Int 13/AH=08h

DISK - GET DRIVE PARAMETERS (PC,XT286,CONV,PS,ESDI,SCSI)

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AH = 08h
DL = drive (bit 7 set for hard disk)
ES:DI = 0000h:0000h to guard against BIOS bugs
```

Return:

```
CF set on error
AH = status (07h) (see #00234)
CF clear if successful
AH = 00h
AL = 00h on at least some BIOSes
BL = drive type (AT/PS2 floppies only) (see #00242)
CH = low eight bits of maximum cylinder number
CL = maximum sector number (bits 5-0)
high two bits of maximum cylinder number (bits 7-6)
DH = maximum head number
DL = number of drives
ES:DI -> drive parameter table (floppies only)
```

Notes: May return successful even though specified drive is greater than the number of attached drives of that type (floppy/hard); check DL to ensure validity. For systems predating the IBM AT, this call is only valid for hard disks, as it is implemented by the hard disk BIOS rather than the ROM BIOS. The IBM ROM-BIOS returns the total number of hard disks attached to the system regardless of whether DL >= 80h on entry.. Toshiba laptops with HardRAM return DL=02h when called with DL=80h, but fail on DL=81h. The BIOS data at 40h:75h correctly reports 01h.. May indicate only two drives present even if more are attached; to ensure a correct count, one can use AH=15h to scan through

possible drives. Reportedly some Compaq BIOSes with more than one hard disk controller return only the number of drives DL attached to the corresponding controller as specified by the DL value on entry. However, on Compaq machines with "COMPAQ" signature at F000h:FFEAh, MS-DOS/PC DOS IO.SYS/IBMBIO.COM call INT 15/AX=E400h and INT 15/AX=E480h to enable Compaq "mode 2" before retrieving the count of hard disks installed in the system (DL) from this function.. The maximum cylinder number reported in CX is usually two less than the total cylinder count reported in the fixed disk parameter table (see INT 41h,INT 46h) because early hard disks used the last cylinder for testing purposes; however, on some Zenith machines, the maximum cylinder number reportedly is three less than the count in the fixed disk parameter table.. For BIOSes which reserve the last cylinder for testing purposes, the cylinder count is automatically decremented. On PS/1s with IBM ROM DOS 4, nonexistent drives return CF clear, BX=CX=0000h, and ES:DI = 0000h:0000h. Machines with lost CMOS memory may return invalid data for floppy drives. In this situation CF is cleared, but AX,BX,CX,DX,DH,DI, and ES contain only 0. At least under some circumstances, MS-DOS/ PC DOS IO.SYS/IBMBIO.COM just assumes a 360 KB floppy if it sees CH to be zero for a floppy.. The PC-Tools PCFORMAT program requires that AL=00h before it will proceed with the formatting. If this function fails, an alternative way to retrieve the number of floppy drives installed in the system is to call INT 11h.. In fact, the MS-DOS/PC-DOS IO.SYS/IBMBIO.COM attempts to get the number of floppy drives installed from INT 13/AH=08h, when INT 11h AX bit 0 indicates there are no floppy drives installed. In addition to testing the CF flag, it only trusts the result when the number of sectors (CL preset to zero) is non-zero after the call.

BUGS: Several different Compaq BIOSes incorrectly report high-numbered drives (such as 90h, B0h, D0h, and F0h) as present, giving them the same geometry as drive 80h; as a workaround, scan through disk numbers, stopping as soon as the number of valid drives encountered equals the value in 0040h:0075h. A bug in Leading Edge 8088 BIOS 3.10 causes the DI,SI,BP,DS, and ES registers to be destroyed. Some Toshiba BIOSes (at least before 1995, maybe some laptops??? with 1.44 MB floppies) have a bug where they do not set the ES:DI vector even for floppy drives. Hence these registers should be preset with zero before the call and checked to be non-zero on return before using them. Also it seems these BIOSes can return wrong info in BL and CX, as S/DOS 1.0 can be configured to preset these registers as for an 1.44 MB floppy.. The PS/2 Model 30 fails to reset the bus after INT 13/AH=08h and INT 13/AH=15h. A workaround is to monitor for these functions and perform a transparent INT 13/AH=01h status read afterwards. This will reset the bus. The MS-DOS 6.0 IO.SYS takes care of this by installing a special INT 13h interceptor for this purpose.. AD-DOS may leave interrupts disabled on return from this function.. Some Microsoft software explicitly sets STI after return.

See Also: AH=06h"Adaptec" - AH=13h"SyQuest" - AH=48h - AH

See Also: INT 41"HARD DISK 0"

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(Table 00242)
Values for diskette drive type:
01h    360K
02h    1.2M
03h    720K
04h    1.44M
05h    ??? (reportedly an obscure drive type shipped on some IBM machines).
2.88M on some machines (at least AMI 486 BIOS)
06h    2.88M
10h    ATAPI Removable Media Device
```

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