

Digital

A monthly column by Harry R. Matthews

What a great pair of talks at February's Camera Club meeting! David's inspirational talk broadened my horizons and his defense of the “record shot” was great. I was very impressed with Trevor's candour and clarity in explaining his strategy for photojournalism, as well as his images. He mentioned using aperture priority in these situations partly because, as he freely admitted, the camera could think faster than the photographer. For the beginners in the audience, I would like to explain what aperture priority is and when and why it is so useful. As usual, I've posted a couple of relevant example images [here](#).

What is aperture priority and when should I use it?

Aperture priority is about getting the correct exposure and depth of field, especially when working with unpredictable or semi-predictable moving subjects.

You may remember that exposure depends on:

- the brightness of the light falling on the lens
- the size of the lens aperture (A or Av)
- the exposure time (T or Tv)
- the sensitivity of the sensor (ISO).

In the auto or program modes, the camera adjusts the last three parameters for you. Usually, though you want more control. Aperture priority is a good compromise between full auto and full manual. In aperture priority mode you set the aperture and the camera adjusts the exposure time (and the ISO if that's on auto) to give the correct exposure. In other words, the camera gives priority to the aperture that you have set.

Most cameras have an aperture priority mode. Larger cameras usually have a dial on the top of the body with markings that include P, Av, Tv, M or similar abbreviations; A or Av is used for aperture priority. Smaller cameras don't have room for a dial on top and aperture priority may be set by a control on the back or in the menus (look for “exposure modes” or “aperture priority” in the manual).

By choosing your own aperture, you are determining the depth of field in your picture. You may do this for artistic reasons such as blurring out the background (large aperture e.g. f/4) or to get near and far parts of the image both in focus (small aperture e.g. f/16).

Alternatively, with a moving subject, you may just want the shortest exposure time possible in the circumstances. So, in aperture priority mode, you set the aperture to the largest size that gives you enough depth of field for your subject. This forces the camera to adjust the exposure time and not the aperture. In program or auto modes the camera might choose to shut down the aperture, if there is plenty of light, instead of giving you the fastest possible exposure time.

My examples are both of wild birds in flight, taken with a hand-held telephoto lens from the deck of a moving ship. I wanted as fast a shutter speed as possible to avoid motion blur and camera shake and I wanted a narrow depth of field to de-focus the background.

I started by setting the lens to its maximum aperture which gave me the shortest exposure time and least depth of field. This worked well for my first example image where Iris was holding out food for gulls and I was photographing them taking the food from her hand. In this case, I pointed the camera at the food in Iris' hand and pushed the shutter button half-way down to set the exposure and focus. Holding the shutter button in the half-way position, I moved the camera so that Iris' hand was in the corner, leaving room for a gull to come in and get shot (photographically speaking).

Depending on how “fast” your lens is, the maximum aperture may give too small a depth of field. I experienced this in my second example which is of southern petrels accompanying our cruise ship bound for Antarctica. They continually circled alongside the ship moving very fast relative to the ship. In this case, I couldn't pre-focus but had to pan or follow the bird and press the shutter as the camera was moving. This gave me slightly out-of-focus images. I found that I could eliminate this by reducing the aperture to give a greater depth of field. The details of the settings I used are on Flickr.

Aperture priority was great help in getting both these images reasonably sharp and is very simple to use. It is still of over-riding importance, though, to do whatever you can to choose a vantage point that gives you good light and minimal background distraction, before worrying about camera settings.