

86-DOS version 1.0 File Control Block

The only differences between the File Control Block for version 1.0 and earlier versions is that bytes 14-21 which were reserved for system use are now defined for use by user programs, and an extra byte may be added to the random record field if small (less than 64 bytes) records are used.

BYTE 0-Drive Code. Zero Specifies the default drive, 1=drive A, 2=drive B, etc. Note that other functions which use a drive number use 0=drive A, 1=drive B, etc.

BYTES 1-8 - File Name. If the file name is less than 8 characters, the name must be left justified with trailing blanks.

BYTES 9-11 - Extension. If less than 3 characters, must be left justified with trailing blanks. May also be all blanks.

BYTES 12-13 - Current Block. This word (low byte first) specifies the current 16K block, relative the start of the file, in which sequential disk reads and writes occur. If zero, then the first 16K of the file is being accessed; if one, then the second 16K; etc. Combined with the current record field, byte 32, a particular 128-byte record is identified.

BYTES 14-15 - Record size in bytes. Automatically set to 128 by the operating system when the file is opened but can be set to any size desired for file I/O. Notice that if a size other than 128 bytes is to be used this field must be set after the file is opened because 86-DOS sets the record size to 128 when the file is opened. If the record size used is less than 64 bytes, the random record field (bytes 33-36) is increased to 4 bytes.

BYTES 16-19 - Size of file in bytes. This 32 bit number (low byte first) indicates the file size in bytes and may be examined by the user program but must NOT be changed.

BYTES 20-21 - This 16-bit field (low byte first) is the date. The 5 least significant bits are the day, the next 4 are the month, the last 7 are the year minus 1980 (i.e., 1980=0). The date is always set to the current date when data is written to the file. To change the date, set it to the desired value after writing to the file but before closing the file. Some data must be written to the file or the new date set by the user program will not be used.

BYTES 22-31 - Reserved for system use once the file is opened and until it is closed.

BYTE 32 - Current Record. Identifies the record within the current 16K block that will be accessed with a sequential read or write function.

BYTES 33-36 - Random Record. This 24-bit or 32-bit number (low byte first) need be present only when the file is accessed with a random read or write function. It is the position in the file of a record. If the record size (as defined in bytes 14-15) is less than 64 bytes, then this field will be 4 bytes long (bytes 33-36). If the record size is 64 bytes or larger, then this field will be three bytes long (bytes 33-35). The size of the FCB will be either 36 or 37 bytes depending on the size of this field.

Notice that there are two ways to address a record within a file. The Current Block and Current Record fields together address a record when the file is accessed with the sequential read and write functions. The Random Record field addresses a record when the file is accessed with the random read and write functions. The appropriate fields may be set before either a sequential or random transfer to select the next record to be accessed.