

## Technologies Explained – PowerShot SX210 IS

**EMBARGO: 8<sup>th</sup> February, 2010, 15:00 CET**

### Optical Image Stabilizer

Canon's highly-effective optical Image Stabilizer technology prevents image blur by dramatically reducing the effects of camera shake. In situations where image blur due to camera shake is more likely – such as in darker conditions or when shooting with the zoom extended – the optical Image Stabilizer can help images remain sharp through minute vibration gyros which detect camera movement caused by hand shake. These signals are processed by a single-chip IS controller, which discriminates between hand shake and intentional camera movements. Signals are then sent to the IS unit, which moves one of the lens elements accordingly to re-align the light rays and cancel out the effects of camera shake.

### Dynamic optical Image Stabilizer (Dynamic IS)

Dynamic optical Image Stabilizer is a technology which was initially developed for Canon video cameras and is now being incorporated for the first time into a Canon digital still camera. It is designed to counter blur and camera shake, caused by user movement when shooting video, more effectively. Dynamic IS can assess and compensate for low frequency vibrations, such as camera shake generated when filming and walking, and helps produce video sequences with reduced blurriness and a steadier picture.

### Smart Auto mode

Smart Auto mode uses Scene Detection Technology to determine the shooting scene by analysing subject brightness, contrast, distance and overall hue. The camera then selects the scene type from 22 variables, applying the best settings for optimum results. In Smart Auto mode, a colour icon indicating the type of scene detected – and the lighting conditions of the scene – is shown on the LCD monitor. Smart Auto also includes i-Contrast (see below).

### i-Contrast

i-Contrast technology optimises the dynamic range (brightness variation) of each shot by reducing underexposure (hidden detail in dark areas) and overexposure (washed out highlights). i-Contrast can be used both in shooting and playback mode.

## Easy mode

Easy mode offers intelligent picture taking without added complexity - providing the simplest point and shoot mode for beginners. In Easy mode, Smart Auto is active, selecting the optimum settings for the best results in each type of scene. However, most on-screen data is cleared in order to facilitate framing and most of the function buttons are disabled to prevent accidental use.

## Smart Auto in Movie mode

The PowerShot SX210 IS is the first Canon digital still camera to feature Smart Auto in Movie mode, which enables video settings to change automatically whilst recording. The camera assesses the scene while filming and as the shooting subject changes, for example if a face enters the frame, it will adapt its settings; in this instance switching to Portrait mode. Smart Auto in Movie allows the camera to automatically detect and choose from 18 different scenes, optimising the camera settings to produce the best possible result.

## Smart Flash Exposure

The Smart Flash Exposure feature intelligently controls the power and usage of the onboard flash to ensure natural results in a variety of conditions. By using focusing distance as well as shooting scene information, an optimum balance between the ambient light of the scene and flash power is achieved. When shooting in very bright conditions, shadows which can appear on a subject's face are detected by the camera and flash can be used to eliminate them. When shooting at close distances, overexposure is avoided by sensing how reflective the subject is, as well as reducing the flash power to compensate for the close shooting distance.

## Auto ISO with Motion Detection Technology

Auto ISO mode, using Motion Detection Technology, calculates the movement of camera and subject as well as the speed at which the motion occurs. ISO sensitivity and shutter speed are then automatically adjusted to deliver minimum blur and maximum image quality in any situation.

## Face Detection Technology

Canon Face Detection Technology makes it easy to produce superb people shots. This advanced system quickly and accurately detects faces in a scene - then optimises camera settings so that everyone looks their best. With the ability to detect up to 35 faces in one frame, it's great for group photos as well as portraits.

The device includes the following Canon Face Detection Technologies:

- **Face Detection AF:** Sets the focus on faces in people shots – not just the closest subject.
- **Face Detection AE:** Optimises exposure for faces in all lighting conditions – useful for backlit scenes or indoor shooting.
- **Face Detection FE:** Guards against washed-out faces when using the camera's flash – perfect for close-up shots in restaurants, clubs or other dimly lit locations.
- **Face Detection WB:** Optimises white balance for natural-looking skin tones which remain true to life regardless of skin colour and lighting conditions.
- **Face Select and Track:** Allows users to select one of the faces in a group to be given priority over the rest. The camera will then keep this face in focus and optimise settings for the best shot - ensuring the user can shoot the right moment and be sure of excellent results.
- **Red-Eye Correction:** Eliminates the unwanted effects of flash photography. At the touch of a button in playback natural-looking eyes can be instantly restored. The original image can then be replaced or the corrected image saved as a new file.

#### Smart Shutter

Canon's Smart Shutter mode uses Face Detection Technology to allow users to take both group shots and self-portraits more easily and in a more relaxed way. The shutter can be triggered remotely in three different ways:

- **FaceSelf-Timer:** Allows perfect group shots or self portraits by automatically triggering the shutter 2 seconds after a new face has entered the frame.
- **Smile Detection:** Triggers the shutter when the camera detects a smiling face within the frame.
- **Wink Self-Timer:** Triggers the shutter two seconds after the subject in the frame has winked, removing the need for a remote control.

#### PureColor II G LCD screen

The 7.6cm (3.0"), 230K dot, PureColor II G LCD screen has been designed to enhance the capture and playback of images and video. The screen is constructed with a tempered glass layer, making it stronger, with improved contrast and wide colour reproduction. The thin PureColor II G screen also offers an ultra-wide viewing angle,

making it easier to shoot from awkward angles or share images with others. Its 16:9 wide aspect ratio allows users to more easily capture and view HD movies on the LCD, filling the entire screen for the best possible on-camera playback experience.

#### Servo AF/AE

When a subject is moving towards or away from the camera, Servo AF/AE will track it continuously - ensuring that the subject will be in focus and well-exposed at the moment of capture.

#### HD movies with STEREO sound and HDMI

HD movie recording with stereo sound allows the user to shoot movies at 720p quality which can later be viewed on an HDTV screen via the HDMI mini connection port. The HDMI mini connection ensures there is no loss of quality when playing back stills or movies.

#### DIGIC 4 Processor

Canon's DIGIC 4 (Digital Imaging Core) processor manages all of the camera's primary functions to optimise operating efficiency. Advanced image processing algorithms deliver superb image detail and colour reproduction with accurate white balance and minimal noise. High-speed processing results in outstanding responsiveness, rapid auto focus and extended continuous shooting ability.

#### Smart Shuffle

Smart Shuffle is a creative way to browse through photos which can be stored on a single card. Based on the image being viewed, the camera suggests four other related pictures for the viewer to choose from. After selecting one of the suggestions, another set of four is offered. This function provides a fresh angle to viewing stored pictures.