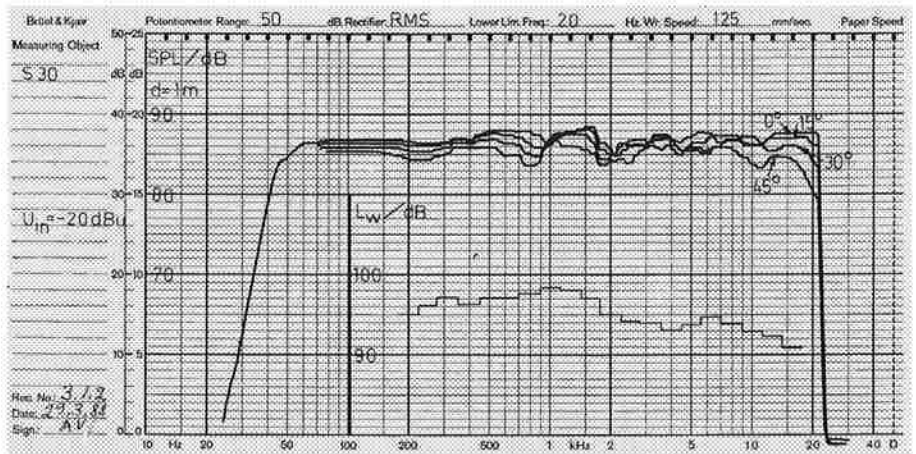


Figure 6. Typical S30 directivity characteristic



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