

# ~ EQUIPMENT TEST REPORTS ~

By Hirsch-Houck Laboratories

## EICO MODEL 3070 CORTINA INTEGRATED STEREO AMPLIFIER

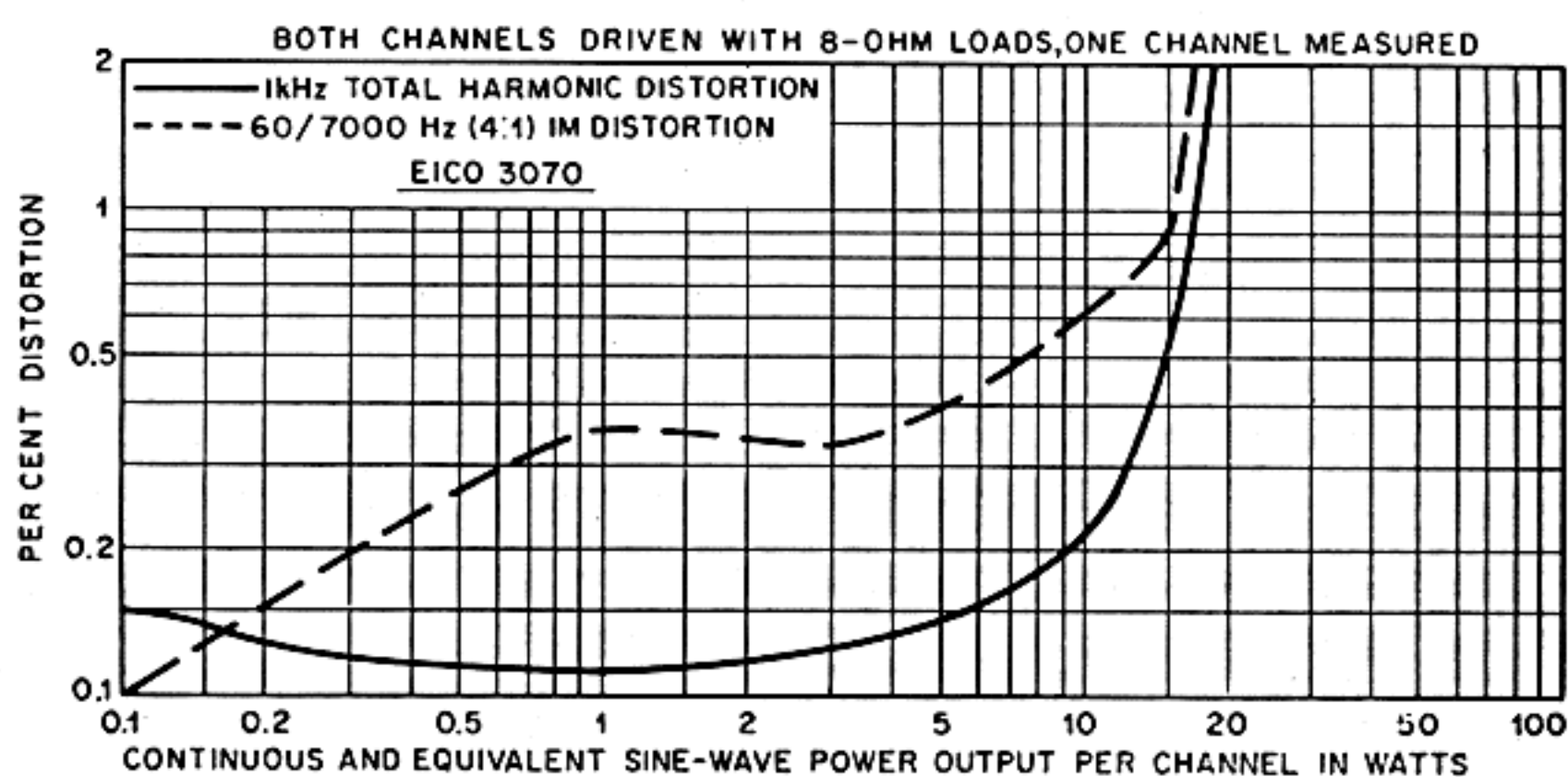


● WE HAVE often wondered why *good* low-powered amplifiers are so hard to find. Most of the better amplifiers, from the standpoints of low distortion and operating flexibility, are also large, high-powered, and expensive. Amplifiers delivering less than 20 watts per channel are usually intended for the less critical, low-budget consumer, and there are numerous compromises in their electronic and mechanical design.

Many music lovers intend to or would like to use reasonably efficient speaker systems that require only a few *clean* watts of audio power for low-distortion listening at comfortable levels. The new Eico Model 3070 Cortina amplifier seems to be aimed squarely at that market, and it has hit the bull's-eye. Its IHF music-power rating of 70 watts is a trifle unrealistic (although accurate) since it applies only to 4-ohm loads. The very complete specifications supplied by Eico for the Model 3070 rate it at 15 watts continuous power per channel into 8 ohms, a figure that we found to be both realistic and accurate.

The Eico 3070 is an integrated stereo amplifier using eighteen silicon transistors and twelve diodes. It is very compact, measuring only 3½ inches high, 12 inches wide, and 7¾ inches deep, and weighing a mere 7½ pounds. Its four inputs (magnetic phono, tuner, auxiliary, and tape recorder) are adequate for almost any system's requirements. The Model 3070 has, in addition to the input selector, a volume control, balance control, two tone controls, and a main/remote speaker-selector switch. The last connects either or both of two pairs of speakers to the outputs, or shuts off all speakers for headphone listening via the front-panel stereo headphone jack.

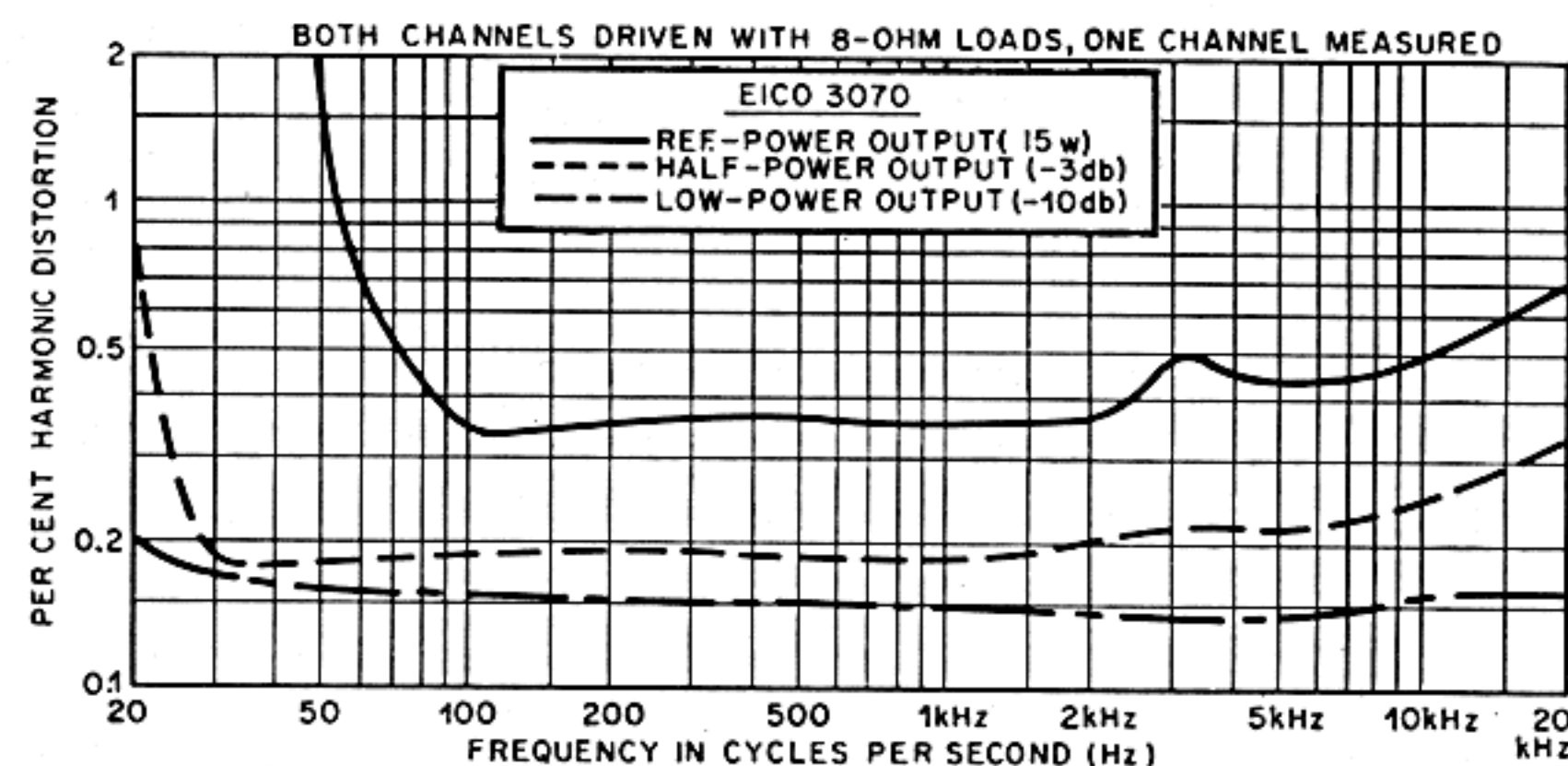
Other functions are handled by a row of six unobtrusive rocker-type switches along the bottom edge of the panel. These control tape monitoring, loudness compensation, stereo/mono modes, high-cut and low-cut filters, and a.c.



power. On the rear of the amplifier are two a.c. outlets, one switched and one permanently energized.

The 3070, like other Eico components, is basically a kit for home construction, although it is available factory-wired as well. It is built on four printed-circuit boards, and the assembly is simple and straightforward. HI-FI/STEREO REVIEW's kit builder reports that the kit's construction time was about 13 hours and that, in terms of clarity, the construction manual was one of the best that Eico has yet produced. Fuses in the speaker lines protect the output transistors against damage. Although the fuses blew several times during our tests, the amplifier itself suffered no damage.

In our laboratory tests, the Eico 3070 delivered its rated 15 watts per channel into 8 ohms, with less than 1 per cent distortion between 50 and 20,000 Hz. From 70 to 10,000 Hz the distortion was less than 0.5 per cent at full power. At half power or less, the distortion was under 0.2 per cent over the entire audio-frequency range. The IM distortion was under 1 per cent up to 15 watts output and



dropped to unmeasurable levels as the power was reduced to 0.1 watt (a typical average level for quiet listening in the home).

The tone controls had a more-than-adequate range although they affected the mid-frequency response considerably when used near their full capabilities. The high- and low-frequency filters were extremely mild in their action (only 6 db per octave slopes) and had little effect on noise or program material. The loudness-compensation contours were well chosen, affecting low frequencies primarily but also boosting the uppermost octave somewhat at low volume-control settings. The RIAA phono equalization was accurate within ±1.5 db from 30 to 15,000 Hz. The available power output into 4 ohms was about 26 watts per channel, and into 16 ohms it was about 9 watts per channel. The Eico 3070 had unusually low hum and noise, measuring -76 db on high-level inputs and -73 db on phono, referred to 10 watts. Both levels are totally inaudible.

We found one minor design flaw in the 3070. In stereo  
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operation the magnetic-phono inputs can handle up to 46 millivolts of signal without overloading, which is more than adequate for modern stereo cartridges. However, if the mode switch is set to MONO, the phono inputs overload at about 3 millivolts. This effect disappears if the two phono inputs are paralleled externally when using a mono cartridge, or if a stereo cartridge is used.

In listening tests, the Eico 3070 proved to be as excellent as one would expect. It has ample power for any medium-efficiency speaker, sounded very clean and effortless,

and had a dead-silent background on all inputs and at all usable volume-control settings. In view of its fine sonic performance and considerable operating flexibility, we believe it can satisfy the needs of the most critical user, provided one does not try to reproduce concert-hall volume levels in the listening room. The Eico 3070, which is an excellent buy in its price and power range, sells for \$89.95 in kit form, including a handsome walnut-finished vinyl-clad steel cabinet. The factory-wired version is \$129.95.

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