

Dynavector SSA/504

SUPER STEREO AMPLIFIER



The Super Stereo Experience

Stereophony is a wonderful invention that has played a vital role in bringing the emotion of musical performance into the homes and hearts of two generations of music lovers. But it remains limited to providing a 'window' onto the scene, and stops far short of creating the illusion of reality that is now possible through careful application of the latest sound processor technology.

Surrounds for All Seasons

Surround sound processing not only enhances the cinematic experience of the latest audio/video programming – feature films and music videos in particular. But used with sensitivity, it can also immeasurably improve the enjoyment of the very best 'high end' audiophile system. The new extra spatial dimensions help eradicate the undesirable influence of a normal domestic living room in favour of a simulated concert hall environment.

Digital Delays

Although various technologies now exist to carry out a wide range of

processing tasks, there is still little proper understanding of how best to use these new capabilities. Many apparently elaborate processors rely on simple, low cost digital 'bucket brigade' devices to create time delays that make some attempt to simulate surround sound acoustics. But this approach ignores a key property of concert hall acoustics. Although the first reflections from the walls and ceilings will be delayed by the same amount, the higher the frequency, the more readily a sound is absorbed and attenuated. So the low frequency sounds will continue to reverberate in the hall well after the higher frequency energy has been dissipated.

In order to recreate this particular phenomenon, it is necessary for a surround sound processor not only to simulate the precise, short term 'early' reflections, but also the longer term, frequency selective reverberation pattern.

And Analogue too

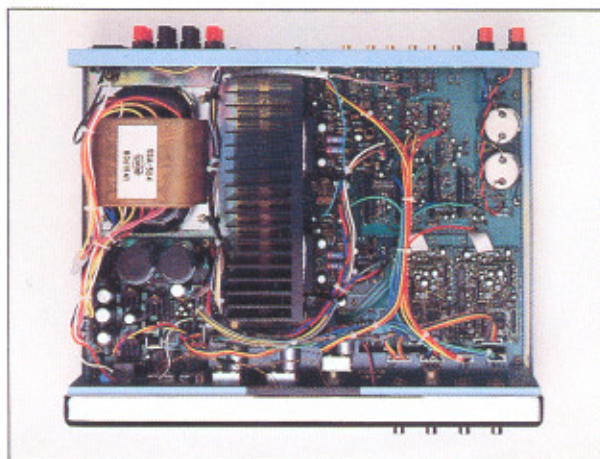
Although it is possible to achieve a rough approximation by combining single and multiple digital delays, the far more elegant approach is

embodied in Dynavector's SuperStereo SSA/504 processing amplifier, which creates a waveform dispersion the same as that found in real concert halls and studios. This is only possible through the application of our world patented concept that combines both digital and analogue time delay processors. The net time delay generated in the SSA/504 is not a constant, but varies continuously according to the frequency content of the sound signals.

In fact three separate delay signals are obtained. In a 4-channel SuperStereo surround sound system, the first stage delay is mixed with the normal stereo signal for the front channels. This signal plus additional second and third stage delays that are subsequently derived are then combined for feeding the rear channels.

This unique configuration ensures a much more faithful – and therefore more convincing and realistic – replication of the concert hall experience, resulting in much less listening fatigue than the conventional stereo system, or surround sound systems using crude digital-only techniques.

Dynavector Systems



Technical Specifications

Delay times: Digital 1 8 - 32 msec
 2 16 - 64 msec
 3 32 - 128 msec

Delay times:	Frequency	50	100	200	500	1000	Hz
Analogue	Delay Time	134	110	74	36	18	msec

Power amplifier: 35W x 4 (1kHz, 8 Ω)
 50W x 4 (1kHz, 4 Ω)
 70W x 2 (1kHz, 8 Ω B.T.L.)

T.H.D. max 0.02% (1kHz, 1W)
 max 0.1% (1kHz, max power)

Frequency performance: 20-50kHz (+0, 3dB)
 Size: 430 x 370 x 93mm (WxDxH)
 Weight: 10.3kg



Total Flexibility

The SSA/504 is not only uniquely subtle in processing terms, it is also unusually compact and flexible. Yet it contains no fewer than four 50W power amplifiers besides the versatile processing circuitry. Having set up the desired configuration of loudspeakers, the front panel provides selection of three different delay ranges, master volume, and the proportion of delay component fed into the front and rear signals. Then the fine-tuning of the soundstage can be carried out from the listening seat itself, by means of an advanced remote

control system. This most important convenience feature uses the finest quality powered LED potentiometers to enable the optimum set up of key surround sound parameters – delay time, reverberation level and front/rear balance – whilst at the same time providing full visual feedback to the user.

Flexible input and output circuitry ensures that the SSA/504 can be used with any kind of system, now or in the future, for 4 or 6-speaker configurations and in conjunction with additional processing equipment if so desired.

These very advanced SuperStereo

time delay features are not just applicable to domestic hi-fi use via the SSA/504 surround sound amplifier, but also provide major benefits in sound reinforcement and public address systems for large auditoria, and in car stereo systems as well – two fields in which Dynavector has already accumulated considerable experience and expertise.

More detailed information on SuperStereo products including the SSA/504 are available on application, from Dynavector Ltd in Tokyo, UK, New Zealand, Australia, and USA, or appointed import agents in other countries.

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