



RAW v JPEG (Updated October 2022)

Graduated Tones: Heavy editing of JPEG files will result in unsightly banding in areas of graduation. This is unlikely to happen with RAW files. An 8 bit JPEG holds 256 levels of luminosity per channel. A RAW is usually 12, 14 or 16 bit giving either 4,096; 16,384; or 32,769 levels of luminosity. This means smoother grading of colours

RAWs can't accidentally be saved over and any edits are reversible, so your original image is maintained.

Highlights and Shadows: RAW files hold more detail in the highlights and shadows so you can recover some bright areas and detail from darker areas

White Balance: With RAW files you can adjust the White Balance in post processing so getting it right in camera is not quite as important. In JPEG files the White Balance is fixed and cannot be altered

Detail Control: You can pull more detail out of RAW files as there is more headroom for editing. JPEGs are processed in camera, so the camera is making the decisions on colour profiles, sharpening, noise reduction, etc

JPEGs obtain their smaller file size by compressing colour information. For example, if 15 pixels each have a different tint of a similar colour they might be reduced to a three colour block during compression. The original tints are now lost.

The advantage of JPEGs is they can be sent immediately to someone, with minimal or zero post processing. They are therefore used for professional sports photographers who need to send the photo from the camera directly to their newspaper, TV broadcaster or magazine.

It used to be that due to their smaller size JPEGs would write to a memory card more quickly than larger RAW files. There has been some test on this recently and the processing time of the JPEG against RAW files having little to no processing, means there is little difference using modern cameras.

JPEGs can be viewed immediately on most screens whereas RAW needs a RAW viewer or Windows 10 update.

JPEG files are considerably smaller than most RAW files so storage of photos is less of an issue both on a memory card and the home PC / Laptop.

I would recommend using RAW wherever possible, unless you have a need to send files directly from the camera.