

The own-word is another protective device. When an item is written nonaddressed, the user program specifies an own-word to be permanently associated with that item on the drum. Whenever a user program attempts to rewrite or expunge an item, it must present the word that matches the item's own-word. This method of identification helps to protect files from accidental destruction by programs under development.

In order to allocate storage space as it is requested, the I-O Processor must maintain information about the status of each quarter-track and about the status of sectors within each quarter-track. One possible method is to maintain all free space as threaded lists, each unused sector or quarter-track pointing to the next. Using this method, however, makes it almost impossible for the I-O Processor to perform any optimization of storage allocation, since no Executive routine could have access to a list of all unused quarter-tracks at one boom position without performing a prohibitive number of drum reads. For this reason, information about the status of each sector or quarter-track is instead maintained in tables in Executive memory. One table contains one word for each of the 384 quarter-tracks on the drum. The quarter-tracks are specified as free, held, or unusable (i.e., physically damaged), and empty, full, or partially full. The I-O Processor uses this table in an attempt to minimize future boom movement when assigning additional quarter-tracks to a user program.

The first two sectors of each quarter-track on the Fastrand are allocated for use by the I-O Processor. These two sectors, comprising only 0.2% of the storage capacity of the quarter-track, are used as an availability table for the rest of the sectors,