



Photo credit: Marvel Entertainment

Canon EOS 5D Mark II and 7D Digital SLR Cameras Add Muscle to Action Scenes in “Marvel’s The Avengers”

An epic confrontation between nightmarish super villains attacking the Earth and the super-heroic team of Iron Man, Captain America, The Incredible Hulk, Thor, Hawkeye, and Black Widow explodes onscreen in “Marvel’s The Avengers.” Directed by Joss Whedon, the film is packed with intense action and visual effects created by Hollywood’s most advanced production technologies, including the EOS 5D Mark II and EOS 7D digital SLR cameras from Canon U.S.A., Inc., a leader in digital imaging solutions.

Compact, lightweight, and compatible with Canon’s wide selection of EF Series lenses, the Canon 5D Mark II and EOS 7D digital SLR cameras are equipped with large Canon CMOS sensors and Canon DIGIC 4 image processors that enable them to record exceptional full 1920 x 1080 HD motion images at the user-selectable frame rate of 24p (23.976 fps), the standard for theatrical filmmaking. As “Marvel’s The Avengers” cinematographer Seamus McGarvey explained, these Canon digital SLR camera features made possible new creative opportunities for capturing thrilling point-of-view (POV) shots that can be seamlessly intercut with footage from the film’s principal 35mm and digital cinematography cameras to heighten the visual impact of this latest and most extraordinary Marvel Studios Super Hero movie to date.



Industry

- ▶ Film & TV Production

Customer

- ▶ Marvel Studios

Usage

- ▶ HD Action Shots

EOS 5D Mark II

Canon



"I think very highly of the Canon 5D Mark II, as I've been using it for the last few years on documentaries and other drama projects," McGarvey stated. "When I started working on 'Marvel's The Avengers' I knew there would be a lot of close-quarter action work and unrepeatable stunts to capture. The 5D Mark II and the 7D digital SLR cameras produce images that are worthy of cinema, and their small size is a major advantage. You can place them in locations where a typical movie camera wouldn't fit, and you can capture images that other cameras cannot. They are perfect for shooting additional angles that give film editors more options for creating powerfully immersive and kaleidoscopic views of action scenes."

Hidden Cameras

Featuring unprecedented battles between iconic super heroes and villains, "Marvel's The Avengers" sets new standards for filming elaborate stunts and pyrotechnics in actual urban locations. Using multiple cameras limits the need for "retakes" of these complex scenes, and the affordability and small size of Canon 5D Mark II and 7D digital SLRs, enabled McGarvey and his crew to obtain ample coverage by positioning as many cameras as they needed, practically anywhere they wanted them. According to McGarvey, a particularly noteworthy sequence was shot in downtown Cleveland involving flaming cars zooming down an alley amid simulated rubble and debris.

"We had five Canon 5D Mark II's and two 7Ds," he said. "We hid them in places that were really close to the big stunts, which would be too risky to do with bigger cameras that would require an operator and two assistants. We were able to slide one Canon digital SLR into a sewer grating and put another under a pile of debris for a key shot of a car hurtling toward the lens, flipping through the air on fire. There's always the danger of destroying one of these SLR cameras, but as long as you can still recover its CF media card you've got the shot."

McGarvey also noted the immersive impact of Canon POV footage on scenes involving stunt performers. "Stunts are conventionally seen from outside the action," he explained, "but we got great footage from a stunt man running with a Canon digital SLR camera. This conveyed a realistic sense of jeopardy to the audience, and a much more intimate view of the action. This footage worked especially well, since the film will be converted to 3D."

Lighting and Lenses

Night scenes were also an important component of the action in "Marvel's The Avengers," and McGarvey had special praise for the low-light capabilities of the Canon 5D Mark II and 7D digital SLR cameras, both of which range from ISO 100 to 6400.

"These cameras really have an incredible register in darkness, which has been integral to our shooting," he said. "We did second-unit shots in a mine with minimal and intermittent light sources, and the detailed images we created using the Canon digital SLR cameras were extraordinary. We also used them for night exteriors with minimal lighting, and they coped very well with the range between our bigger, hotter light sources and the lower end of darkness. I also find this to be true when using 5D Mark II SLR cameras for my documentary work, shooting inside cars and restaurants. Working only with available light, the image registers in a rounder way than the other digital cameras I have used. I think part of that is the way the big CMOS sensors work in the Canon digital SLR cameras, particularly if you work with a lens with a wider aperture. I'm very fond of the Canon EF 50mm f/1.2L lens, which produces a unique look I love."

Further enhancing the creative filmmaking potential of HD-capable Canon digital SLR cameras such as the 5D Mark II and the 7D is Canon's EF lens series, one of the world's most comprehensive selections of high-quality precision optics. Canon EF series lenses include a broad range of standard and medium telephoto models as well as wide-angle, ultra-wide zooms, macro, fisheye, and even tilt-shift lenses.

"I've been working with a range of great Canon lens choices throughout this production, and on my documentary work," McGarvey noted. "I love the look that these lenses create. They create a softer, more rounded look. The resulting footage is still crisp in terms of contrast but has a warmer feel. This helped us match the Canon footage with images from the digital movie cameras we used."

Shots captured using Canon 5D Mark II and the 7D SLR cameras were conformed to motion sequences acquired using the film's principal digital cinematography and 35mm movie cameras during months of extensive digital intermediate sessions. For McGarvey, the Canon digital SLR cameras were as important as any of the other production tools employed to make "Marvel's The Avengers."

"I don't see a difference in terms of storytelling value between the scale and size of the Canon digital SLR cameras and the main digital cinematography and film cameras we used," McGarvey confided. "They're all part of the artistic palette of filmmaking. Cinema and photography are converging and the technology continues to rapidly accelerate. Canon is at the vanguard of this revolution. Cinema is still evolving and there are many stories yet to be told. The affordability and quality of Canon's cameras are democratizing film production. ■"