**Pertec floppy drives**

Tom says the Pertec drives come with black or white bezels (interchangeable) and DC or AC motors. There are two door types, one with aluminum doors and another with white plastic doors. MITS drives for hard-sectored use had holes near the CENTER for the sector and index holes, not holes near the EDGE like the very oldest 8-inch drives. There are versions of drives with a 50-pin interface and others with a Pertec interface. To identify drives by model and revision, Tom offered me the following "key to understanding the Pertec drive numbering system".

"The first digit identifies drive motor type. An FD4xx number indicates a DC motor and a 5xx number indicates an AC Motor.

The second digit identifies density. An FDx0x drive is single density and a FDx1x drive is single or double density. MITS used both FD410 and FD510 drives, even though the MITS controller was only single density.

The third digit is interface type. An FDxx0 is the "Basic" PRE-STANDARD Pertec interface, and it is not 50 pins. An FDxx1 indicates a Basic interface with "Internal Daisy Chain". An FDxx4 number indicates a standard Shugart Interface. These drives were not used by MITS. Pertec used them in the PCC2000. They may be in the iCOM 3812; I'm not sure.

An extension to the FDxxx number specifies Model Revision, for example FD514-06."

Tom describes what he knows about the production history of use of these drives.

"The original Altair drive was an FD400. Later production used a FD-510. I've also seen a FD-511 drive used with a FD-510 FD board.

There are six versions of the FD-514. Changing versions required few component changes in addition to jumper changes. The FD514-06 revision provides a standard Shugart configuration. Another revision supported hard sector operation."