



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

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# Int 21H, AH=48H

## Version

2 and higher

## Brief

ALLOCATE MEMORY

## Family API

[DosAllocHuge](#), [DosAllocSeg](#)

## Input

```
AH = 48h  
BX = number of paragraphs to allocate
```

## Return

```
CF clear if successful  
  AX = segment of allocated block  
CF set on error  
  AX = error code (07h,08h) (see #01680 at AH=59h/BX=0000h)  
  BX = size of largest available block
```

## Macro

```
INCLUDE DOS.INC
```

**ALLOCATE\_MEMORY** bytes

## Notes

DOS 2.1-6.0 coalesces free blocks while scanning for a block to allocate

.COM programs are initially allocated the largest available memory block, and should free some memory with AH=49h before attempting any allocations

under the FlashTek X-32 DOS extender, EBX contains a protected-mode near pointer to the allocated block on a successful return

## See also

**INT 21H:** 49H, 4AH, 58H

## 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

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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="#">@GetEGInfo</a> <a href="#">@Cls</a>
Hardware info	<a href="#">@Equipment</a> <a href="#">@MemSize</a>
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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> <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="#">DosDevIOct2</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="#">VIOCALS.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="#">FAP.LIB</a> <a href="#">DOSCALLS.LIB</a> <a href="#">SUBCALLS.LIB</a>

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