



### Sprites:

To create a sprite things are a little different to that of the C64, in the C64 the sprite data is built left to right, on the SIDBOX machine the sprites are done in "8bit chunks" – due to the way the sidbox machine graphics library it was quicker to do it this way. The system scan lines are from top to bottom – starting from the left.

Each sprite can be up to 128 bytes in length, making this a 4 by 4 cell sprite  
 Each cell goes from left to right

E.g. for this 4 by 4 cell

0	1	2	3
4	5	6	7
8	9	10	11
12	13	14	15

Sprite is 1 cell in side, 8 bytes, but will produce an 8x8 pixel image

0	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7

24	60	126	255	255	126	60	24
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With multicolours in the Sprite Cell, every other bit is combined, the effect though makes the sprite look less sharp.

- 00 = transparent,
- 01 = colour 1,
- 10 = colour 2,
- 11 = colour 3

The Sprite itself has a colour index, from a pre-set palette of 256.

When the multicolour is used, the colour bits are used to choose the colour from the palette.

E.G, a sprite with a colour of 64, and the multicolour sprite colour bits, 64 + [3 colour offsets], so if the colour bits are both 1's that value is 3 + 64 = choosing the colour from the palette 67.

NOTE: while in multi-colour mode the sprite will appear lower resolution instead.

The colour palette is editable which will make it is easier to set up your program colour palette for the sprites.

DO NOTE: colours 80-88 are colour cycled, rotated.

While these colours can be changed, they might not be good for the sprite.

Sprite in multicolour mode, 2 bits control the colour of 2 pixels

0	0	0	0	1	0	0	0
1	0	1	1	0	0	1	1
2	0	1	1	0	0	1	0
3	1	1	1	1	0	0	0
4	1	1	1	0	1	0	0
5	0	0	1	1	1	0	0
6	1	0	1	0	1	0	1
7	1	0	0	0	1	1	0

- Pixel 1      00 - transparent
- Pixel 2      01 = colour 1
- Pixel 3      02 = colour 2
- Pixel 4      03 = colour 3

BITS	216	30	126	40	241	132	18	66
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