#### ות - INT 21h

# Function 1- Character input with echo

Reads a character from the standard input device and echoes it to the standard output **Action:** device.

If no character is ready it waits until one is available.

I/O can be re-directed, but prevents detection of OEF.

AH = 01h On entry:

AL = 8 bit data input Returns:

Equivalent to CP/M BDOS call 01h, except that if the character is CTRL-C an INT 23h **Notes:** is performed.

# **Function 2 - Character output**

Outputs a character to the standard output device. I/O can be re-directed, but prevents **Action:** detection of 'disc full'.

AH = 02h On entry:

DL = 8 bit data (usually ASCII character)

Nothing Returns:

**Notes:** 

# **Function 3- Auxiliary input**

Reads a character from the current auxilliary device. Action:

AH = 03hOn entry:

AL = 8 bit data input Returns:

There is no way to read the status of the serial port or to detect errors through this call, Notes: therefore most PC comms packages drive the hardware directly, hence their general incompatibility with the 512.

### **Function 4- Auxiliary output**

Outputs a character to the current auxiliary device.

Action:

AH = 04h On entry:

DL = 8 bit data

Nothing Returns:

There is no way to read the status of the serial port or to detect errors through this call. **Notes:** Comments as Function 3.

### **Function 5- Printer output**

Sends a Character to the current listing device. Action:

AH = 05h

On entry:

DL = 8 bit data

Nothing Returns:

If the printer is busy this call will wait until the data is sent. **Notes:** 

There is no way to poll the printer status in DOS.

#### Function 6- Direct console I/O

Reads a character from the standard input device or returns zero if no character available. Also can write a character to the current standard output device. I/O can be redirected but prevents detection of EOF on input or 'disc full' on output.

**Action:** 

On entry:

AH = 06h

DL = function requested: 0Ch to 0FEh = output

(DL = character to be output)

0FFh = Input request

If output - nothing Returns:

If input - data ready: zero flag clear, AL = 8 bit data

If data not ready: zero flag set

This call ignores CTRL-X. Notes:

### Function 7 - Unfiltered character input no echo

Reads a character from the standard input device without echoing it to the display. Action:

If no character is ready it waits until one is available.

AH = 07h On entry:

AL = 8 bit data input Returns:

This call ignores CTRL-C, use function 8 if CTRL-C processing is required. There is **Notes:** 

no CP/M equivalent.

# **Function 08- Character input with no echo**

Reads a character from the standard input device without copying it to the display. **Action:** 

If no character is ready it waits until one is available.

AH = 08h On entry:

AL = 8 bit data input **Returns:** 

If CTRL-C is detected INT 23h is executed.

#### **Function 09- Output character string**

Writes a string to the display. Action:

AH = 09h On entry:

DS:DX = segment:offset of string

Nothing Returns:

The string must be terminated by the \$ character (24h), which is not transmitted. Any **Notes:** 

ASCII codes can be embedded within the string.