



**Note:** This IBM PC BIOS API call is for DOS/Win16 personality only. Use [Family API](#) for portability.

**Note:** [osFree Macro Library](#) provides macros for most of functions

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# Int 10H, AH=00H

## Version

IBM 5150 and higher

## Brief

Specify the display mode for the currently active display adapter

## Macro

[@SetMode](#)

## Family API

[VioSetMode](#)

## Input

```
AH = 00h
AL = Mode
```

## Return

- AL = video mode flag (Phoenix, AMI BIOS)
  - 20h mode > 7
  - 30h modes 0-5 and 7
  - 3Fh mode 6

- AL = CRT controller mode byte (Phoenix 386 BIOS v1.10)

## Notes

- Install check/adaptor detect:
  - for Ahead adapters, the signature "AHEAD" at C000h:0025h
  - for Paradise adapters, the signature "VGA=" at C000h:007Dh
  - for Oak Tech OTI-037/057/067/077 chipsets, the signature "OAK VGA" at C000h:0008h
  - for ATI adapters, the signature "761295520" at C000h:0031h; the byte
    - at C000h:0043h indicates the chipset revision:
      - 31h for 18800
      - 32h for 18800-1
      - 33h for 18800-2
      - 34h for 18800-4
      - 35h for 18800-5
      - 62h for 68800AX (Mach32) (see also #00732)
    - the two bytes at C000h:0040h indicate the adapter type
      - "22" EGA Wonder
      - "31" VGA Wonder
      - "32" EGA Wonder800+
    - the byte at C000h:0042h contains feature flags
      - bit 1: mouse port present
      - bit 4: programmable video clock
    - the byte at C000h:0044h contains additional feature flags if chipset
      - byte > 30h (see #00009)
  - for Genoa video adapters, the signature 77h XXh 99h 66h at C000h:NNNNh, where NNNNh is stored at C000h:0037h and XXh is
    - 00h for Genoa 6200/6300
    - 11h for Genoa 6400/6600
    - 22h for Genoa 6100
    - 33h for Genoa 5100/5200
    - 55h for Genoa 5300/5400
  - for SuperEGA BIOS v2.41+, C000h:0057h contains the product level
  - for Genoa SuperEGA BIOS v3.0+, C000h:0070h contains the signature "EXTMODE", indicating support for extended modes
- IBM standard modes do not clear the screen if the high bit of AL is set (EGA or higher only)
- the Tseng ET4000 chipset is used by the Orchid Prodesigner II, Diamond SpeedSTAR VGA, Groundhog Graphics Shadow VGA, Boca Super X VGA, Everex EV-673, etc.
- intercepted by GRAFTABL from Novell DOS 7 and Caldera OpenDOS 7.01.

## Note

Text based on [Ralf Brown Interrupt List Release 61](#)

| IBM PC BIOS API |   |
|-----------------|---|
| Video I/O       | <b>INT 10H:</b> 00H, 01H, 02H, 03H, 05H, 06H, 07H, 08H, 09H, 0AH, 0BH, 0CH, 0DH, 0EH, 0FH |

| <b>IBM PC BIOS API</b> |   |
|------------------------|---|
| Hardware info          | <a href="#">INT 11H</a> , <a href="#">INT 12H</a>   |
| Serial I/O             | <a href="#">INT 14H</a> : <a href="#">00H</a> , <a href="#">01H</a> , <a href="#">02H</a> , <a href="#">03H</a>   |
| Tape I/O               | <a href="#">INT 15H</a> : <a href="#">00H</a> , <a href="#">01H</a> , <a href="#">02H</a> , <a href="#">03H</a>   |
| Keyboard I/O           | <a href="#">INT 16H</a> : <a href="#">00H</a> , <a href="#">01H</a> , <a href="#">02H</a>   |
| Printer I/O            | <a href="#">INT 17H</a> : <a href="#">00H</a> , <a href="#">01H</a> , <a href="#">02H</a>   |
| Disk I/O               | <a href="#">INT 13H</a> : <a href="#">00H</a> , <a href="#">01H</a> , <a href="#">02H</a> , <a href="#">03H</a> , <a href="#">04H</a> , <a href="#">05H</a> |
| Date and Time          | <a href="#">INT 1AH</a> : <a href="#">00H</a> , <a href="#">01H</a>   |

### osFree Macro Library

|                |  |
|----------------|--|
| Video I/O      | <a href="#">@SetMode</a> <a href="#">@SetCurSz</a> <a href="#">@SetCurPos</a> <a href="#">@GetCur</a> <a href="#">@SetPage</a> <a href="#">@ScrollUp</a> <a href="#">@ScrollDn</a> <a href="#">@Scroll</a> <a href="#">@GetChAtr</a> <a href="#">@PutChAtr</a> <a href="#">@PutCh</a> <a href="#">@SetPalet</a> <a href="#">@SetColor</a> <a href="#">@SetDot</a> <a href="#">@GetDot</a> <a href="#">@WrtTTY</a> <a href="#">@VideoState</a> <a href="#">@GetMode</a> <a href="#">@GetDisplay</a> <a href="#">@GetVideoState</a> <a href="#">@GetEGAInfo</a> <a href="#">@Cls</a> |
| Hardware info  | <a href="#">@Equipment</a> <a href="#">@MemSize</a>  |
| Serial I/O     | <a href="#">@AuxInit</a> <a href="#">@AuxSendChar</a> <a href="#">@AuxRecieveChar</a> <a href="#">@AuxStatus</a>   |
| Tape I/O       | <a href="#">@TapeOn</a> <a href="#">@TapeOff</a> <a href="#">@TapeRead</a> <a href="#">@TapeWrite</a>  |
| Keyboard I/O   | <a href="#">@KbdStatus</a> <a href="#">@CharIn</a> <a href="#">@CharPeek</a>   |
| Printer I/O    | <a href="#">@PrnPrint</a> <a href="#">@PrnInit</a> <a href="#">@PrnStatus</a>  |
| Disk I/O       | <a href="#">@DskReset</a> <a href="#">@DskStatus</a> <a href="#">@DskRead</a> <a href="#">@DskWrite</a> <a href="#">@DskVerify</a> <a href="#">@DskFormat</a>  |
| Date and Time  | <a href="#">@SetTime</a> <a href="#">@GetTime</a>  |
| Mouse          | <a href="#">@MouInit</a> <a href="#">@MouShowPointer</a> <a href="#">@MouStatus</a> <a href="#">@MouSetPos</a> <a href="#">@MouSetMickey</a> <a href="#">@MouRegion</a>  |
| Memory manager | <a href="#">@ModBlok</a> <a href="#">SET_BLOCK</a>   |

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### Family API

|     |  |  |
|-----|--|--|
| DOS | Process Manager  | <a href="#">DosBeep</a> <a href="#">DosExit</a> <a href="#">DosSleep</a> <a href="#">DosExecPgm</a>  |
|     | File Manager   | <a href="#">DosChDir</a> <a href="#">DosChgFilePtr</a> <a href="#">DosClose</a> <a href="#">DosDelete</a> <a href="#">DosDupHandle</a> <a href="#">DosMkDir</a> <a href="#">DosMove</a> <a href="#">DosQCurDir</a> <a href="#">DosQCurDisk</a> <a href="#">DosSetFileMode</a> <a href="#">DosOpen</a> <a href="#">DosQFileInfo</a> <a href="#">DosRead</a> <a href="#">DosQFileMode</a> <a href="#">DosQFSInfo</a> <a href="#">DosQVerify</a> <a href="#">DosRmdir</a> <a href="#">DosSelectDisk</a> <a href="#">DosFindClose</a> <a href="#">DosFindFirst</a> <a href="#">DosFindNext</a> <a href="#">DosSetFileInfo</a> <a href="#">DosSetVerify</a> <a href="#">DosWrite</a> <a href="#">DosFileLocks</a> <a href="#">DosSetFHandState</a> <a href="#">DosNewSize</a> <a href="#">DosBufReset</a> <a href="#">DosQFHandState</a> <a href="#">DosSetFSinfo</a> <a href="#">DosShutdown</a> |
|     | Memory Manager   | <a href="#">DosFreeSeg</a> <a href="#">DosSubAlloc</a> <a href="#">DosSubFree</a> <a href="#">DosSubSet</a> <a href="#">DosAllocHuge</a> <a href="#">DosAllocSeg</a> <a href="#">DosReallocHuge</a> <a href="#">DosReallocSeg</a> <a href="#">DosGetHugeShift</a> <a href="#">DosCreateCSAlias</a>   |
|     | NLS  | <a href="#">DosCaseMap</a> <a href="#">DosGetCtryInfo</a> <a href="#">DosGetDBCSEv</a> <a href="#">DosSetCtryCode</a> <a href="#">DosGetCollate</a> <a href="#">DosGetMessage</a> <a href="#">DosInsMessage</a> <a href="#">DosPutMessage</a>  |
|     | Date and Time  | <a href="#">DosSetDateTime</a> <a href="#">DosGetDateTime</a>  |
|     | Devices  | <a href="#">DosDevConfig</a> <a href="#">DosDevIOct1</a> <a href="#">DosDevIOct12</a>  |
|     | Signals  | <a href="#">DosHoldSignal</a> <a href="#">DosSetSigHandler</a>   |
|     | Misc   | <a href="#">BadDynLink</a> <a href="#">DosGetEnv</a> <a href="#">DosGetMachineMode</a> <a href="#">DosGetVersion</a> <a href="#">DosError</a> <a href="#">DosErrClass</a> <a href="#">DosSetVec</a>  |
| KBD | <a href="#">KbdCharIn</a> <a href="#">KbdFlushBuffer</a> <a href="#">KbdGetStatus</a> <a href="#">KbdSetStatus</a> <a href="#">KbdStringIn</a> <a href="#">KbdPeek</a> |  |

| <b>Family API</b> |   |
|-------------------|---|
| VIO               | <a href="#">VioGetBuf</a> <a href="#">VioGetConfig</a> <a href="#">VioGetCurPos</a> <a href="#">VioGetCurType</a> <a href="#">VioGetPhysBuf</a><br><a href="#">VioReadCellStr</a> <a href="#">VioReadCharStr</a> <a href="#">VioScrollUp</a> <a href="#">VioScrollDn</a> <a href="#">VioScrollLf</a> <a href="#">VioScrollRt</a><br><a href="#">VioScrUnLock</a> <a href="#">VioSetCurPos</a> <a href="#">VioSetCurType</a> <a href="#">VioSetMode</a> <a href="#">VioGetMode</a> <a href="#">VioShowBuf</a><br><a href="#">VioWrtCellStr</a> <a href="#">VioWrtCharStr</a> <a href="#">VioWrtCharStrAtt</a> <a href="#">VioWrtNAttr</a> <a href="#">VioWrtNCell</a><br><a href="#">VioWrtNChar</a> <a href="#">VioWrtTTY</a> <a href="#">VioScrLock</a> <a href="#">VioPopUp</a> |
| Tools             | <a href="#">BIND</a>  |
| Modules           | <a href="#">DOSCALLS.DLL</a> <a href="#">VIOCALLS.DLL</a> <a href="#">KBDCALLS.DLL</a> <a href="#">MSG.DLL</a>  |
| Libraries         | <a href="#">API.LIB</a> <a href="#">OS2386.LIB</a> <a href="#">FAPI.LIB</a> <a href="#">DOSCALLS.LIB</a> <a href="#">SUBCALLS.LIB</a>   |

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Last update: **2022/03/27 14:13**

