Infrared converted compact cameras.

A personal guide to use.

In my opinion all images from IR converted infrared cameras need some post processing in an image editor like Photoshop, I usually use Photoshop CS3 which is adequate for my needs.

The digital cameras I convert to Infrared usually have an almost opaque 89b type (R72 equivalent) infrared pass filter installed instead of the existing infrared cut /anti alias filter which is removed. This means that the camera's sensor is now sensitive to infrared light and the majority of the visible light is blocked.

Hand held exposures are the norm because the conversion is internal, there is no requirement to use an IR filter on the front of the lens.

The consequence of this conversion is that growing vegetation that reflects high levels of infrared light appear light and blue skies dark which can create an atmospheric, almost ethereal photograph, sunshine is critical for a strong effect.

Because of the filter used and the nature of the infrared light the uncorrected image in the camera appears to be pink/magenta. This can be corrected in the camera if it is possible to set a custom white balance, I usually sample a patch of grey tarmac to set this up. If this is not possible then often a monochrome mode can be set in the camera. Conversely the image can be left as it is and adjusted later in Photoshop. Remember that if you use the built in flash or a different camera mode it may automatically switch to a different white balance and you are temporarily back to that pink/magenta colour cast.

To retain detail in the images highlights I usually set – 1/3 of a stop to - 1 stop exposure adjustments in the camera. Very sunny days with growing vegetation may need the higher value.

If the photos are taken in colour it gives you the opportunity to create images in Photoshop with false colours, this is because the 89b filter lets a very small amount of visible light containing colour information. This false colour is achieved by swapping the red and blue channels in Photoshop with the channel mixer. If you configure the camera to take photos in monochrome you will of course loose this colour information.

The first thing I always do in Photoshop is to try an "auto" adjustment of Levels , if there is an undesirable colour shift then try "auto contrast" instead. You can then play with curves or brightness and contrast and convert to monochrome to get your desired effect.

I guess the most important thing to do with an infrared converted camera is to experiment both in the camera and in Photoshop, you can have too many photos that look like there has been a hoar frost , look at the effect on metal objects or water. It can bring life into dull days but you won't get the exaggerated effects that happen when the sun shines. Search the web for IR ideas.

Most users report that infrared converted cameras are more susceptible to flare and reflections and also some, but definitely not all, lenses can exhibit a “hotspot” after IR conversion, this is a consequence of the camera’s lens design and coating being based on the characteristics of visible light and appears to be the result of internal reflections. There is nothing I know of that can be done during the conversion to reduce this effect, I have experimented with different types of replacement filters with no improvement. The hotspot can vary depending on the focal length, aperture and the quality and direction of the light. It manifests itself by a light area in the middle of the image, close examination shows that it is usually only present in the blue channel and is actually like a localised circular colour cast in the middle of the image sometimes with very soft diffused edges and in bad cases very defined. If the converted camera has interchangeable lenses try another lens, if it is a compact camera that is known to suffer very badly (search on the web) I wouldn’t convert it, this is why I like to convert cameras that I have already had good results from especially the Panasonic TZ3.

If your camera shows hotspots it is possible to reduce the effect during post processing in Photoshop, I find auto levels and curves usually minimises the effect. Manually burning in the centre of the image can help and I have read that some delete the troublesome blue channel for a monochrome result. Search on the web for more information about hotspots. Beware of contra jour situations, review your pictures on the cameras screen and be prepared to use your hand (or your hat!) as an impromptu lens hood to stop the sun’s rays directly striking the front of the lens.

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