

# Problem with Draw files containing sprites etc.

Sprites at colour depths supported by RISC OS prior to RISC OS 3.10, i.e. 8bpp, 4bpp, 2bpp and 1bpp are referred to in PRM 1-751 as follows:

To make your sprites readable by older versions of RISC OS we recommend you use the following mode numbers in a sprite:

1bpp: 0, 4 or 18    2bpp: 8, 1 or 19    4bpp: 12, 9 or 20  
and 8bpp: 15, 13 or 21.

PRM 5a-116 amends the above list to suggest modes 25-28 rather than 18-21 and omits mode 4. It also says that calls that create sprites will - wherever possible - create an old format sprite. The problem therefore surfaces where sprites of 8bpp and lower colour depths are created in the 'new' format.

'New' format sprites were introduced in RISC OS 3.5 to allow 32k and 16M colour depths and have no equivalent 'old' format. 'New' format sprite files contain a 'mode' number greater than 256. Newer applications will handle these sprites perfectly well. Impression and ArtWorks will not.

A completely separate problem occurs when sprites are created in the new format at 32k colour depth using \*ScreenSave and with a graphics viewport where the viewport includes, at its left hand edge, the right hand 16 bits of the first 32 bit word on the line in versions of RISC OS prior to September 2014. This causes mayhem in Paint, ArtWorks, Impression etc. as it is a completely illegal sprite format - a new format sprite with non-zero left hand wastage (NZLHW).

The two columns above contain a single zero-terminated block of text in a 2-column format text-area object.

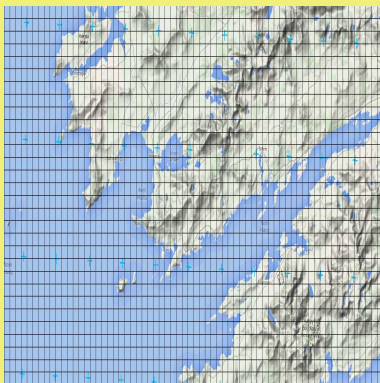
This draw file contains examples of sprites that cause such problems (sprites 1 and 2).



1: New format 8bpp palletised \*\* deprecated has mask - sprite name: !packman

2: New format 8bpp palletised \*\* deprecated no mask - sprite name: apps

3: Old format Mode 21 640 x 512, 256bpp no mask - sprite name: install



4: New format 16bpp 1:5:5:5 TBGR no mask - sprite name: screendump

If sprites 1 and 2 are loaded into !DplgScan and re-saved with Choices/Sprites 'Old Sprite format' ticked they will work correctly. See sprites 5 and 6 below:



5: Old format Mode 28 640 x 480, 256bpp has mask - sprite name: !packman

6: Old format Mode 28 640 x 480, 256bpp no mask - sprite name: apps

The sprite descriptions above are those given by !MultiTask if asked to 'disassemble' this draw file.



A JPEG picture of sprite 6