

voltage variations should thereby be eliminated.

Cascode circuitry has been used in a number of devices: transistor and vacuum tube preamps, amplifier front-ends, head amps, etc. Because extended high frequency ability is a by-product of cascoding, it is found in nonaudio components that require ultrasonic operation. As far as we know, Threshold was the first company to use cascode circuitry from input to output in an audio amplifier.

Threshold's investigations into cascode circuitry yielded the original CAS-1 and the current CAS-2, but actually, there is more to the story than meets the eye. From what we can gather, Threshold's cascode amplifier has been something of an experimental pivot point from which further investigations of methods of eliminating transistor distortions arose. Threshold's first amplifier, the 800A, embodied the now widely copied, dynamically biased class A circuit. Somewhere along the line, the cascoding technique was brought under scrutiny. It was not long before both methods, cascoding and dynamic class A, were brought together in the model 4000 (and the later version model 400A) in the form of a cascoded front-end and a dynamic class A output. We may be wrong, but we logically assume the obvious success of these two methods is what gave Threshold designer Nelson Pass the encouragement to develop his Stasis amplifier, an even bolder attempt at reducing transistor nonlinearities. (Note: We can now say that attempt is an unqualified success. Don't miss the review of the Stasis 2 in the next issue!)

Anyway—the CAS-2 is a stereo power amplifier rated at 100 watts

per channel into an eight ohm load. Threshold decided the original CAS-1 was too plain, so they added a set of peak-reading LED output indicators for each channel to the face of the CAS-2. A look inside the unit proves that the CAS-2 is no exception to the Threshold rule, that is, high quality parts assembled with enviable workmanship. And if you do look inside the unit, you will also see that the CAS-2 is actually two mono amplifiers on a common chassis. Each channel of the audio circuitry has its own independent circuit board. The power supply has two sets of components: two transformers, two bridge rectifiers, and two filter capacitor banks.

As far as the sonics of the CAS-2 are concerned, it is obvious that the CAS does not have the kind of harsh distortions that are associated with the "old school" of transistor amplifier designs. On the other hand, it is not the sonic equal of Threshold's more expensive units, and we don't think that anyone really expects it to be. We compared the CAS-2 to the latest version of Threshold's own 400A which has the advantage of a dynamically biased class A output in addition to a cascoded front end. We were not surprised to find that the 400A is sonically better in all respects.

Comparatively speaking, the 400A has more control over the bottom end, is smoother through the middle, and is purer on the top end. Over a broad range, however, the CAS-2 is much better sonically than an "average" solid-state amplifier, and it is easily in the top ranks of all the amps that are available. Threshold's more expensive units are of such high calibre that they create stiff competition within the company's own product line. The fact is that trade-offs must be made