

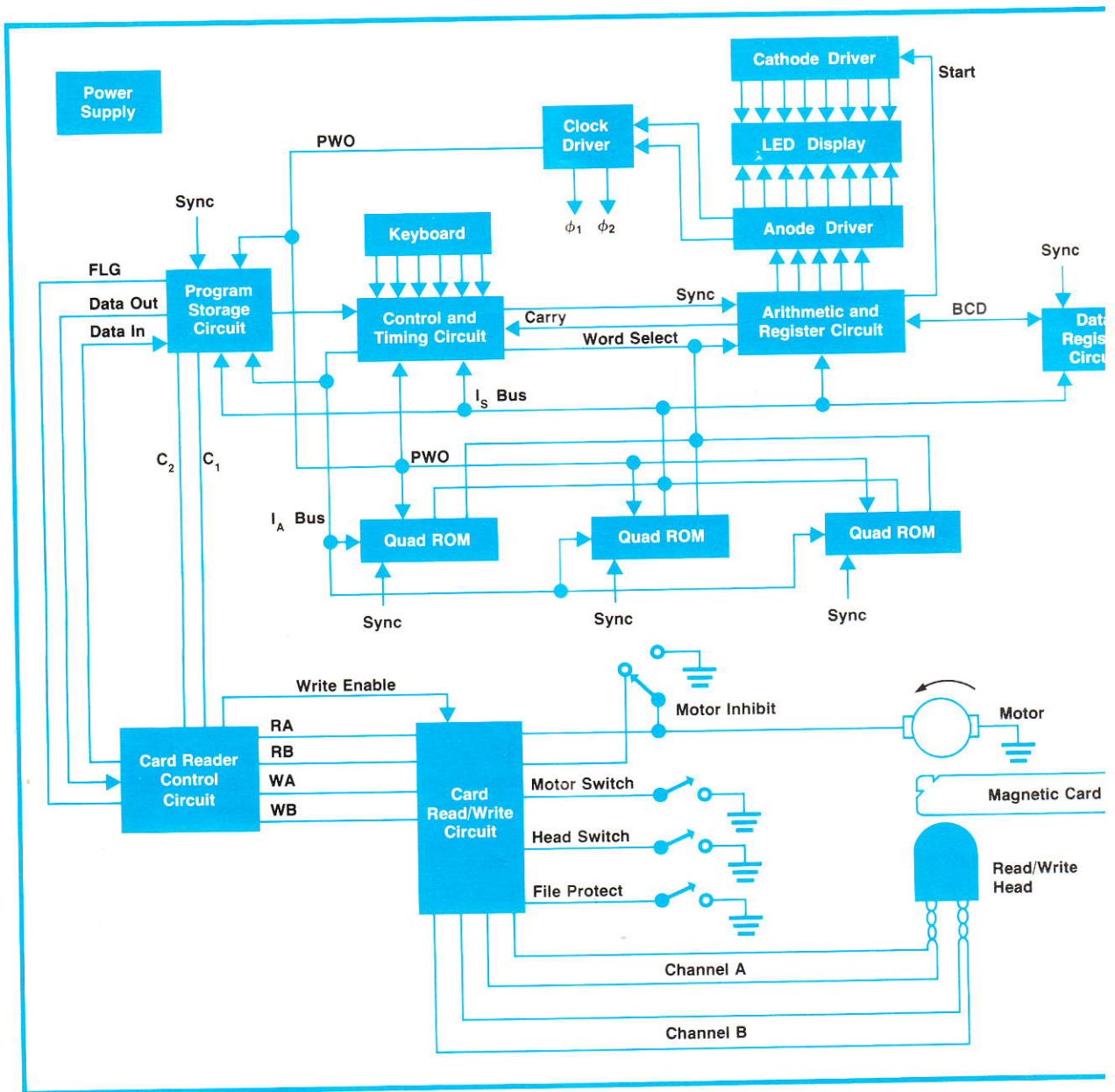


Fig. 5. Architecture of the HP-65 is stack and bus oriented, like earlier HP pocket calculators. New circuits are the program storage circuit, the card-reader control circuit, and the card read/write circuit.

Therefore, during reading or writing the card-reader control circuit assumes control of the program memory and controls the movement of the pointer. Thus only limited handshaking is needed between the card-reader control circuit and the program storage circuit.

The magnetic-card read/write circuit is a bipolar LSI (large-scale-integrated) circuit. It serves as the interface between the magnetic read/write head and the card-reader control circuit. There are two identical channels on the chip, each consisting of a read amplifier, a threshold detector, a latch, and a write amplifier.

The read amplifier takes a one-millivolt from the head, amplifies it approximately 20 and feeds it into the threshold detector. The removes noise and triggers the latch to provide signal to the card reader control circuit. The amplifier takes logic information from the reader control circuit and transforms it into driving current that flows through the inductor and generates the flux that magnetizes the card.

The read/write circuit also provides a dc motor control circuit that regulates the widely varying voltage so the card-reader motor runs at speed.