

pulley. The base of the unit has no suspension as such (except for the Audio-Technica feet), but it works because the material it is made from is so dense that it resists resonances. The only other aspect of the mechanics that need be considered is the spindle bearing. It must have 4 or 5 drops of oil to function correctly. The bearing is made such that the oil fills up the space between the spindle and the bearing sleeve walls. Without the oil, the platter will wobble slightly about its spindle.

We have only one major reservation about the unit: the platter. Instead of being a full 12 inches, it is only 10 inches in diameter. The maker uses the Osawa platter mat because it is stiff enough to support the one inch worth of record that hangs over the platter. Our negative reaction to this is probably more psychological than tangible; however, we still wish the unit had a

12 inch platter. The extra support could only help.

The AC-4 is available by itself or with a tone arm or with a tone arm and a cartridge. (Call or write HCM for details.) If you buy the 'table with an arm and cartridge, HCM will mount the tone arm in its proper location and align the cartridge for proper geometry. (Even if you just buy the 'table and an arm, HCM will align the whole thing if you send your cartridge.) A combination of the HCM AC-4 'table and a Grace 707MkII tone arm, for example, sells for \$299. The HCM will never win any beauty contests or technical awards, but at those kinds of prices, it sounds like a good deal to us!

Made by: HCM Audio, P. O. Box 2029, Chico, CA 95927, (916) 343-0558 / **Associated components:** 1, 3, 6, 24, 7, 8, 9, 12, 14, 17, 19 / **Listening room:** B / **Price:** \$169.

Threshold CAS-2

All distortions produced by a transistor* are due to changing gain characteristics as the voltage and current across the device fluctuate in response to the audio signal. If you accept that statement as true, then you will understand the basis on which all of Threshold's amplifiers have been designed. That is, if voltage and current across the gain transistors could somehow be held constant, the amplifier would be distortionless. In the case of the CAS-2, the second generation fully cascode power amplifier, Threshold takes a swipe at one of those two distortion causing situations by using a technique that suppresses voltage varia-

tions across the gain transistors.

That technique is, of course, called cascoding. We see no point in attempting a technical discussion of this technique since many of you are probably not interested in the technical aspects, and even if you are, there is material available from other sources that provides a thorough explanation of this topic. (See the article by Nelson Pass in the March 1978 issue of Audio magazine. Literature on the subject is also available from Threshold.) In the simplest terms, cascoding is a method of using an extra transistor to insulate the gain transistor (or transistors) from voltage fluctuations. Those distortions that would normally be caused by

*Or any type of gain device: tube, transistor, or whatever.