

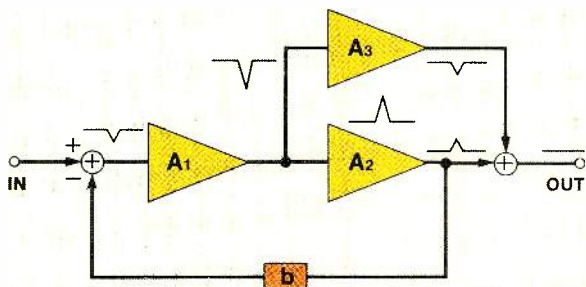
Sansui's revolutionary Super Feedforward System virtually eliminates all types of distortion.

The Sansui Super Feedforward System has eradicated all types of distortion. Gone are harmonic, intermodulation, crossover, switching, TIM (Transient Intermodulation) and envelope distortions. With them are gone other, unknown and not yet quantifiable types of distortion (TIM at one time was considered to be of this type). Switching and crossover distortion generated by the in-out switching operation of the power transistors is suppressed the moment it is generated. TIM distortion is not produced since the Super Feedforward System responds faithfully to the never-repeating, rapidly changing waveforms of real music. And the Super Feedforward System totally eliminates distortion at *all* frequencies, not just selected frequencies as a negative feedback circuit does. It suffers no instability or oscillation. But most importantly, it eliminates all distortion of both a static and transient nature.

Super Feedforward System: How does it work?

The feedforward circuit theory is not new. In fact it predates the negative feedback circuit that is found in nearly all audio amplifiers on the market today including direct-coupled and "non-switching" types. But feedforward had never been practically applied to an audio amplifier until now.

Fig. 1 Sansui Super Feedforward System



Sansui's Super Feedforward System is actually a hybrid of both negative feedback and feedforward, as conceptualized in Fig. 1. Distortion, generated by power amp stage A_2 , is returned to the input through the NFB loop (b) and added, out of phase, to amp stage A_1 . The out-of-phase distortion is

amplified by A_1 and added to A_2 . This effectively cancels most distortion. This is where the feedforward circuit comes into play. Like the NFB circuit, the feedforward circuit also uses out-of-phase distortion as an error-correction signal, but it bypasses power amp stage A_2 and sends the distortion component to error correction amp A_3 from which it is routed to the *output* of A_2 to cancel any distortion that may have been generated in A_2 and any distortion overlooked by the NFB loop.

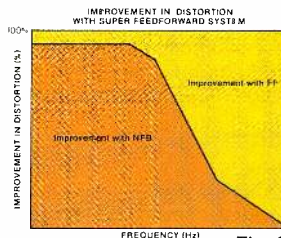
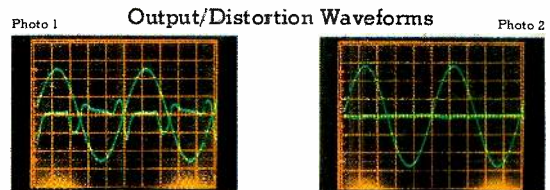


Fig. 2

The concept is simple but effectiveness is 100%, as Fig. 2 shows. In fact, the Super Feedforward System is so effective that it even eliminates artificially-injected distortion completely (Photo 2).



Even artificially-injected distortion (center trace in Photo 1) is eliminated; no distortion appears at output (Photo 2).

The AU-D11 and AU-D9 – the most perfect amps around

When presented at the Audio Engineering Society Conventions in Los Angeles and London, the logic of Sansui's Super Feedforward System was quickly perceived by the engineers in attendance.

And now the theory has become reality. In the AU-D11 and AU-D9, Sansui has added the Super Feedforward System to Sansui's highly acclaimed DD/DC design to create amplifiers that are virtually free of any kinds of distortion. Stated simply, whether you're a firm believer in the advantages of "non-switching" over "high-speed" amp technology, or vice-versa, you get all the advantages of both, with Sansui's new Super Feedforward System. You just can't go wrong.

Sansui continues to be the industry pacesetter in advanced technology. The name to remember is Sansui and the amps to hear are the AU-D11 and the AU-D9.



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