Jon Fauer, ASC www.fdtimes.com Sep-Oct 2023 Issue 122-123

FILM AND DIGITAL TIMES

Art, Technique and Technology in Motion Picture Production Worldwide

Infinity Photo-Optical TS-160: Microscope Technology meets Cinematography

Fruit fly taken with Micro HM lens at 16x magnification. Photo by Roy Larimer.

ECU in a script usually means extreme close-up on an actor's face. ECU in Jay Margolis's world means 4x macro or 16x micro views, like the scary face of a fruit fly, above.

Jay Margolis is the founder and president of Infinity Photo-Optical, makers of extremely sharp and incredibly close-focus lenses for cine and still cameras. As a boy growing up in New Jersey, Jay was fascinated by things near and far: microscopes and telescopes. He graduated from The University of Colorado, Boulder, went to work at Bausch and Lomb, and received a Masters Degree from Colorado State University.

But we digress. For me, this story began at Clairmont Camera. Denny was wildly enthusiastic about the cinematized (Clairmontized) model of Jay's TS-160 lens system. Which brings us to Infinity Photo-Optical's new TS-160 kit (photo on next page). It is like a film or photo studio in a Pelican case.

Jay explained, "The TS-160 is an eventual offshoot of my patented Continuously-Focusable Microscope (CFM). I had been studying the use of afocal variation not as it previously had been for zoom lenses but rather to be able to uniquely focus—not zoom.

"I realized from working on a Hubble Telescope proposal that the Continuously-Focusable Microscope could be scaled down to much more compact dimensions. After several attempts, I invented the TS-160."

That word "Microscope" is the essence of this lens system. It is a true microscope and not an endoscope, as most ECU probe lenses are. An endoscope consists of a front lens and the image is relayed through the tube. The TS-160 is a a microscope where the aerial image of the front lens is magnified. As a result, the contrast, resolution and depth of field of the TS-160 are greater.

You can purchase the Macro or Micro lenses alone—helpful if you're backpacking all your gear into a far-off location. But for studio and regular location work, it's the kit you'll want, to achieve almost any extreme focus work the most imaginative of directors or art directors can conjure up.

Use the Macro Pro up to a distance of 1.25" as a 4x macro lens or use it as a long lens, equivalent to 135mm, for portrait work and much greater depth of field than you would normally get with a regular cine lens.

Use the Micro HM lens to fill the frame up to 16x magnification with an object as small as two of the letters in this sentence.

Macro Pro Lens

Micro HM Lens

Infinity Photo-Optical TS-160: Microscope Technology meets Cinematography

Macro Pro provides more depth of field than probes or other macro lenses. Photo by Nicholas DeSciosce.

Try the SFX-1 as a 100mm lens with astonishing depth of field from 20 inches to infinity. The companion SFX-2 is a 50mm lens that is sharp to 6 inches when focused at infinity. And the SFX-3 holds focus from 2 inches to infinity.

There are 90-degree and 45-degree prisms to hover over your mounds of extremely close coffee beans and other tabletop shots.

Attach the Double Aspheric FlipR to erect an inverted image. All these lenses are modular and easy to connect.

Coming soon: DippR plunges into liquids and stays clear because of its hydrophobic front that does not retain water.

For more information, go to: *ts-160system.com*
or Infinity Photo-Optical's home page: *infinity-usa.com*

TS-160 Lens System (Studio in a Pelican Case)