Support Group Application Note
Number: 020
Issue: 1
Author:

*FX/OSbyte features not documented in the BBC Micro User Guide

Applicable Hardware :

BBC B
BBC B+

Related Application Notes:

Support Group
Acorn Computers Limited
Acorn House
Vision Park
Histon
Cambridge CB4 4AE

&0D (13)
Two undocumented parameters may be supplied in X to disable events:

X = 7 disable RS423 receive error event
X = 8 disable service/network error event

&0E (14)
As above, two undocumented parameters may be supplied in X to enable events:

X = 7 enable RS423 receive error event
X = 8 enable service/network error event

Events are explained on p465 of the User Guide.

&76 (117)
This call returns the VDU status byte (which contains various status flags) in the X register.

BIT 0 - set if VDU2 sent, cleared by VDU3
BIT 2 - set if PAGED MODE ON, cleared if PAGED MODE OFF
BIT 3 - set if software scrolling, cleared if hardware scrolling

Software scrolling is used when text windows have been defined whereas hardware scrolls are used when the whole screen scrolls.

BIT 5 - set when cursors joined by VDU5
BIT 7 - set if VDU disabled

&76 (118)
Returns with the carry bit if the CTRL key is pressed, and with the Negative bit set if the SHIFT key is pressed. Machine code routines may branch on these conditions. This feature is invalid when called from a Second Processor.

&7B (123)
This call is used by the User Print Routine to indicate to the MOS that it has finished its task. (CF *FX 5.3 command). This feature should not normally be called from a Second Processor.

&8A (138)
This call has been expanded to allow a character to be inserted into any buffer. X must contain the buffer number, and Y the character to be inserted. A list of buffer numbers appears with *FX 21 on p428 of the User Guide.

&8D (141)
This command is exactly equivalent to the *ROM command.

&98 (152)
This call examines a buffer. The buffer number must be in X, and the call returns as follows:

Carry bit set if buffer empty
Carry bit clear indicates character(s) present in buffer.

Note that no character has been removed from the buffer.

&99 (153)
The call inserts a character into an INPUT buffer handling the interrupt character, and generating an escape condition if necessary.

Valid only for X = 0 or 1
Y must contain character to be inserted

&9C (156)
Change 6850 control register. The 6859 register is altered to: (Old value AND Y) EOR X. (See User Guide page 438).

Refer to the 6850 Data Sheet for details of the 6850 control register.

&9E (158) / &9F (159)
These calls respectively read and write to the Speech Processor chip. Refer to the Speech System User Guide.

&E9 (233)
As for &E7 (see User Guide page 441) but affects the system 6522. The system 6522 is used extensively in the normal operation of the machine and consequently this call should be used with extreme care.

&EB (235)
Return presence of Speech Processor.

X = &FF if Speech Processor present
X = &00 if Speech Processor not present

&F1 (241)
Read/Write *FX1 value.

&F5 (245)
Read/Write *FX5 value.

&F6 (246)
Read/Write *FX6 value.

THESE THREE CALLS OPERATE AS DESCRIBED IN THE USER GUIDE ON PAGE 438.

&FC (252)
Reads ID of current language, a number from 0 to 15 which indicates which socket the presently selected language ROM is in. The sockets are numbered from right to left starting at 15. On board sockets are 15, 14, 13, 12; and the remainder can be installed offboard. This call may not be meaningful from a Second Processor, since there may not necessarily be a current language in this case.

&FD (253)
Returns a number indicating what sort of reset last occurred:

0 = Soft Break
1 = Power-on Break
2 = CTRL Break

&FE (254)
Read/Write available RAM in BBC microcomputer (even when called from Second Processor).

128 = 32K
64 = 16K

&FF (255)
Read/Write start up option byte. This allows the keyboard link value to be read: it may be written to, but the value will be reset to the actual wired value on any reset other than a soft-reset. The links are configured as follows:

1	2	3	4	5	6	7	8
X	X	D_2	D_1	B	M_3	M_2	M_1

D2, D1 : Disc configuration bits (see Disc Manual).
B : Auto-boot select (Auto-boot when fitted).
M3, M2, M1 : Screen mode on hard reset (0-7)
X : Unused.