FORMAT OF THE CMOS DATA AREA
James Vahn

The standard AT CMOS addresses from 00h to 3Fh are easy,

```
;    Read CMOS
mov al,addr     ; 'addr' ranges from 00h to 3Fh.
out 70h,al      ;  wakes up the port.
jmp $+2         ;  a delay loop..
in al,71h       ;  reads CMOS.

;    Write CMOS
mov al,addr     ; 'addr' ranges from 00h to 3Fh.
out 70h,al      ;  wakes up the port.
jmp $+2         ;  a delay loop..
out 71h, value  ;  Writes 'value' from 00h to FFh.
                ;    note that 'addr' 10h to 20h are checksummed.
```

Some CMOS info...

addr	contents
00h	Seconds
01h	Second Alarm
02h	Minutes
03h	Minute Alarm
04h	Hours
05h	Hour Alarm
06h	Day of the Week
07h	Day of the Month
08h	Month
09h	Year
0Ah	Status Register A
0Bh	Status Register B
0Ch	Status Register C
0Dh	Status Register D
0Eh	Diagnostic Status Byte
0Fh	Shutdown Status Byte
10h	Disk Drive Type for Drives A: and B:
	The drive-type bytes use bits 0:3 for the first drive and 4:7 for the other disk drive types.
00h	no drive present
01h	double sided 360k
02h	high capacity (1.2 meg)
03h-0Fh	reserved
11h	(AT):Reserved (PS/2):drive type for hard disk C:
12h	(PS/2):drive type for hard disk D:
	(AT, XT/286):hard disk type for drives C: and D:

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Format of drive-type entry for AT, XT/286:

0 number of cyls in drive (0-1023 allowed)
2 number of heads per drive (0-15 allowed)
3 starting reduced write compensation (not used on AT)
5 starting cylinder for write compensation
7 max. ECC data burst length, XT only
8 control byte

Bit
7 disable disk-access retries
6 disable ECC retries
5-4 reserved, set to zero
3 more than 8 heads
2-0 drive option on XT (not used by AT)
9 timeout value for XT (not used by AT)
12 landing zone cylinder number
14 number of sectors per track (default 17, 0-17 allowed)

13h Reserved
14h Equipment Byte (corresponds to sw. 1 on PC and XT)
15h-16h Base Memory Size (low,high)
17h-18h Expansion Memory Size (low,high)
19h-20h Reserved
(PS/2) POS information Model 50 (60 and 80 use a 2k CMOS RAM that is not accessible through software)
21h-2Dh Reserved (not checksumed)
2Eh-2Fh Checksum of Bytes 10 Through 20 (low,high)
30h-31h Exp. Memory Size as Det. by POST (low,high)
32h Date Century Byte
33h Information Flags (set during power-on)
34h-3Fh Reserved - Put Your Name Here.