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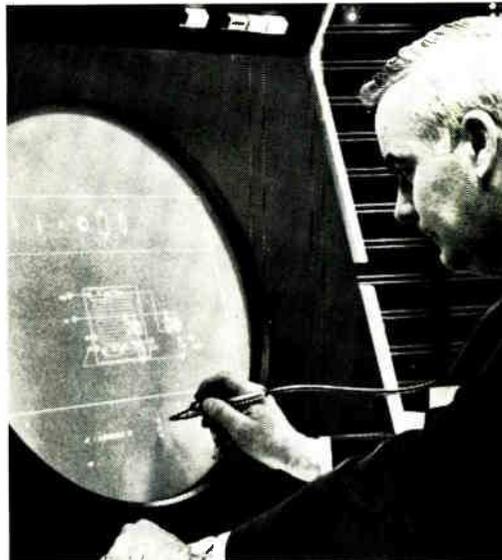
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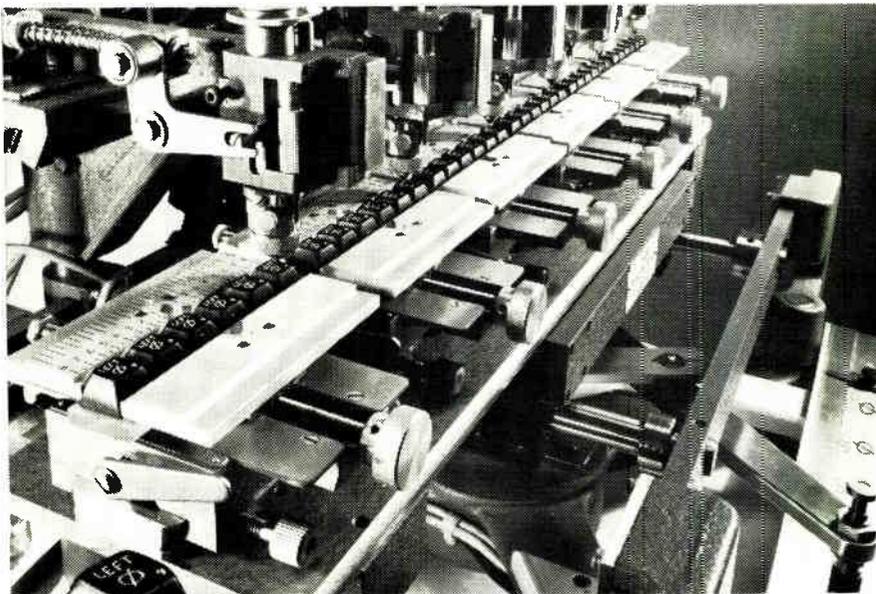
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New Books

Recap on ECAP

Introduction to Computer Analysis:
ECAP for Electronics Technicians
and Engineers
Herman Levin, Prentice-Hall,
256 pp., $14.65

ECAP—Electronic Circuit Analysis Program—is as good a circuit design program as any to use as a first step in getting into the computer-aided design game. Developed as a joint effort of IBM and the Norden division of United Aircraft, it is a general purpose program used in time-shared systems because it's uncomplicated and offers flexibility for device modeling.

There's generally little doubt that circuit designers should at least be on speaking terms with computer-aided design procedures.

And this is perhaps the only book available that could give him a solid foundation in the subject, no matter which of the many available circuit design programs he uses. It grew out of a course given to technicians, and moves rather slowly in circuit theory. But this should be a welcome change of pace for an engineer—he can skim over certain portions but can also slow down on points that aren't quite clear at first and be assured that he's getting a clear logical description.

The book covers basic dc analysis with a good discussion of modeling active components, transient response, frequency response, sensitivities and worst-case analyses, and various computer output options. It also has a useful appendix, containing sample ECAP formats and a list of the capabilities of ECAP when used with any of several IBM computers—1620, 1130, 7040, 7090, and several versions of the 360.

The level of detail is more than adequate. For the frequency response of a single-stage amplifier, for example, the author presents the circuit, its ac equivalent, the input form with all the necessary statements (only 16 in this analysis), the printout of the input data and the command statements, and the printout of the results of the ac analysis.

To help the self-teacher, problems are given at the end of each chapter and answers are provided.