Support Group Application Note
Number: 005
Issue: 1
Acorne

## Author:

## Use of *FX 3

## Applicable

Hardware :
BBC B
BBC B+
BBC Master 128

Related
Application
Notes:

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## USE OF *FX 3

## Output characters destination

As a result of errors and omissions in the BBC User Guide, use of the *FX 3 command is difficult, particularly when one destination, which is not the screen, is required.

The error is the User Guide is as follows:
page 422: The chart of written character destinations shows four ticks in the Printer [Bit 2] column. There should not be ticks for *FX 3,2 and 3,3.

There is an undocumented bit of this word (bit 3) which allows other bits to be overridden; this is summarised in the chart below:

| Value of $n$ in decimal | Value of $n$ in binary |  |  |  | EFFECT |  |  | + Printer |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Bit 3 | Bit 2 | Bit 1 | Bit 0 | Printer | Screen | RS423 |  |
| 0 | 0 | 0 | 0 | 0 | $1+$ | 1 | x |  |
| 1 | 0 | 0 | 0 | 1 | $1+$ | 1 | 1 |  |
| 2 | 0 | 0 | 1 | 0 | x | x | x | controlled |
| 3 | 0 | 0 | 1 | 1 | x | x | 1 | by VDU 1,2 |
| 4 | 0 | 1 | 0 | 0 | x | 1 | x | 3 and *FX5 |
| 5 | 0 | 1 | 0 | 1 | x | 1 | 1 | and *FX6 |
| 6 | 0 | 1 | 1 | 0 | x | x | x |  |
| 7 | 0 | 1 | 1 | 1 | x | x | 1 |  |
| 8 | 1 | 0 | 0 | 0 | /* | 1 | x | * Printer |
| 9 | 1 | 0 | 0 | 1 | /* | 1 | 1 | controlled |
| 10 | 1 | 0 | 1 | 0 | /* | x | x | by *FX5 |
| 11 | 1 | 0 | 1 | 1 | /* | x | 1 | and *FX6 |
| 12 | 1 | 1 | 0 | 0 | x | 1 | x | and autom- |
| 13 | 1 | 1 | 0 | 1 | x | 1 | 1 | atically |
| 14 | 1 | 1 | 1 | 0 | x | x | x | enabled |
| 15 | 1 | 1 | 1 | 1 | $\mathbf{x}$ | $\mathbf{x}$ |  |  |

## Table 1 - the effect of *FX3.n

Note that the appropriate printer must have been selected with *FX5, and that if a serial printer is selected with FX5 and RS423 is selected from the above chart (with FX3) then the output from the RS423 port is undefined.

