

Installing a USB :CueCat

A USB :CueCat needs no software or drivers (I believe that PS/2 :CueCats do need drivers, though I've heard both views). Just plug your :CueCat into a USB port and Windows XP should recognise the new USB Device and tell you ':CueCat installed'. If it doesn't then unplug the :CueCat, wait a few moments and try again.

Your computer sees the :CueCat as a 'KeyBoard' device (not as a scanner). If for some unlikely reason you need to manually install then search for a new USB HID 'Human Interface Device'.

Note: because it is a kind of keyboard the :CueCat will give you strange results unless your NumLock Key is 'On' – if your keypad won't give you numbers then nor will the :CueCat

Scanning Codes with a :CueCat

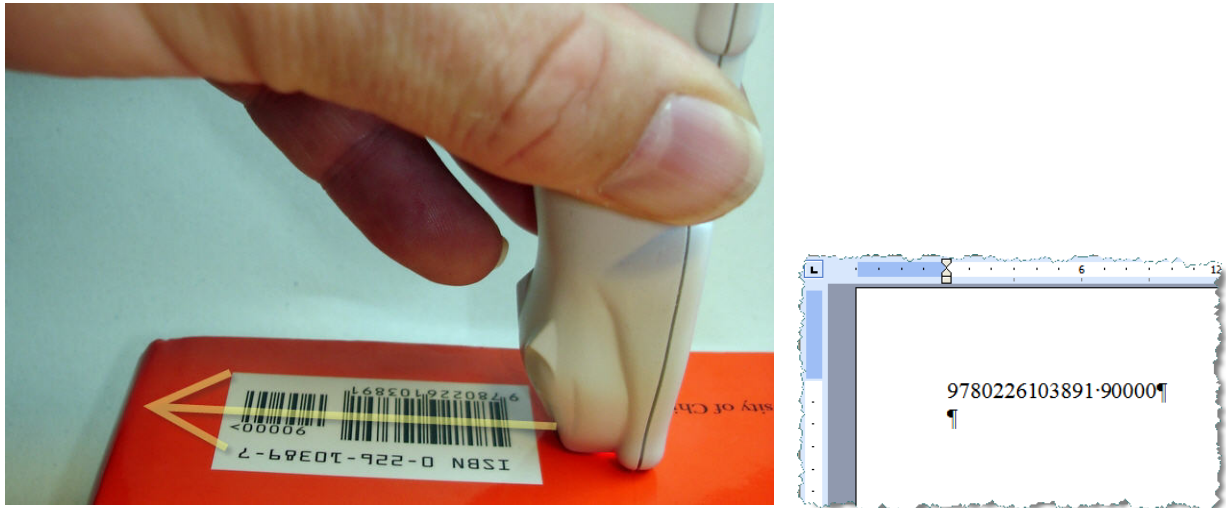
When your :CueCat is plugged into a USB port the small window in its nose will show a pulsing red light. While the light is pulsing, the :CueCat is asleep. To wake it up, hold it nose down on a piece of paper so that the light is reflected back into the window. When it wakes up the light will be a brighter steady red.



Find a handy bar-code, any UPC code on a book or other product will do. It may help to start with a code that is flat and not too near the edge of the product – a book with a code that's not right against the edge is ideal.

Open up a text editor on your PC. Notepad is fine, or a word processor.

Hold the :CueCat vertically with its tail in the air and it's nose touching the book. Put it so that its front paws are above and below the barcode and move it off to the empty space at one end of the code. Then move the :CueCat smoothly along the barcode from the clear space at one end to the clear space at the other.



There is a knack to this and it will come pretty quickly. Some things to check are:

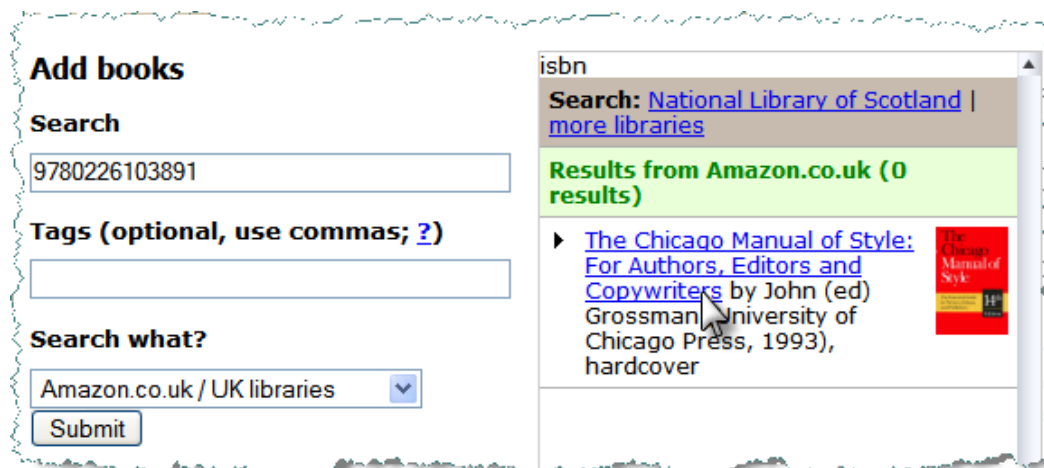
- Hold the :CueCat vertically, not at a slope.
- Try swiping faster or slower – usually a bit faster is better but keep the movement smooth.
- Keep the centre line of the :CueCat more or less in the centre of the barcode, if you wander off to one side the :Cue Cat may get confused.
- Start off to one side of the code – allow a centimetre (1/2”) of clear space to give you a run in.
- It does not matter whether you go from start to end of the code or end to start, nor which way the cat is facing.
- It may help to turn the book so that you are moving the :CueCat towards and away from you rather than from right to left. I find this helps with longer codes.

When the :CueCat reads the code you should see the 13 digit UPC code appear in your text editor window. If your barcode also includes a smaller code – like the example above – this is fine, the extra information will cause no problems. (Note: if you get a long string of apparent garbage then you may have an unmodified :CueCat, see below.)

Note: Barcodes on most books are in effect ISBN-13s of the form 978+ISBN+check digit (though this check digit differs from that on the ISBN-10). If the barcode does not start with 978 then it may be a local product code attached by the store -- Borders, Walmart and some others do this. The ISBN-13 barcode may still exist under a sticker or inside the front cover.

Using the :CueCat with LibraryThing

There are two main approaches that I use, one is to create a list of ISBNs in my text editor and import this into LibraryThing using 'Import Books' or, even more simply, to put the cursor in the 'Add books' Search box and scan the ISBN-13 directly into the field, :CueCat adds a carriage return automatically so the search is automatic. I just need to click to accept the result that I want to add to my catalogue.



Other :CueCats

Unmodified USB :CueCats

:CueCats were originally intended to output a serial number and an encrypted version of the barcode so that they could be used for user tracking. In the unmodified form they generate results that look like

```
.C3nZC3nZC3nWCxjWE3D1C3nX.cGf2.ENr7C3v7D3T3ENj3C3zYDNnZ.
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There is a simple fix (but not a trivial one, it involves opening up the :CueCat and cutting a connection on one of the integrated circuits) for the USB :CueCat that effectively modifies them to simply output the BarCode data. See <http://www.cexx.org/cuecat.htm> for more information.

PS/2 :CueCats

:CueCats are also available with PS/2 connectors to link in between your keyboard and computer. These are a little cheaper than USB :CueCats but do need driver software to make them work. I haven't tried one.

Acknowledgements

I spent several hours getting my first :CueCat to work and Googled many sites in the course of doing so. Some are named here, others I passed by and have since forgotten. I particularly acknowledge Norman Gennaro's pdf 'LibraryThing and Barcodes' from <http://groups.yahoo.com/group/Librarything/files/> which set me off on this road and gave me several useful sources; and, of course, Tim Spalding and friends for LibraryThing www.librarything.com

Bob Janes
6th July 2006

Creating Barcodes for the :CueCat

The barcodes below are created in Microsoft Word using the 'Free 3 of 9 Barcode' font from Matthew Welch at <http://www.squaregear.net/fonts/> (NB there is another free font on the web called '3 of 9 Barcode' that did not work so well.) By experiment I found that I can print good readable barcodes on my LaserJet if I do the following:

- a) Turn off the automatic bold setting in Word – go to Tools | AutoCorrect Options . . . | AutoFormat and uncheck '[] *bold* and _italic_ with real formatting'
- b) Put an * at each end of the text to be coded. Note: the standard font only includes upper case characters. I have used the Extended font on this page and for some unknown reason the :CueCat reverses the upper and lower case letters i.e. 'E' comes out as 'e' and vice versa.
- c) Put several spaces after the final asterisk to make sure that there is clear space for the scanner to start in (and before the first asterisk if necessary)
- d) Set the size of your font to about 36 point
- e) Set the font colour of the spaces and paragraph marker after your barcode to white, otherwise they may show up in the barcode and make it impossible to read. If you have problems look at your code and make sure that it starts and ends with the asterisk character (see below). Anything else makes the code unreadable.
- f) Make sure that there is vertical white space between barcodes. If they are too close the scanner may overlap and get confused.

You can also easily produce personal barcodes using on-line barcode creators and copying and pasting the resulting image see e.g. <http://www.barcodemill.com/> or <http://www.tec-it.com/playground>

Note: these Code 39 barcodes are not the same as UPC or ISBN codes which use a different font coding and are only numeric. See http://en.wikipedia.org/wiki/Code_39 for more information on Code 39 barcodes.



the asterisk code



1234567890



9781888316001



LIBRARYTHING

Footnote: all the barcodes here (and on the first page) will scan with my :CueCat when printed out on my LaserJet, or on my DeskJet. In the pdf version they have been replaced with gif files because the free barcode font will not distil into a pdf.

De-clawing a USB :CueCat

De-clawing or modifying a :CueCat is the process of changing it to output code that is plain-text without the encryption or serial number.

Caution: This process works with later model USB :CueCats – those I bought from ElectroMavin, it may not be appropriate for earlier models or for PS/2 :CueCats.

Before going any further do check that your :CueCat works correctly. You should see a red flashing light in the nose when it's at rest – changing to a continuous brighter red light when you put the nose against a sheet of white paper. When you scan a barcode into NotePad (or some other text editor) you should see a text string like this:

```
.C3nZC3nZC3nWCxjWE3D1C3nX.cGf2.ENr7C3v7D3T3ENj3C3zYDNnZ.
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If this doesn't work then there may be a fault with your :CueCat and modifying it is unlikely to make that any better. So stop here!

If all is well and you are happy to go ahead . . .

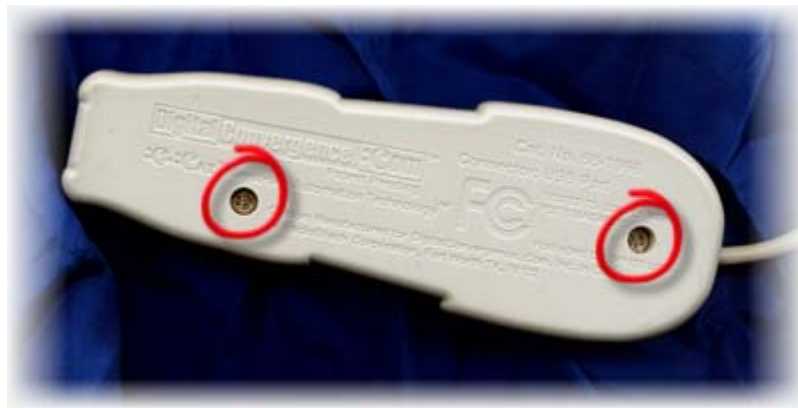
It's a simple process but needs a little confidence and some simple tools – a small cross-tip (Philips or Pozidrive) screwdriver to open it up, a sharp craft-knife or fine bladed pair of scissors to cut the single connection. Here's how to do it.

First unplug your :CueCat from your computer, then turn it over and check the type.



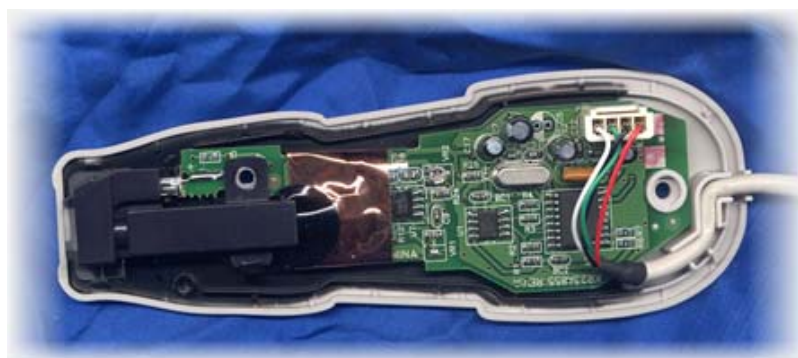
If yours is a USB model with the same or a similar Cat. No than carry on . . .

Next undo these two screws.



They can be a little tight to start with but should undo if you have the right size of cross-tip screwdriver. Hold the top and bottom of the :CueCat together while you remove them, you don't want any parts falling out.

When you've removed both screws put your :CueCat down on a table with the 'body shape' up. Then lift off the top part of the body – it should come quite easily and expose the working parts which look like this:



The parts that interest us are all at the back end here near where the cable enters.

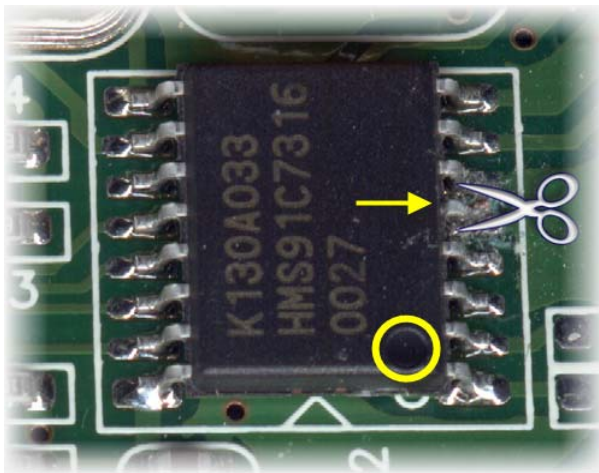
Note: At the 'nose end' where you can see that black cover there are some loose plastic parts: the black cover, a clear plastic prism assembly and a tiny plastic lens. You don't need to remove any of them but if you should accidentally knock them loose you can easily reassemble them as they all drop into place. The black cover goes last and locates under a clip at the bottom and over the round grey lug at the top.

Next, move lift the cable from its guide at the back end of the :CueCat to give you access to the chip (see the yellow arrow).



Then identify the chip you need to work on – in the yellow circle here, it's the bigger chip near the back end of the :CueCat.

Look carefully at the chip and find the locator marker – a round indent at one corner (marked here with the yellow circle):



Count up from the marker to the fifth connection leg on the chip and cut it, I used a sharp craft knife on this which is a bit messy (sorry about that). It's possible to use a sharp pair of scissors – like nail scissors to cut the leg as well.

Check that the leg is clear of the solder remaining on the circuit board and isn't touching either of the adjoining legs. If it is then use a small screwdriver to move it gently until it is clear.

Now replace the cable in it's guide – the shapes bent into it will show you how it goes; then put the top of the body back in place, turn the :CueCat over and replace the two screws.

That's it.

Check your work area to make sure that nothing has dropped out by mistake. If it has, open up your :CueCat and put it back.

Now plug your :CueCat back in to your computer and check the output. You should find that when you scan a barcode now you get plain text output instead of the previous encrypted string.

The only failures I have had are when I've left the cut leg touching one of the legs next to it. Moving it clear fixed the problem.

Good luck!