Table 6-5. Function calls with the Type 21 interrupt.

(AH) Operation	*Additional Input Registers*	*Result Registers*
Keyboard Functions		
1 Wait for keyboard character, then display it (with Ctrl-Break check)*	None	(AL) = Character
6 Read keyboard character (no Ctrl-Break check)*	(DL) = 0FFH	(AL) = Character, if available = 0, if no character is available
7 Wait for keyboard character, but do not display it (no Ctrl-Break check)*	None	(AL) = Character
8 Same as function 7, but with Ctrl-Break check*	None	(AL) = Character
A Read keyboard string into buffer	(DS:DX) = Buffer address First buffer byte = Buffer size	Second buffer byte = Number of chars. read
B Read keyboard status	None	(AL) = 0FFH if no character is available = 0 if character is available
C Clear keyboard buffer and call a keyboard function	(AL) = Keyboard function number (1, 6, 7, 8, or A)	Per keyboard function
Display Functions		
2 Display a character (with Ctrl-Break check)	(DL) = Character	None
5 Print a character	(DL) = Character	None
6 Display a character (no Ctrl-Break check)	(DL) = Character	None

*Some key combinations generate "extended codes," and may require two function calls. See Section 6.4 for details.

Table 6-5. Function calls with the Type 21 interrupt (continued).

(AH)	*Operation*	*Additional Input Registers*	*Result Registers*
9	Display a string	(DS:DX) = String address String must end with $.	None
Asynchronous Communications Functions			
3	Wait for asynchronous input character	None	(AL) = Character
4	Output a character to asynchronous device	(DL) = Character	None
File Management Functions			
D	Reset default disk drive	None	None
E	Select default disk drive	(DL) = Drive number (0 = A, 1 = B, 2 = C)	(AL) = Number of disk drives (2 for single drive)
19	Get default drive code	None	(AL) = Default drive code (0 = A, 1 = B, 2 = C)
2E	Set verify state	(DL) = 0 (AL) = 0 to turn verify off = 1 to turn verify on	None
Date and Time Functions			
2A	Get date	None	(CX) = Year (1980-2099) (DH) = Month (1-12) (DL) = Day (1-31)
2B	Set date	(CX), (DX) = Date, in same format as function 2A	(AL) = 0 if date is valid = FF if date is invalid
2C	Get time	None	(CH) = Hours (0-23) (CL) = Minutes (0-59)

Note: See the DOS 1.1 manual of the *DOS Technical Reference* manual for other disk functions in the range (AH) = F through (AH) = 2F. DOS 2 users should use the Extended File Management functions.

Table 6-5. Function calls with the Type 21 interrupt (continued).

(AH) Operation	*Additional Input Registers*	*Result Registers*
		(DH) = Seconds (0-59) (DL) = 1/100 Seconds (0-99)
2D Set time	(CX), (DX) = Time, in same format as function 2C	(AL) = 0 if time is valid = FF if time is invalid
Interrupt Vector Functions		
25 Set interrupt vector	(DS:DX) = Vector address (AL) = Interrupt number (type)	None
35 Read interrupt vector address	(AL) = Interrupt number (type)	(ES:BX) = Vector address
Directory Functions (DOS 2 only)		
	Note: For "error returned" codes, see Table 6-6.	
39 Create a directory (MKDIR)	(DS:DX) = Address of ASCIIZ string for directory	Error returned is 3 or 5.
3A Remove a directory (RMDIR)	(DS:DX) = Address of ASCIIZ string for directory	Error returned is 3 or 5.
3B Change the directory (CHDIR)	(DS:DX) = Address of ASCIIZ string for new directory	Error returned is 3.
47 Get current directory	(DL) = Drive number (0 = default, 1 = A, etc.) (DS:SI) = Address of 64-byte buffer	(DS:SI) = Address of ASCIIZ string Error returned is 15.
Extended File Management Functions (DOS 2 only)		
Note: For "error returned" codes, see Table 6-6.		
36 Get free disk space	(DL) = Drive number (0 = default, 1 = A, etc.)	(AX) = 0FFFFH if invalid = Sectors per cluster (BX) = No. of free clusters (DX) = Total no. of clusters (CX) = Bytes per sector
3C Create a file	(DS:DX) = Address of ASCIIZ string (CX) = Attribute of file	(AX) = File handle Error returned is 3, 4, or 5.

Table 6-5. Function calls with the Type 21 interrupt (continued).

(AH)	*Operation*	*Additional Input Registers*	*Result Registers*
3D	Open a file	(DS:DX) = Address of ASCIIZ string (AL) = 0 to open for reading = 1 to open for writing = 2 to open for reading and writing	(AX) = File handle Error returned is 2, 4, 5, or 12
3E	Close a file handle	(BX) = File handle	Error returned is 6.
3F	Read from file or device	(BX) = File handle (CX) = No. of bytes to read (DS:DX) = Buffer address	(AX) = No. of bytes read = 0 if read from end of file Error returned is 5 or 6.
40	Write to a file or device	(BX) = File handle (CX) = No. of bytes to write (DS:DX) = Buffer address	(AX) = No. of bytes written Error returned is 5 or 6.
41	Delete a file	(DS:DX) = Address of ASCIIZ string	Errors returned are 2 or 5.
43	Get file attribute	(AL) = 0 (DS:DX) = Address of ASCIIZ string for file	(CX) = Attribute Error returned is 2 or 5.
43	Set file attribute	(AL) = 1 (DS:DX) = Address of ASCIIZ string for file (CX) = Attribute	Error returned is 2 or 5.
54	Get verify state	None	(AL) = 0 if verify is off = 1 if verify is on
56	Rename a file	(DS:DX) = Address of ASCIIZ string for old name (ES:DI) = Address of ASCIIZ string for new name	Error returned is 3, 5, or 17.