

## The MonoPulse Reference Model AA4 - Description

**Design objective.** MonoPulse loudspeakers have the primary objective of realism and holographic imaging. This is done by millimetre synchronism of the impulses and musical leading edges in sounds.

The **Model AA4** features two amplifiers per speaker, enabling bi-amping and bi-wiring. It is also a top quality active hi-fi loudspeaker in all other respects. The LF features 200mm 20Hz bass units with 550 watts peak power handling. The 28mm silk-domed HF units operate through to 22kHz.

These are separately driven by integral bi-wired class D amplifiers with a total of 400 watts.

**Description.** For its realism, MonoPulse uses unique patented asymmetric crossovers. These use only film capacitors and air-spaced coils. They are coupled to drive-units positioned to the millimetre.

The HF units have fourth-order circuits, ensuring a minimum crossover span and 24dB per octave attenuation from 3.5kHz. The LF units are directly connected, avoiding crossover distortions.

The bass responses of the Kevlar-coned LF units, in generous box volumes, are extended with a reflex tuning points at 32Hz, giving an in-room response down to 20Hz.

**Spikes.** The **Model AA4** is rear ported, so the use of spikes is an option. For hard uneven surfaces, such as stone, Blutack can be used. Medium nylon rounded end, and long steel spikes are included for wood or carpet, as appropriate. For initial positioning trials, it can be easiest not to use spikes.

**Positioning for bass.** The LF unit is 85cm from the floor. Try to avoid the speakers being 85cm from side or rear walls - if possible make these one greater and one less. Close to one wall is OK.

Few speakers are able to be sited ideally, so this is a guide to doing the best. If there is unwanted bass emphasis, see overleaf. We can also supply (FOC) bass damping tubes to be fitted in the bass ports.

**Position and imaging.** Conventional placement is with the units and listener in an equilateral triangle with 3m sides. The exceptional imaging of MonoPulse allows the speakers to be further apart, giving a dramatic central image, with the speakers in peripheral vision. Conversely, the listener can be closer in than normal. This can solve the problems of narrower rooms. If a small room is over-bright – see over.

**Adjustment for listening height.** The focus of impulse synchronism is at a listening height of 90cm - perfect for a low sofa or chair. For other positions, adjustment can be made by tilting the units for exact acoustic focus. 7.5mm front/rear spike difference, changes the focus up/down by 10cm at 3 metres out.

**Connections.** To use the **Model A** with an external amp, disconnect existing panel connections. The upper terminals are HF, the lower ones LF. These fit 4mm plugs, 7mm spades, or 5mm wire. They can be connected with links for single wiring – otherwise do not bridge these.

### Specifications.

**Speaker** - Impedance, 8 ohms. Power, 550 watts maximum. Sensitivity 91dB

**Amplifier** – Power @ 8 ohms, 4 x 100 watts total

**Size** - Height 110cm. Width 24cm (base 30cm). Depth 24cm. (base 30cm) Weight 18Kg per unit.