



MANUFACTURERS OF AUDIO EQUIPMENT

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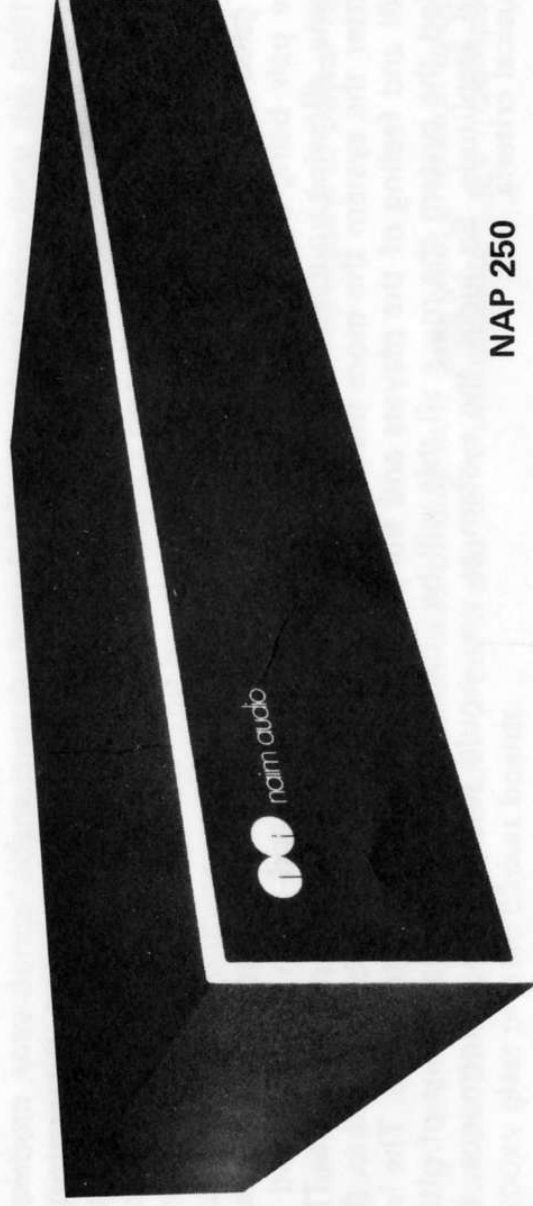
The System

PRECEDENCE

The choice of components for a hi-fi system is governed by the basic rule that no component can improve the quality of its incoming signal. The very best that any individual component can do is deal faithfully with its input without loss of musical information. The hierarchy thus established is simple and logical, and can be heard in any good demonstration room.

In a system for playing records the turntable comes first, then the arm, then the cartridge. The best turntable with a cheap arm and cartridge will always outperform a moderate turntable with the best possible arm and cartridge. Everything follows from the turntable, which is the most influential individual component in a system for playing records. The arm, in its turn, is more important than the cartridge, so that a good arm with a cheap cartridge will outperform a moderate arm with a better cartridge. The cartridge ranks third.

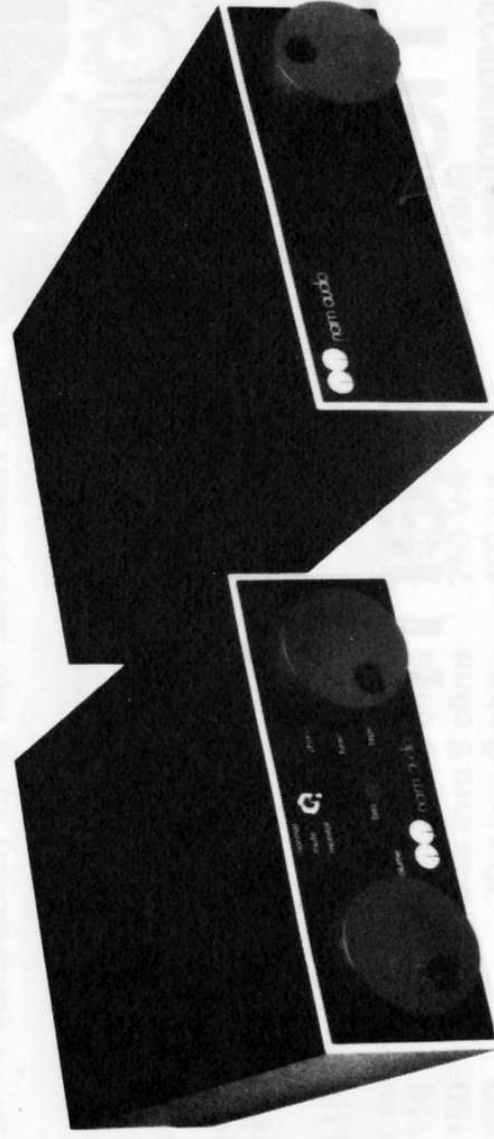
The preamplifier and amplifier come next, in that order. If the preamp is inadequate it will make nonsense of the demands of a good cartridge, but neither amp nor preamp can improve the quality of their incoming signal, and the better they do their task the more clearly they will expose, instead of masking, any faults in that signal. They are not the most important part of the system.



NAP 250

NAC 42

NAP 110



Loudspeakers come last of all. The loudspeaker is the slave of the amplifier, and moderate speakers, properly driven by a very good amplifier, will outperform speakers that are potentially the best possible, but are less well driven. The loudspeaker ranks lowest in the hierarchy of the system. And it cannot improve the quality of its incoming signal.

BALANCE IN THE SYSTEM

When the loudspeakers are the weakest link in the system then, and only then, improving them will enhance the system. Improving the amplification will enhance the system but only if it is inferior to the potential and demands of the turntable, arm and cartridge. Improving the cartridge will enhance the system, but only if it is inferior to the potential of the arm and turntable, and if the preamplifier can handle the greater demands made by high-quality cartridges.

The aim of the system is to allow you to respond to music without the system getting in your way, and a well-balanced system made up of very moderate components that mask each other's faults may allow you to do this better than a badly balanced system containing the best amplifier or the best loudspeakers that can be obtained. You will want to listen to music, not to our amplifiers.

A good demonstration takes place in a room with no loudspeakers in it other than the pair being demonstrated, in which you can relax and listen as you would at home, allowing yourself to respond naturally to all aspects of the performance. The better the system the more the intentions of the composer will be revealed in the skill and feeling of the players and the precise quality of the instruments. The less good the system the more all this will be obscured by minute alterations of pitch and amplitude. So judge the system as you would judge a live performance, by musical criteria.

Control Units

DESIGN CRITERIA

We consider the most important circuit in a preamplifier to be the phono input stage, which must accept the output from a phono cartridge without loss of information. The total output of the cartridge must be considered, equally the effect of its impedance on the circuit.

We have employed a new concept in our preamplifiers. The initial stage is linear with a small gain, and the RIAA equalisation is divided into two parts. Complete theoretical and practical stability is attained in this way, with a much wider open loop bandwidth than is normally possible. The resultant overload capability is maintained over the whole audio bandwidth.

Our experience has shown that tone controls and filters do not improve the musical performance with a system of this calibre, even when playing old and dirty records, due partly to the excellent stability and overload margin of the preamplifier and partly to its outstanding transient handling capability.

NAC 42

This is a simple preamplifier designed to meet the basic requirements of the serious audiophile. Facilities are limited to a phono input, tuner, tape, and a monitor/mute switch. The preamplifier is available with phono input boards to suit either low output moving coil cartridges (type 42S) or high output magnetic cartridges (type 42N).

Internally the NAC 42 comprises a mother board having on it the high level audio circuitry, and two daughter boards containing the phono input stages. The boards are interconnected with gold-plated precision connectors.

NAC 32

The basic electronic circuitry of the NAC 32 is similar to that of the NAC 42, but more facilities are available. These consist of volume and balance controls, and selector for two phono, one tuner and two tape inputs. The tape sockets have input/output connections, and the tape monitor switch has a mute facility. Tape inputs are buffered and the outputs are fed from a 600 ohm source. The tape monitor facility is automatically switched between tape 1 and tape 2, with tape 1 having precedence.

No. 1 phono input is suitable for moving coil cartridges, and no. 2 phono input is suitable for high output magnetic cartridges.

There are two main output sockets. The NAC 32 also has a mono/stereo switch which operates on all outputs.

Internally the NAC 32 consists of a mother board with eleven daughter boards interconnected with gold-plated precision connectors. Both the NAC 42 and the NAC 32 have phono sockets for interconnection with pick-up cartridges, and locking DIN sockets for all other connections. Delayed switch-on circuitry provides thump-free turn-on. Power is supplied from a regulated supply in the NAP 110 & 160, or a separate power supply is available. This ensures hum-free operation and enables correct earthing to be used.