



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

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# Int 20H

## Version

1 and higher

## Brief

CONTROL-C/CONTROL-BREAK HANDLER

## Family API

## Input

none

## Return

1. -DOS 1.x—

AH = 00h abort program

```
if all registers preserved, restart DOS call
---DOS 2+---
CF clear
  all registers preserved
return via RETF with CF set or (MS-DOS 1,DR DOS) RETF 2 with CF set
  DOS will abort program with errorlevel 0
else (RETF/RETF 2 with CF clear or IRET with CF ignored)
  interrupted DOS call is restarted
```

## Macro

## Notes

this interrupt is invoked whenever DOS detects a ^C or ^Break; it should never be called directly

MS-DOS 1.25 also invokes INT 23 on a divide overflow (INT 00)

MS-DOS remembers the stack pointer before calling INT 23, and if it is not the same on return, pops and discards the top word; this is what permits a return with RETF as well as IRET or RETF 2

MS-DOS 2.1+ ignores the returned CF if SP is the same on return as it was when DOS called INT 23, so RETF 2 will not terminate the program

Novell DOS 7 always pops a word if CF is set on return, so one should not return with RETF 2 and CF set or IRET with the stored flags' CF set

any DOS call may safely be made within the INT 23 handler, although the handler must check for a recursive invocation if it does call DOS

## See Also

INT 1B, INT 21/AH=92h"PTS-DOS"

## Note

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

| DOS API              |                                                                                                                                                                                                                                                                                                                                                            |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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                                                                                                                                                                    |

**DOS API**

|         |                                                                                                                                                   |
|---------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| 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                                  |

**osFree Macro Library**

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

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**Family API**

|     |                 |                                                                                                                                                                                                                                                                                                                                                                              |
|-----|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DOS | Process Manager | DosBeep DosExit DosSleep DosExecPgm                                                                                                                                                                                                                                                                                                                                          |
|     | File Manager    | DosChDir DosChgFilePtr DosClose DosDelete DosDupHandle DosMkDir DosMove DosQCurDir DosQCurDisk DosSetFileMode DosOpen DosQFileInfo DosRead DosQFileMode DosQFSInfo DosQVerify DosRmDir DosSelectDisk DosFindClose DosFindFirst DosFindNext DosSetFileInfo DosSetVerify DosWrite DosFileLocks DosSetFHandState DosNewSize DosBufReset DosQFHandState DosSetFSinfo DosShutdown |
|     | Memory Manager  | DosFreeSeg DosSubAlloc DosSubFree DosSubSet DosAllocHuge DosAllocSeg DosReallocHuge DosReallocSeg DosGetHugeShift DosCreateCSAlias                                                                                                                                                                                                                                           |
|     | NLS             | DosCaseMap DosGetCtryInfo DosGetDBCSEv DosSetCtryCode DosGetCollate DosGetMessage DosInsMessage DosPutMessage                                                                                                                                                                                                                                                                |
|     | Date and Time   | DosSetDateTime DosGetDateTime                                                                                                                                                                                                                                                                                                                                                |
|     | Devices         | DosDevConfig DosDevIOCtl DosDevIOCtl2                                                                                                                                                                                                                                                                                                                                        |
|     | Signals         | DosHoldSignal DosSetSigHandler                                                                                                                                                                                                                                                                                                                                               |
| KBD | Misc            | BadDynLink DosGetEnv DosGetMachineMode DosGetVersion DosError DosErrClass DosSetVec                                                                                                                                                                                                                                                                                          |
|     |                 | KbdCharIn KbdFlushBuffer KbdGetStatus KbdSetStatus KbdStringIn KbdPeek                                                                                                                                                                                                                                                                                                       |
|     | VIO             | VioGetBuf VioGetConfig VioGetCurPos VioGetCurType VioGetPhysBuf VioReadCellStr VioReadCharStr VioScrollUp VioScrollDn VioScrollLf VioScrollRt VioScrUnLock VioSetCurPos VioSetCurType VioSetMode VioGetMode VioShowBuf VioWrtCellStr VioWrtCharStr VioWrtCharStrAtt VioWrtNAttr VioWrtNCell VioWrtNChar VioWrtTTY VioScrLock VioPopUp                                        |
|     | Tools           | BIND                                                                                                                                                                                                                                                                                                                                                                         |
|     | Modules         | DOSCALLS.DLL VIOCALLS.DLL KBDCALLS.DLL MSG.DLL                                                                                                                                                                                                                                                                                                                               |
|     | Libraries       | API.LIB OS2386.LIB FAPI.LIB DOSCALLS.LIB SUBCALLS.LIB                                                                                                                                                                                                                                                                                                                        |
|     |                 |                                                                                                                                                                                                                                                                                                                                                                              |

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