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*Erratum

Page 157: Although the Figure numbers and captions on this page are correct as set, the charts for Figs. 13 and 14 should be transposed, as well as those for Figs. 15 and 16.



The IBM Journal of Research and Development is regularly indexed and abstracted by Science Abstracts (I.E.E.—Britain), Chemical Abstracts, The Engineering Index, Physikalische Berichte, ASM Review of Metal Literature, Mathematical Reviews, Bulletin Signalétique (C.N.R.S.—France), Electronic Industries & Tele-Tech., Electronic & Radio Engineer, Psychological Abstracts, Aviation Research & Development and the Library of U. S. Naval Research Laboratory.

Opposite and overleaf

A direct-reading printed-circuit commutator for analog-to-digital data conversion.

Combination of the large primary (overleaf) and smaller secondary and tertiary patterns (opposite) permits direct translation of 10,000 distinct positions of analog rotation to or from electric-circuit pulses. Conversion is accomplished without diode circuitry or special code translators. Printed on the back side of the primary pattern, the higher-order secondary and tertiary patterns are read by brushes geared to the main shaft. Ambiguous readout errors due to gearing backlash and digit-order switching are avoided by lag-lead switching circuits which are an integral part of the commutator. The commutator is used for voltage-to-digital conversion, automatic linear or angular measurement and semi-automatic chart reading.

A detailed explanation of the commutator's pattern design logic is given on pages 184-188.