Velo Vision/HPV News: hints on photography for publication

You don't need a fancy camera or special skills to get good results – just common sense and the benefit of some hints and tips gleaned from experience. I (Peter Eland) took all the pictures for bike reviews in early issues of Velo Vision with a cheapish compact no-zoom camera. It's mostly a question of getting the basics right, then looking for interesting and imaginative angles. So here goes:

1) Print, slide or digital?

You don't usually have a choice here unless you're just about to buy a new one… generally just make the best of what you have. The onlything that really won't work well is a cheap digital camera (under 2Megapixels - see later) as the images this produces really can't be printed at a decent size. But apart from that, anything goes.

For 'conventional' cameras (we'll discuss digital ones later) the type of film you use can make a big difference. If possible, use SLIDE film instead of print film! Slide film usually results in sharper images, with better colour definition. Cheap brands are often false economy, and fade with time. Also, as the professionals say, ‘film is the cheapest part of the shoot’. Unless you’re really counting the pennies, it’s a good idea to take several exposures of every shot.

You can get slide film both pre-paid (you send it off in an envelope for development, and it comes back a few days later) or non-prepaid. The prepaid version can be quite handy when touring – just put the return address as your home base. For what it’s worth I generally use Fuji Sensia 100 pre-paid film, 36 exposures a roll.

You can also get the slides scanned and put onto a CD as digital images, at little extra cost, at the same time as you get them developed. This may well be a good idea – it can save you having to send the originals off later. See below for more comments on digital formats, but in general, if you’re getting them put on CD, go for the highest resolution available.

2) A plain background

Whatever type of camera you use, if you're trying to get a clear picture of a bike or anything else, PLEASE make sure that the background is plain, not ‘an exercise in camouflage’ as someone put it. The subject’s features can easily be confused with background features unless you are very careful. That means using one of a number of techniques:

- Easiest is to find a PLAIN background. Ideal is a photography studio with a plain white ‘cove’ or paper backdrop, but an even road surface is a more universally-available backdrop, if unexciting. Leaning the bike against a wall can be OK, but is often spoiled by the line which marks the transition from floor to wall, and by shadows on the wall if it's sunny. Grass is not usually successful, and any sort of leafy or flowery background is generally a recipe for disaster (but see below). You could also try shooting against the sky, but this is often a bit bright, and you end up with a silhouette. Might be worth a try on a dull day, though.
- Shooting on an overcast day, if you get the choice, can reveal more detail. Bright sunlight can create strong shadows which can be confused with the features of what you’re trying to photograph. Of course you instead run into the danger of the photo coming out too dark...
- If you know about choosing a long lens and wide aperture settings, you can set the depth of field so that while the foreground is sharp, the background goes all blurred. Note it’s easy for the extremities of bikes to get out of focus like this.
- Another technique, which requires no fancy lenses or theory, is just to find a spot to put what you're photographing with nothing nearby in the background at all. For instance, you could prop a bike up on a park bench, so that the nearest thing behind the bike is a row of trees a hundred yards away. There's a good chance that once you've got close enough to the bike to fill your frame with it, the background will be nicely out of focus and non-distracting.
- Finally, for pictures of the bike being ridden along, you can sweep the camera as the bike goes past. If you get it right the bike will be sharp and the background pleasingly blurred into a ‘dynamic’ effect. Known as ‘panning’ this is a good technique for action shots generally.

- An even better - if riskier - technique is to ride along next to the bike you're trying to photograph, and take pictures with both of you moving. This should leave the subject clear and sharp, with the background motion-blurred. A tandem is ideal if you have one - the photographer sits on the back and directs the other riders. It is perfectly possible with just a solo bike - find wide, quiet roads to try it. A digital camera is ideal for this sort of work, as a lot of the shots you take like this will be useless, either from camera shake or because aiming to fill the frame with a nicely-composed shot as you ride along, steering with one hand and operating the camera with the other isn't easy. Be sure the camera is attached to you with a wrist band or something. This is how the Velo Vision Issue 9 cover was taken. That shot was selected from around 200 images I'd taken with the digital camera.

3) **Fill the frame!**

Try to get as close as you can. Fill the picture with the subject without lopping off vital extremities. This captures the maximum detail possible. Pretty, scenic backgrounds are all very well, but remember what you're trying to show. If it's a bike, let's have 80% of the frame filled with bike, not 80% background with a tiny bike.

Tiny bikes disappearing into the distance aren't too helpful - and you get this effect a surprisingly short distance away from the camera, especially with non-zoom compact cameras. Of course, we can subsequently crop the picture and blow it up to make the rider fill the frame, but it'll be all blurry and 'orrible. See page 30 of Velo Vision 4 for an example of where we were forced to do this – compare the quality with those on the previous pages (themselves not brilliant).

4) **Subject matter and composition**

This depends on the purpose/story, but it's usually essential to have a few shots of the machine being ridden as well as a shot just showing the machine clearly by itself. For most types of article, a dynamic, positive 'opening image' is really important.

In general, human interest really adds to the appeal of images - so unless you're purely trying to illustrate some technical subject, please do try to picture as many smiling people as possible, doing what you're describing. We're trying in the magazines to make cycling and HPVs attractive, appealing and positive, so please try to get your models to look happy and be smartly-dressed. 'Cycling gear' is by no means necessary - just normal clothes are fine.

Clearly you will need at least two people for this – one to ride the bike and the other to take the shot.

- The person taking the photo can often get more interesting angles by crouching or even lying down on the ground, as the rider moves past slowly. It's worth taking shots at several different angles – side on, with the rider coming at an angle towards the photographer. Take shots with the rider moving left and moving right – this gives us more flexibility when we lay out the page. Again, do try to fill the frame with your subject - this will require good timing for action shots.
- Shots from the back, and with the rider's face not visible to the camera, aren't usually successful. Wherever possible, make sure the rider's face is visible, well-lit and not obscured by any hat or similar.
- Watch out for any opportunities to get an unusual, dramatic perspective – perhaps from a bridge, or framing the subject in an archway. If your camera has no zoom, do be sure that the rider fills a significant part of the frame, or the shot won't be useable.
- If there is a choice, yellow and red or light-coloured bikes and clothing are generally photogenic, black or very dark-coloured bikes or clothing are not.
- Also, if there are any interesting details it is often worth getting in CLOSE and taking a few shots of these. Watch that the auto-focus widget on your camera isn't indicating that you're too close, and again, fill the frame with what you're showing. And keep the background clean!
- For touring photography, it's almost always essential to have some foreground, be it a bike or person, to add interest to that lovely landscape. And try, by including local detail, to avoid that 'could have been taken anywhere' syndrome. A picture of a road or a rider going along with a hedge in the background could be taken anywhere: if the location matters, make it obvious, perhaps by including a famous local landmark in the background.
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5) **Packaging**

When you're sending us physical images (we'll cover digital ones later) please go easy on the sticky tape! Things always seem to get jumbled around in envelopes, and sticky tape and slides don't go well. Sticking slides down onto card is also annoying as it can be hard to get them off without damage. The best idea is to use the small plastic box in which the slides come back from the developer, placed in a padded mailing bag with a few sheets of stiff cardboard, then indulge the sellotape craving by sealing the bag like Tutankhamen's tomb. Prints can be sandwiched between sheets of cardboard.

- Avoid staples, too, they can scratch things when they're taken out.
- If you're sending us photo materials, it's a great help if you number the photos, and provide a list of what each is, with caption if appropriate. Take a copy yourself. This helps us keep track of everything, and lets you check that everything is returned in due course. This may, incidentally, be many months – as a quarterly, we can take some time. Having said that, if you want them back fast, just say: we scan everything in house and can turn slides and prints around the day they come in, and return them immediately if need be.
- If you're sending prints and are doubtful about the sharpness and quality, send the negatives too. We can often get a better image by scanning direct from the negative.
- If you don't want to part with original slides, consider having them scanned and put onto CD, rather than copying them physically. Quality of copies is usually several notches down from originals. Most photographic labs will be able to do this – but it's often much cheaper if you do it at the same time as developing the slides.

6) **Digital cameras and digital (scanned) images**

With the fall in prices of decent digital cameras and scanners, we receive more and more pictures in digital form, and this is great for us - we can use them straight away as we lay out the magazine on computer.

The key things to understand with these images are the concepts of **resolution** and **image size**. Digital images are made up of a grid of dots (pixels), each dot being coloured appropriately to make up the image. It's similar to how a TV screen or computer monitor works.

'**Image size**' is (for our purpose) simply how many rows and columns the image has. One common size, for example, might be an image 800 pixels wide and 600 pixels high. The image size determines how much information is stored in an image.

How big that image is displayed, be it in print, on screen, or blown up to poster size, is another matter. The same image (of the same 'image size) can be displayed as a tiny thumbnail or a large poster: what's changing here is the **resolution** at which it's being used.

Resolution is usually expressed in dots per inch. So if your image is 300 pixels (dots) wide, and your computer screen displays it at say 100 dots per inch (dpi), you'll see it as three inches wide.

But the print process requires much higher resolution than screen or website use. Because our print process requires around 300dpi, we could run that same 300-pixel-wide image at a size of just an inch across – that's a tiny thumbnail.

If your picture is a more useful 1200 pixels wide, say, we can run it at 4 inches wide on the page – we work at 300 dots per inch. It's nice to be able to run images at at least 4 inches wide (half page width). Sometimes, the designer will choose to run images at up to 12 inches wide or more– that's 3600 pixels!

To get an image big enough to use at reasonable size, you either need a fairly expensive digital camera, or a scanner, which will digitise existing prints, negatives or slides.

- Unless you're happy using the scanner, and aware of some of the nuances of scanning, it's usually best just to send me the originals and let me scan and return them.
- Digital cameras of 2 Megapixels or more should work fine. 3 or 4 Megapixels is definitely better.

  The Megapixel rating of a camera describes how many pixels it captures with each shot (when it's on its maximum image size setting). So if it captures images at say 1200 pixels tall and 1600 pixels wide, those two figures are multiplied together to give just under 2 million, so this would be called a 2 Megapixel camera.

  Fewer pixels may be perfectly acceptable for small, detail shots. Be sure to check that the camera is capturing its maximum image size, and saving it without too much compression. You may not fit that many full-quality images onto a smallish memory card, but they'll be useable at a decent size.

What doesn't work is to take a small digital image, with only say 300 rows and 600 columns, and use software to 'increase the resolution' (known as extrapolation) to say 600x1200. All this does is split up the

original information captured in the image and spread it out over twice as many pixels. There's exactly the same amount of info in the picture. So if we want a sharp image in print, and require 300dpi, we can still only use the image at 1" x 2", rather than the 'doubled' 2" x 3" which 600x1200 would suggest. The number of pixels captured by the original camera or scanner is what counts.

There are several formats in which digital images can be saved, and the one you select is determined by what you're trying to achieve:

- If you've used a digital camera it will probably have saved the images as JPEG. This format is 'lossy': to achieve a small file size it discards some image information when the file is saved. Most image programs will allow you to trade off quality against file size - so it's possible to discard lots of info, and achieve a very small file size (at the cost of serious loss of image quality). Or, you can choose a 'high-quality' or 'low-compression' setting, which leaves the image quality pretty much intact, but requires more disk space to store the image.

  Because the losses occur each time the file is saved, it's best to save as JPEG only immediately before you send me the file.

  Digital cameras usually have a selection of settings available, to trade off space required on the storage card against image quality. Please use the best-quality JPEG setting available. Once the camera has performed the initial (lossy) save to JPEG format (which the camera electronics will do with as little quality loss as possible) then ideally, we want no more losses to occur. So I prefer to have the JPEG files straight off the camera. These will be small enough to email or send on disk, and I can then save as TIFF (see below) once they're on my system.

  To avoid the losses which occur when saving as JPEG, if you need to rename a JPG file it's better to do this in your file manager (e.g. Windows Explorer, or directly on the Mac desktop) rather than opening the file in an image program and using 'save as'.

  If you're going to manipulate images before sending them to me, it's best to do 'intermediate' saves as TIFF, so no quality loss occurs, and only when it's finished save as a high-quality JPEG to get a file size more suitable for transmission to me.

- TIFF files are the industry-standard 'non-lossy' file format - in other words, there's no loss in quality when you save. The downside is that TIFF files take up a lot more disk space than JPEGs.

  Your image software may present you with a few options when saving as TIFF. If you can, switch on LZW compression (this won't reduce quality, but shrinks file sizes by about a third). If offered a choice between 'Mac' or 'PC' formats, choose what you like - I've never been able to discern a difference.

- Even if you know how, please don't bother converting to CMYK or adjusting the images for colour balance, sharpness or the like– we'd rather do all of that ourselves to match the guidelines provided by our printers.

Finally, you need to get the digital image files to us:

- Sending images for publication via email is quick and costs more or less nothing! We need to work at 300dpi and millions of colours, and file sizes are often in the megabytes range. This is no problem at our end, even up to tens of Meg, but if you don't have a fast internet connection, it could tie up your phone lines for several hours.
- If you happen to have any of the following, you can send digital images on these media: CD-ROM, CD-RW, ZIP100, Imation 120M SuperDisk.
    - CD burners are cheap these days, and the blank CD-ROMS are also extremely cheap (and useful for backups). They're also light and robust enough to make posting easy. This is a good way to send images.
    - Floppies tend to be unreliable and too small for larger images.
    - We can handle most Mac and PC disk and CD formats.

Thanks for sending us your pictures - it's much appreciated. Please just call or email peter@velovision.co.uk if you'd like any further help or advice.