

Input-Output Core Card 1

The GM -- card consists of five magnetic-tape-wound core positions designed especially for use in the input-output area of a system. Groups of these cards properly connected provide an input scanning core buffer normally used with a card reader. As the card is read, cores wired to brushes sensing holes in the card are set at each card point of the input device. Between these card points, the core positions are read out serially and provide the drive to current mode transistor N blocks. External bias and integrator are required in this application.

Circuit Description

The operation of this card in a typical card scanning core buffer application is shown above. Assume that a card is being read and that all cores have been previously reset.

Set Cores, Cycle 1. All brushes sensing holes in the card at a particular card point time permit sufficient current flow from the gated electronic circuit breaker, through the core input windings and the integrator networks to +48v, to set the core positions. The input integrator networks connected to each input winding prevent back circuits and transient noise signals from affecting the core operation, by isolating the brush and core positions.

Reset Cores, Cycle 2. Between card reader digit times,

core positions are serially reset under control of the core drivers gated on by word and digit rings as shown. When a set core position is read out, a 2v to 5v signal is induced across the output windings which, in conjunction with the load card, provides a +N output to the current mode block.

The sense windings are biased near -3.0v by the external bias card connected to pin A. An LC network returned to the other end of the sense windings (pin C) effectively widens the output pulse seen at the current-mode base and insures that the +N line is up for at least 0.5 μ s. After all positions are serially read out, the upper and lower read-out core drivers are gated on and place pin J at ground potential and pin A at -6v. The resulting current flow through the sense windings insures that all positions have been reset off and permits safer operation of the validity check circuits.

This sequence of setting cores at each card point time, followed by a serial read-out, continues for the entire card.

Application

Card scanning core buffer configurations of various sizes may be produced from the basic GM -- card and associated bias cards.