

## KbdPeek

### Bindings:

### C:

```

typedef struct _KBDKEYINFO { /* kbc_i */
    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 = KbdPeek(CharData, KbdHandle);

PKBDKEYINFO CharData; /* Buffer for data */
HKBD KbdHandle; /* Keyboard handle */

USHORT rc; /* return code */06800680

```

### MASM:

```

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 KbdPeek:FAR
INCL_KBD EQU 1

PUSH@ OTHER CharData ;Buffer for data
PUSH WORD KbdHandle ;Keyboard handle
CALL KbdPeek

Returns WORD

```

This call returns any available character data record from the keyboard without removing it from the buffer.

KbdPeek (CharData, KbdHandle)

CharData (**PKBDKEYINFO**) - output Address of the character data information:

*asciicharcode* (**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 hardware.

*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, set to zero.  |
| 1   | 0 = Scan code is a character.   |
|     | 1 = Scan code is not a character; it is an extended key code from the keyboard. |
| 0   | 1 = Shift status returned without character.                                    |

*reserved* (**UCHAR**) NLS shift status. Reserved, set to zero.

*shiftkeystat* (**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   |
| 10  | Right Ctrl key down  |
| 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  |
| 2   | Either Ctrl key down |
| 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.

*KbdHandle* (**HKBD**) - input Default keyboard or the logical keyboard.

*rc* (**USHORT**) - return Return code descriptions are:

|     |                          |
|-----|--------------------------|
| 0   | NO_ERROR                 |
| 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 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 *KbdPeek* when coding for the DOS mode:

- The *CharData* structure includes everything except the time stamp.
- Interim character is not supported.
- *Status* can be 0 or 1.
- *KbdHandle* is ignored.

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