Try It and See

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The various demo panoramas on the CD are 'finished products' in the sense that any dodgy source images were pre-processed before blending and, with one exception (the matrix panorama was intentionally left 'as-is'; see Part 3, p5), the resultant panoramas have been rotated/cropped as required. But so that you can try out whatever application software you have, the source images are also provided, in their various folders.

When the panoramas are complete, you might like to note various points which help to illustrate what we've discussed in the articles; in particular in Part 2.

Use of tripod & spirit level

The source images for the *Whitby* panorama were taken without a tripod – and doesn't it show? (See Fig 1.) Despite best efforts to keep the camera 'up/down' angle constant, both the top and bottom of the composite image need to be cropped significantly and quite a lot of detail is lost. Lesson: Use a tripod.

Even though a tripod was used for the *Sutton Bank* panorama, it was set on steeply sloping ground and, again, despite best efforts to get the tripod head level (by eye), once more this shows up in the amount of cropping needed. Lesson: Use a spirit level.

The source images for both the *Goathland* and *Scarborough* panoramas (near-360°) were taken using a tripod *and* spirit level. Except at the ends, the resulting degree of cropping required is negligible. Lessons learnt...

Adding 'dummy' images

If you try out the various source images – and picking up the last point about the need for cropping at the ends – note the way there is 'fall-off' at the ends of all the blended images (left/right for horizontal panoramas and top/bottom for vertical panoramas).

This illustrates the value of adding extra, 'dummy' exposures to the source images which are then cropped off intentionally (see Part 2, p5, especially Fig 5).

Pre-processing images

It should be noticeable that some of the panoramas, if simply blended from the source images provided, are marred by having irregular, dark and light areas, which calls for some prior work on the images.

This is particularly evident in the *Goathland* and *Scarborough* panoramas where, unavoidably, the camera was panned through the sun's azimuth. Even with auto-exposure set (see Part 2, p2), the general light level is anything but smooth.

In Part 2, we discussed two ways of allowing for this. Firstly, always take *far* more source images than you think you might need, for example by capturing at least two 'sweeps' of the same subject. It may then be possible to pick-and-mix images from the different sweeps to even things out.

Secondly, if that doesn't do the trick, it may be necessary to apply some pre-processing to individual images, or a small group, for example to lighten a dark area.

Fig 1 Whitby panorama (source images taken without the use of a tripod)

How you do that is largely a question of personal choice. For preference, we use *DPScan*, using either the Colour–Balance–Brightness or the Colour–Non-linear–Gamma functions; the latter seems to produce better results, with settings between 0.7 to 0.85.

Note however that, as you will be importing a 'lossy' JPEG image from the camera, pre-processing it and exporting it back to *AutoStitch/PanoramaPlus 2* as a JPEG, some additional qualitative loss is unavoidable, so we advise setting up the value of Q in *DPScan* etc to at least 95, or even 100.

True 360° panoramas

The *Scarborough* panorama demonstrates that it is theoretically possible to achieve a blended image of 360° or more. However, when doing it, we noticed a slightly odd phenomenon in that the resultant image didn't start and end at the logical points, i.e. at the first and last images (numerically) loaded into the application.

Although in this demo it didn't really matter, someone else hit the same thing but which rather spoilt the effect. Serif advise that, in order to avoid this hiccup, ensure the first and last images loaded do not overlap; a break of 10-15° seems to be enough.

Vertical panoramas (corruption)

There are reports of vertical panoramas, consisting of a single column of source images taken in the landscape format (normally 4:3), being corrupted. When this happens, the problem is unmistakable! (See Fig 2, below.)

We've replicated the symptoms in both *AutoStitch* and *PanoramaPlus 2* and have sussed out a very simple workaround.

Firstly, pre-rotate all the source images through 90°; either direction will suffice and we can do it within both titles (i.e. there's no need to pre-rotate the images in, say, *DPScan* before using them).

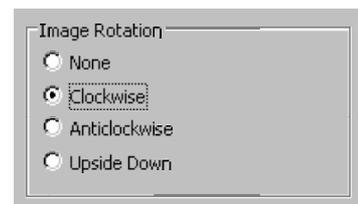With *Auto-Stitch*, the rotation is done before the images are loaded. Click on Edit–Options and, in the Image Rotation section at the right-centre of the window, select either the Clockwise or Anticlockwise button (Fig 3). Then load the source images.

Fig 3 Rotating images (AutoStitch)

With *PanoramaPlus 2*, first load the images, select them and click on either the rotate anticlockwise or clockwise icon (Fig 4).
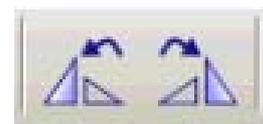
Fig 4 Rotating images (PanoramaPlus 2)

In both cases, proceed with the blending as normal and, on completion, the panorama should be successful – except that the composite image will be rotated through 90°.

Save the image, import it into *DPScan* or similar, effect a 90° rotation back to normal and crop the final output as required.

This simple workaround is not documented – nor is the problem acknowledged by the authors – but it seems to work!

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Fig 2 Single-column, vertical panorama (corrupted)