



This is part of **Family API** which allow to create dual-os version of program runs under OS/2 and DOS

**Note:** This is legacy API call. It is recommended to use 32-bit equivalent

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## KbdCharIn

This call returns a character data record from the keyboard.

### Syntax

KbdCharIn (CharData, IOWait, KbdHandle)

### Parameters

;CharData (PKBDKEYINFO) - output : Address of the character data structure: :asciicharactercode (UCHAR) : ASCII character code. The scan code received from the keyboard is translated to the ASCII character code. :scancode (UCHAR) : Code received from the keyboard. The scan code received from the keyboard is translated to the ASCII character code.

status (UCHAR) : State of the keystroke event: 'Bit Description' 7-6 00 = Undefined

```
01 = Final character, interim character flag off
10 = Interim character
11 = Final character, interim character flag on.
```

5 1 = Immediate conversion requested.

4-2 Reserved.

1 0 = Scan code is a character.

```
1 = Scan code is not a character; is an extended key code from the
keyboard.
```

0 1 = Shift status returned without character. reserved (UCHAR):NLS shift status. Reserved, set to zero. 7 Kana-To-Kanji Conversion Mode (Japanese)

```
Hanja_25: Hangeul-to-Hanja Conversion Mode (Korean)
Reserved (T-Chinese)
```

6 Romaji Mode (Japanese)

Hanja\_CSR: Hangeul-to-Hanja Conversion Mode (Korean)  
Reserved (T-Chinese)

5 Reserved 4-3

- 00 Shift Indicator Row always visible
- 01 Shift Indicator Row always invisible
- 10 Shift Indicator Row visible only when a shift key is pressed.  
And it becomes invisible, depress another key.
- 11 Reserved

2-1

- 00 Alphanumeric Mode
- 01 Katakana Mode (Japanese)  
Jamo Mode (Korean)  
Phonetic Input Mode (T-Chinese)
- 10 Hiragana Mode (Japanese)  
Hangeul Mode (Korean)  
TsangJye Input Mode (T-Chinese)
- 11 Reserved

0 DBCS Mode

shiftkeystate (USHORT) : Shift key status. 'Bit Description' 15 SysReq key down 14 CapsLock key down 13 NumLock key down 12 ScrollLock key down 11 Right Alt key down (SBCS) 10 Right Ctrl key down (SBCS) 9 Left Alt key down 8 Left Ctrl key down 7 Insert on 6 CapsLock on 5 NumLock on 4 ScrollLock on 3 Either Alt key down (DBCS) 2 Either Ctrl key down (DBCS) 1 Left Shift key down 0 Right Shift key down time (ULONG) : Time stamp indicating when a key was pressed. It is specified in milliseconds from the time the system was started.

;*IOWait* (USHORT) - input : Wait if a character is not available. 'Value Definition' 0 Requestor waits for a character if one is not available. 1 Requestor gets an immediate return if no character is available. ;*KbdHandle* (HKBD) - input : Default keyboard or the logical keyboard.

**Return Code**

rc (USHORT) - return Return code descriptions are: \* 0 NO\_ERROR \* 375 ERROR\_KBD\_INVALID\_IOWAIT \* 439 ERROR\_KBD\_INVALID\_HANDLE \* 445 ERROR\_KBD\_FOCUS\_REQUIRED \* 447 ERROR\_KBD\_KEYBOARD\_BUSY \* 464 ERROR\_KBD\_DETACHED \* 504 ERROR\_KBD\_EXTENDED\_SG

**Remarks**

On an enhanced keyboard, the secondary enter key returns the normal character 0DH and a scan code of E0H.

Double-byte character codes (DBCS) require two function calls to obtain the entire code.

If shift report is set with KbdSetStatus, the CharData record returned reflects changed shift information only.

Extended ASCII codes are identified with the status byte, bit 1 on and the ASCII character code being either 00H or E0H. Both conditions must be satisfied for the character to be an extended keystroke. For extended ASCII codes, the scan code byte returned is the second code (extended code). Usually the extended ASCII code is the scan code of the primary key that was pressed.

A thread in the foreground session that repeatedly polls the keyboard with KbdCharIn (with no wait), can prevent all regular priority class threads from executing. If polling must be used and a minimal amount of other processing is being performed, the thread should periodically yield to the CPU by issuing a DosSleep call for an interval of at least 5 milliseconds.

## Family API Considerations

Some options operate differently in the DOS mode than in the OS /2 mode. Therefore, the following restrictions apply to KbdCharIn when coding in the DOS mode: \* The CharData structure includes everything except the time stamp. \* Interim character is not supported \* Status can be 0 or 40H \* KbdHandle is ignored.

### Example Code

## C Binding

```
<PRE> typedef struct _KBDKEYINFO { /* kbci */
```

```
    UCHAR    chChar;           /* ASCII character code */
    UCHAR    chScan;          /* Scan Code */
    UCHAR    fbStatus;        /* State of the character */
    UCHAR    bNlsShift;       /* Reserved (set to zero) */
    USHORT   fsState;         /* State of the shift keys */
    ULONG    time;           /* Time stamp of keystroke (ms since ipl) */
```

```
}KBDKEYINFO;
```

```
#define INCL_KBD
```

```
USHORT rc = KbdCharIn(CharData, IOWait, KbdHandle);
```

```
PKBDKEYINFO CharData; /* Buffer for data */ USHORT IOWait; /* Indicate if wait */ HKBD KbdHandle; /* Keyboard handle */
```

```
USHORT rc; /* return code */ </PRE>
```

## MASM Binding

```
<PRE> KBDKEYINFO struc
```

```

kbc_i_chChar    db  ? ;ASCII character code
kbc_i_chScan    db  ? ;Scan Code
kbc_i_fbStatus  db  ? ;State of the character
kbc_i_bNlsShift db  ? ;Reserved (set to zero)
kbc_i_fsState   dw  ? ;state of the shift keys
kbc_i_time      dd  ? ;time stamp of keystroke (ms since ipl)
    
```

KBDKEYINFO ends

EXTRN KbdCharIn:FAR INCL\_KBD EQU 1

PUSH@ OTHER CharData ;Buffer for data PUSH WORD IOWait ;Indicate if wait PUSH WORD KbdHandle ;Keyboard handle CALL KbdCharIn

Returns WORD </PRE>

## Note

Text based on [http://www.edm2.com/index.php/KbdCharIn\\_\(FAPI\)](http://www.edm2.com/index.php/KbdCharIn_(FAPI))

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 DosDevIOct1 DosDevIOct2
	Signals	DosHoldSignal DosSetSigHandler
	Misc	BadDynLink DosGetEnv DosGetMachineMode DosGetVersion DosError DosErrClass DosSetVec
KBD	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 KBDSCALLS.DLL MSG.DLL	
Libraries	API.LIB OS2386.LIB FAPI.LIB DOSCALLS.LIB SUBCALLS.LIB	

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