



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

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# Int 21H, AH=40H

## Version

2 and higher

## Brief

“WRITE” - WRITE TO FILE OR DEVICE

## Family API

## Input

```
AH = 40h
BX = file handle
CX = number of bytes to write
DS:DX -> data to write
```

## Return

CF clear if successful

```
AX = number of bytes actually written
CF set on error
AX = error code (05h,06h) (see #01680 at AH=59h/BX=0000h)
```

## Notes

```
if CX is zero, no data is written, and the file is truncated or
    extended to the current position
    data is written beginning at the current file position, and the file
```

position is updated after a successful write  
 for FAT32 drives, the file must have been opened with AX=6C00h with the "extended size" flag in order to expand the file beyond 2GB; otherwise the write will fail with error code 0005h (access denied)  
 the usual cause for AX < CX on return is a full disk  
**BUG:** a write of zero bytes will appear to succeed when it actually failed if the write is extending the file and there is not enough disk space for the expanded file (DOS 5.0-6.0); one should therefore check whether the file was in fact extended by seeking to 0 bytes from the end of the file (INT 21/AX=4202h/CX=0000h/DX=0000h)  
 under the FlashTek X-32 DOS extender, the pointer is in DS:EDX

## See also

AH=28h,AH=3Fh“DOS”,AH=93h,INT 2F/AX=1109h

## Note

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

<b>DOS API</b>	
Process manager	INT 20H, <b>INT 21H</b> : 00H, 25H, 26H, 31H, 34H, 35H, 4BH, 4CH, 4DH, 50H, 51H, 52H, 55H, 62H, INT 22H, INT 27H, INT 28H
File manager	INT 25H, INT 26H, <b>INT 21H</b> : 0DH, 0EH, 0FH, 10H, 11H, 12H, 13H, 14H, 15H, 16H, 17H, 19H, 1AH, 1BH, 1CH, 21H, 22H, 23H, 24H, 27H, 28H, 29H, 2EH, 2FH, 32H, 3305H, 36H, 39H, 3AH, 3BH, 3CH, 3DH, 3EH, 3FH, 40H, 41H, 42H, 4300H, 4301H, 45H, 45H, 46H, 4EH, 4FH, 54H, 56H, 5700H, 5701H, 5AH, 5BH, 5c00H, 5c01H, 60H, 67H, 68H, 6900H, 6901H, 6AH, 6CH
Character Device I/O	INT 29H, <b>INT 21H</b> : 01H, 02H, 03H, 04H, 05H, 06H, 07H, 08H, 09H, 0AH, 0BH, 0AH, 0CH, 5D07H, 5D08H, 5D09H, 5D0AH
Signals	INT 23H, INT 24H, <b>INT 21H</b> : 3300H, 3301H, 3302H
Memory manager	<b>INT 21H</b> : 48H, 49H, 4AH, 5800H, 5801H, 5802H, 5803H
Date and Time	<b>INT 21H</b> : 2AH, 2BH, 2CH, 2DH
Misc	<b>INT 21H</b> : 30H, 3306H, 3700H, 3701H, 3702H, 3703H, 59H
NLS	<b>INT 21H</b> : 3303H, 3304H, 3800H, 3801H, 6300H, 6301H, 6301H, 6500H, 6501H, 6502H, 6503H, 6504H, 6505H, 6506H, 6507H, 6520H, 6521H, 6522H, 6523H, 65A0H, 65A1H, 65A2H, 6601H, 6602H
Devices	<b>INT 21H</b> : 4400H, 4401H, 4402H, 4403H, 4404H, 4405H, 4406H, 4407H, 4408H, 4409H, 440AH, 440BH, 440CH, 440DH, 440EH, 440FH, 4410H, 4411H, 53H
Network	<b>INT 21H</b> : 5E00H, 5E01H, 5E02H, 5E03H, 5E04H, 5E05H, 5F00H, 5F01H, 5F02H, 5F03H, 5F04H, 5F05H, 5F07H, 5F08H

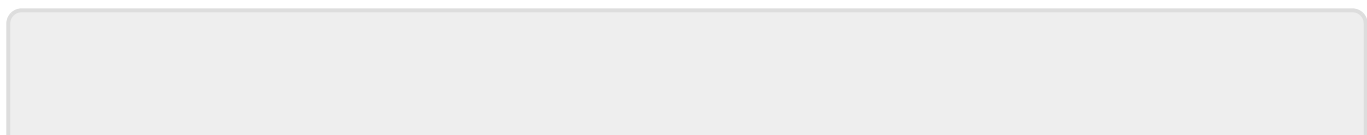
<b>osFree Macro Library</b>	
Video I/O	<a href="#">@SetMode</a> <a href="#">@SetCurSz</a> <a href="#">@SetCurPos</a> <a href="#">@GetCur</a> <a href="#">@SetPage</a> <a href="#">@ScrollUp</a> <a href="#">@ScrollDn</a> <a href="#">@Scroll</a> <a href="#">@GetChAtr</a> <a href="#">@PutChAtr</a> <a href="#">@PutCh</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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<b>Family API</b>		
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>
	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="#">DosDevIOctI</a> <a href="#">DosDevIOctI2</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>
VIO		<a href="#">VioGetBuf</a> <a href="#">VioGetConfig</a> <a href="#">VioGetCurPos</a> <a href="#">VioGetCurType</a> <a href="#">VioGetPhysBuf</a> <a href="#">VioReadCellStr</a> <a href="#">VioReadCharStr</a> <a href="#">VioScrollUp</a> <a href="#">VioScrollDn</a> <a href="#">VioScrollLf</a> <a href="#">VioScrollRt</a> <a href="#">VioScrUnLock</a> <a href="#">VioSetCurPos</a> <a href="#">VioSetCurType</a> <a href="#">VioSetMode</a> <a href="#">VioGetMode</a> <a href="#">VioShowBuf</a> <a href="#">VioWrtCellStr</a> <a href="#">VioWrtCharStr</a> <a href="#">VioWrtCharStrAtt</a> <a href="#">VioWrtNAttr</a> <a href="#">VioWrtNCell</a> <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="#">KBDSCALLS.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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