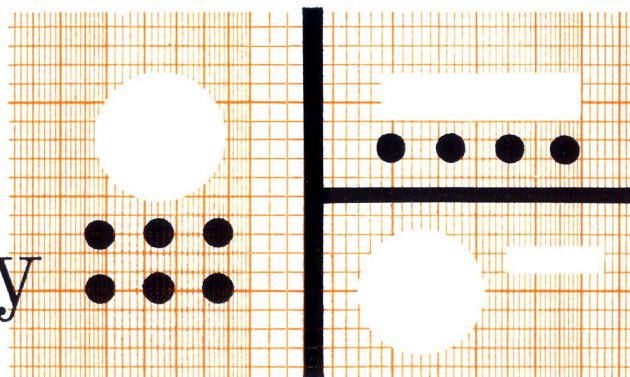


*The consumer's guide
to new and important
high-fidelity equipment*

high fidelity



EQUIPMENT REPORTS

AT A GLANCE: The Marantz Model 9 is a single-channel power amplifier rated at 70 watts output, with built-in option of running it at 40 watts. Performance is outstanding. Price: \$324.

IN DETAIL: To those who know of the performance and quality of previous Marantz amplifiers and preamplifiers, it is enough to say of the Model 9 that it represents "pure Marantz at its best." For those who may not know, as well as those who want to know why, here are some details.

To begin with, the Model 9 is built like a battleship and shows conservative operation of all components. Four EL-34 tubes are used for the output stage; these tubes are literally loafing and should have a very long life. The other three tubes, used in the early stages, run quite cool. Inspection shows the use of high-grade parts, such as telephone-quality electrolytic capacitors, low-noise deposited carbon resistors, and so on. Complete metering facilities are provided, with adjustments for each tube, including bias and balance of the AC signal to the output tubes. Evidence of attention to controlling phase shift is seen in the use of factory-sealed trimmer capacitors. The power supply uses silicon rectifiers which improve voltage regulation and reduce heat dissipation.

The power transformer and output transformer are huge, and are unique in that they run absolutely cool. After three hours of operation, much of it at full power output, the power transformer was faintly warm to the touch and the rest of the unit, including the chassis, was actually cold.

The 70-watt rating of the Marantz Model 9 is actually quite conservative. Our tests show that even at 20 cps it will deliver 70 watts at 0.3% distortion. At higher frequencies the distortion is literally unmeasurable up to the point of overload. The IM distortion curve is very similar to the 20-cps harmonic distortion curve, with some 80 watts output at well under 1% distortion. To show the power capability of this amplifier when the usual IHFM standards are applied, we measured its output at the 1% distortion point over the audio frequency range. There is no point in plotting it, but it delivers 80 watts at 20 cps, about 85 watts through most of the range, and well over 90 watts between 15 and 20 kc.

Another unique feature we found was that with a 3-mfd capacitor across the output, the power available at 10 kc was not reduced in the least. We have never before seen an amplifier which would deliver even half its rated power under this test condition.

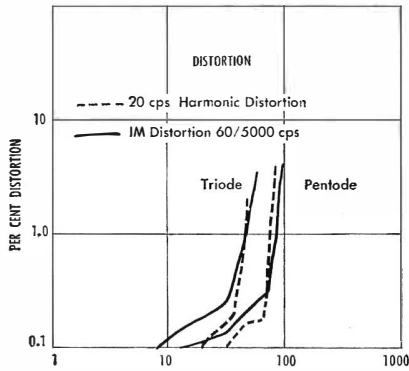
The triode connection, which may be selected on a switch, reduces power about 40%. No other characteristics are affected.

Stability is absolute. Square wave response is virtually perfect. Frequency response is flat within one or two tenths of a db from 20 to 20,000 cps. A low cut filter is provided, switch-controlled from the panel. It cuts response below 20 cps, and has no effect above that point. Such a filter in an amplifier of this power can prevent blowing speakers with switching transients, or other subsonic disturbances.

Hum and noise are totally inaudible and hardly measurable, 91 db below 10 watts. Sensitivity is relatively low, needing about 0.4 volts for 10 watts output. This would suggest that the Model 9 be used with a preamplifier of suitable output and quality of signal, such as Marantz's own Model 7 control

Marantz Model 9 Power Amplifier





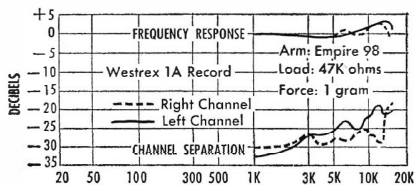
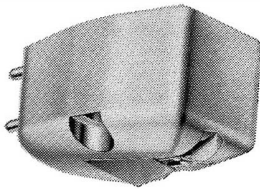
unit. Accordingly, a new model of this unit was used in listening tests with the Model 9. As far as we can determine, the Model 7 remains the same excellent device we tested some two years ago. At all listening levels, and with any low level or high level input, absolutely no hum, hiss, or other extraneous noise could be heard. In fact, hum and noise measurements made on the new Model 7 preamp produced results that, in most cases, were 2 or 3 db better than with the former unit. These, of course, could represent a normal variation among production units.

In sum, the Model 9 is an amplifier built to the highest of standards. With two needed for stereo, it is only for the most exacting and well-to-do audiophile. Little comment is needed on listening quality which is as splendid as its measured performance indicates. Our final impression is one of the extreme reliability and obvious potential for long, trouble-free life built into this amplifier.

H. H. LABS.

Audio Dynamics

ADC-1 Stereo Cartridge



AT A GLANCE: The ADC-1 is a moving-magnet stereo cartridge fitted with a 0.5-mil diamond stylus. The cartridge mounts on standard ½-in. mounting centers as well as 7/16-in. centers. The stylus assembly is easily replaced by the user; it slides off readily without the use of tools. The stylus arm extends forward of the cartridge body, for easy cuing, yet the stylus-to-mounting-hole distance remains essentially the industry standard (within 1/32 in.). The cartridge is enclosed in a mu-metal shield, gold-colored. Price: \$49.50. Replacement stylus: \$25.

IN DETAIL: To test the ADC-1, we first determined its lowest usable tracking force by playing the Cook 60 record (with its extremely large 30-cps amplitudes) and then the Fairchild 101-A record (30 cm/sec at 1,000 cps). The ADC-1 tracked the Cook 60 at slightly under 1 gram (an all-time record in our experience). It tracked one channel of the Fairchild 101-A at less than 1 gram, but "skating force" caused some distortion on the other channel until a stylus force of 2½ grams was used. We then established 1 gram as the usable stylus force for the duration of our tests.

The Westrex 1A record was used for tests of stereo response and channel separation. The measured response curve was quite smooth, with a very slight rise at 13 kc (a characteristic, generally, of this record). The ADC-1's channel separation proved to be exceptionally good—actually better than 20 db up to 10 kc, and better than 18.5 db up to 15 kc. Though these figures do not confirm ADC's claim of 30 db separation, the discrepancy could easily be a matter of the particular test record used.

The output level measured was 3 millivolts per channel at 5 cm/sec at 1 kc. This figure indicates that the ADC-1 is a relatively low output cartridge, much lower than other high quality pickups we have tested, which would suggest that for best response, it should be used with a fairly high quality preamplifier or control amplifier. Its sensitivity to magnetically induced hum also was actually a few db better than other quality pickups tested previously.

The arm resonance, in the Empire 98 arm, was between 5 and 10 cps. This indicates very high compliance. In fact, the stylus is so compliant that it actually feels "floppy." In arms with any appreciable friction, such compliance might offset the stylus and introduce tracking error. However, we feel that the other benefits of the ADC-1 would more than outweigh this objection. We also feel that this cartridge preferably should be used in a low-friction arm. While most "separate" arms today meet this requirement, most record changers do not. Incidentally, ADC will soon offer an ADC-2, a less compliant model for use in changers.

For most listening tests, the cartridge was installed in an SME 3009 arm with tracking force set at about ¾ grams. In spite of this low force, the pickup seemed almost immune to shock. Needle talk was practically inaudible.

Listening quality proved to be superb, with silky smooth highs, solid middles and bass, and generally superior definition.

The ADC-1 is seemingly delicate, although it is probably more rugged than its ultra-compliant stylus would suggest. In any case, it is a cartridge that merits being used with the finest reproducing equipment.

H. H. LABS.

REPORT POLICY

Equipment reports are based on measurements and listening tests. The choice of equipment to be tested rests with High Fidelity's editorial department. Many equipment reports are prepared for us by Hirsch-Houck Laboratories, an independent organization whose staff was responsible for the original Audio League reports. Some reports are prepared by the High Fidelity staff using data supplied by Hirsch-Houck Laboratories or by other similar independent testing organizations. No report or any portion thereof may be reproduced without written permission of the publisher.