Support Group Application Note
*Number: 005*
*Issue: 1*
*Author:*

Acorn

# Use of *FX 3

Applicable
Hardware :

BBC B
BBC B+
BBC Master 128

Related
Application
Notes:



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

**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 <u>not</u> 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** | | | |
|---|---|---|---|---|---|---|---|---|
| | **Bit 3** | **Bit 2** | **Bit 1** | **Bit 0** | **Printer** | **Screen** | **RS423** | |
| **0** | **0** | **0** | **0** | **0** | **/+** | **/** | **x** | |
| **1** | **0** | **0** | **0** | **1** | **/+** | **/** | **/** | **+ Printer** |
| **2** | **0** | **0** | **1** | **0** | **x** | **x** | **x** | **controlled** |
| **3** | **0** | **0** | **1** | **1** | **x** | **x** | **/** | **by VDU 1,2** |
| **4** | **0** | **1** | **0** | **0** | **x** | **/** | **x** | **3 and *FX5** |
| **5** | **0** | **1** | **0** | **1** | **x** | **/** | **/** | **and *FX6** |
| **6** | **0** | **1** | **1** | **0** | **x** | **x** | **x** | |
| **7** | **0** | **1** | **1** | **1** | **x** | **x** | **/** | |
| **8** | **1** | **0** | **0** | **0** | **/*** | **/** | **x** | *** Printer** |
| **9** | **1** | **0** | **0** | **1** | **/*** | **/** | **/** | **controlled** |
| **10** | **1** | **0** | **1** | **0** | **/*** | **x** | **x** | **by *FX5** |
| **11** | **1** | **0** | **1** | **1** | **/*** | **x** | **/** | **and *FX6** |
| **12** | **1** | **1** | **0** | **0** | **x** | **/** | **x** | **and autom-** |
| **13** | **1** | **1** | **0** | **1** | **x** | **/** | **/** | **atically** |
| **14** | **1** | **1** | **1** | **0** | **x** | **x** | **x** | **enabled** |
| **15** | **1** | **1** | **1** | **1** | **x** | **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.