

Canon

XLH1

GENUINE CANON OPTICS

XLH1

In a world where format technologies are constantly evolving, one of the most important components is the lens. Canon is known as a high-end optics company, first and foremost. Canon's lenses are indisputably among the very best in the world. At the end of the day, it doesn't really matter what technological magic is happening behind the lens—or what creative genius is unfolding in front of it, for that matter—if the glass through which the light is passing is not manufactured to the very highest of standards.

The impressive pedigree of the lens that comes standard with the Canon XL H1 is immediately evident by the black finish and red stripe around the front element. This is the color code that marks Canon's professional Cine-Style HD broadcast lenses. The XL H1 boasts a new 20x HD fluorite lens that features a new SR multi-coating. This coating minimizes ghosting and veiling of the image, and ensures the highest level of resolution and color fidelity. The focal length range of the standard lens is equivalent to 38.9- 778mm (in 35mm photography terms).

INTERCHANGEABILITY AND THE XL MOUNT: One of the most useful and desirable features that distinguishes the XL line of camcorders is the interchangeable lens system. This flexibility of optics opens the door to total creative freedom, which is further enhanced by a number of adaptors that are available for the camera's XL mount. The EF Adaptor, for example, will allow you to use any of the Canon still-camera lenses in the EF or EOS series. Keep in mind that these lenses were designed for a larger target area, so there will be a 7.2x magnification (in 16:9 aspect ratio shooting) when using them on the XL H1. Thus, a 100mm lens will become a 720mm lens. Certainly, this is ideal for any long-lens photography that your project may require.

72MM FILTER THREAD: Any filters with the 72mm thread size can be screwed directly on the front of the lens, even with the lens hood attached. Despite all the image control tools currently available on modern cameras, there's still no digital replacement for a good Polarizer or UV Filter on the front of the lens when you're doing outdoor photography or fighting difficult reflections.

ELECTRONIC FOCUS RING: Like the previous models in the XL line of camcorders, the focus ring is an electronic adjustment that turns continuously. There is no definitive "start" or "stop" point. There is now an approximate "focus distance" readout in the viewfinder. Like witness marks on the barrel of a traditional photographic lens, this readout tells you roughly where the lens is focused, whether it's at 6 feet, 10 feet, etc. While the numbers are not accurate to the inch (and should not be used blindly with a measuring tape, without a good eye-focus), they are a close approximation, and can be extremely useful as a reference because they are repeatable. Thus, the camera operator can focus by eye, make a note of the distance readout, and then refocus to the same "distance" number during multiple takes while feeling confident that the focus has landed in the same place.

ELECTRONIC ZOOM RING: Similar to the focus control, the zoom ring turns continuously and allows for quick adjustments to the focal length of the lens. While there is no readout of the exact focal length you're using, you can now choose (on the DISPLAY page in the menu) to view your zoom position as a number from 1-99, so you know exactly where you stand. Like the focus distance mentioned above, this zoom position number is repeatable. For example, if you start a shot at "42" on the zoom scale, and then zoom in to "86" during the shot, you'll know to re-set the lens to "42" at the start of the next take. Similarly, to duplicate the first take, you'll know to zoom to "86" during the shot.

NEUTRAL DENSITY FILTER RING: With the push of a button and a counterclockwise turn, you can activate either of the two neutral density filters. The 1/6 option takes down the exposure by 2 ? stops, while the 1/32 option reduces the light intake by 5 stops. There are two primary reasons why you would want to employ these filter options: practical necessity and aesthetic choice.

Helpful Hint: Oftentimes, if you're shooting in bright sunlit exteriors, you'll need to engage an ND in order to get a proper exposure. The lens itself only stops down to F9.5 before closing. If this is inadequate, and the image still looks overexposed, then the neutral density filters will bring the brightness down to a more manageable level.

OPTICAL IMAGE STABILIZER: Along with the high-quality optics and the interchangeability of the lens, this feature is the third big reason to love the Canon XL line of camcorders. While all camcorders offer some sort of image stabilization to smooth out handheld shots, the Canon system delivers a superior optical solution that does not degrade the image in any way. Unlike electronic image stabilizers that reduce jitter by digitally moving the image, the Canon lens features a gyro sensor that detects motion and continuously adjusts the vari-angle prism to eliminate jitter and shake. Super Range technology then re-examines the image after it's been received by the CCD, and sends additional information to the vari-angle prism that further refines its movements, thereby enhancing the "smoothing" ability of the stabilizer. As a result of this advanced interactive process, your shots will be much more graceful and controlled, even when zoomed in all the way.

Helpful Hint: It is recommend that you test in your shooting situation before you keep the stabilizer turned on when using the camera on a tripod or a similarly controlled head. Under these circumstances, the stabilizer may overcompensate for the already smooth moves that you are making.

POSITION PRESET: This feature allows you to set either a focus point or a specific focal length, and then execute a "rack-focus" or a "zoom" to that pre-selected point during the shot. For example, if you want a distinct rack focus effect, you would first switch the "Position Preset" slider from "Off" to "Focus". Then, eye-focus on whatever part of the frame you want to have in focus at the end of the shot. Slide the bar labeled "On/Set" (beneath the "Position Preset" control) to "Set". Now you're ready to begin your shot. Focus

on anything else in the frame that you need to, and when you want the rack-focus effect to kick in, simply slide the “On/Set” bar in the “On” direction. This can be done repeatedly over multiple takes; the “end-point” for the focus is saved until you set a new value, or until you switch the “Position Preset” bar to “Off”. You can select the speed of the rack focus (high, medium, or low) in the CAMERA SETUP page of the menu.

The same process applies for setting a zoom effect. Instead of racking focus, however, the lens will zoom to the desired focal length when the “On/Set” bar is slid in the “On” direction. You can select the speed by using the main zoom handle controls on the camera body. Set the zoom to “constant” mode and use the “fast/slow” toggle to find the desired value (from 1 to 16). Whatever speed you select in the “constant” mode will determine the speed of the “Preset” zoom effect, even if you switch the main controller to “variable”. If you keep the main control on “constant”, however, you can actually adjust the speed during the zoom by using the “fast/slow” toggle.

***Helpful Hint:** These presets are useful even if you’re not looking for a specific rack focus or zoom effect. If you’re doing a “talking head” interview, for example, you may want to get a solid eye-focus on your subject, and then lock that focus point into the preset. Now you’re ready for anything; if you have to pan away to grab another detail that may require a focus adjustment, you can be confident that when you return to your subject, you can hit the preset slider and return to the precise focus point without worry.*

AF/MF (AUTO FOCUS/MANUAL FOCUS): You can choose Auto Focus or Manual Focus on the lens itself, regardless of which mode the camera is in. In other words, even if you’re in “Manual” mode, you can set the lens to “Auto Focus”. Similarly, even in “Auto” mode, you can set the lens to “Manual Focus”. The only exception will occur if the “Green Box” mode is selected on the camera body, in which case the lens will be placed into “Auto Focus” by default, even if “Manual” is selected. If you are in “Manual Focus” but find yourself in a situation where you need a little help from the lens, you can use the “On/Set” slider control that is directly above the “AF/M” switch. By moving this slider to the right, you will temporarily activate the “Auto Focus” mode