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www.fdtimes.com

April 2010 Issue 31

FILM AND DIGITAL TIMES

The Journal of Art, Technique and Technology in Motion Picture Production Worldwide



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Fujinon PL Zooms

What is the significance of seeing a Fujinon PL 18-85 mm zoom lens on a SuperTechno crane and remote head (*above*) at AFC Micro Salon? The need for speed. When you're on a rig or crane, chances are you'd pick a zoom over a set of prime lenses. Primes usually require more precious time spent swapping lenses, rebalancing mass, and re-calibrating focus. The trade-off, so far, has been that primes are generally faster than most zooms. Now, Fujinon has a new set of four PL mount zooms, and two of them open up to T2.0. The set covers from 14.5mm to 400mm. That's an all-encompassing range.

Fujinon will show working models of all four PL zooms at NAB, including the debut of the new 24-180 mm and the 14.5-45mm PL zooms. The most recent addition was Fujinon's 75-400mm PL zoom, introduced at Inter BEE in Tokyo last November.

Band Pro, a premier distributor of the new Fujinon PL mount zooms, will have the lenses on cameras at their booth. Stroll over to the Sony booth at NAB, and you'll see a Fujinon PL 18-85 mm with full Fujinon TV-type studio controls. This would be for customers who want to shoot multi-camera, sitcom-style on Sony F35, SRW9000, Alexa, Red, or...gasp...single camera operator, no focus puller situations. I can just see the meeting now.

The studio staff are gathered in the center of a dark stage.

Studio Chieftain: "We're gonna shoot this show multi-camera. Like 'Hurt Locker' meets the six o'clock news. Lots of cameras rolling all the time. Ten Sony F35s with Fujinon PL lenses and studio controls."

DP: "Studio controls? You know these lenses open up to T2.0?"

Chief: "Yes I do. That's why we bought them. Save a ton of money on lighting. No more ring of fire, salute the electric meter, measure with a thermometer lighting. Nope."

Lighting Director: "Chief, that's rather harsh..."

Chief: "I know, I know. I promised you Kino Flos and Litepanels, but then I heard about these Fujinon PLs."

Lighting Director: "You mean we get new lights and lenses?"

Chief: "Forget about it. These new Fujinon PLs are so fast, we could light the set with a bunch of iPhones."

DP: "But, Chief...shooting at T2, it's like we're wide open with a wrench. My depth of field is thinner than a starlet's waist."

Chief: "Perfect. You've always been lecturing me about how 35mm



format looks better because of its shallower depth of field."

DP: "Depth. Depth of field. Really, Chief, if you want the show in focus, I still think we need focus pullers."

Chief: "Hmm. Did they have camera assistants on 'Hurt Locker?'"

DP: "Yes, Chief. And look at all the Oscars it won. Just think of all the money you'll make after you get one."

Chief: "I think of it all the time. I already have my speech prepared, thanking the Academy, my agent, and those Fujinon PL lenses."

3D on ENG Style Lenses

Fujinon will show Howard Preston's new FIZ controller. It now provides dual control of two Fujinon "ENG drive unit style" lenses for 3D production. It has a helpful "lens tweak" feature to align and adjust the precise range of two zooms if needed. This controller will be on display in a couple of other booths as well. With Fujinon's new special ENG style drive units, ENG type lenses (the ones with attached hand grip and strap), now have better accuracy for use on 3D rigs. ENG drive units were too sloppy before. The new drive unit (optional when ordered, additional cost) gets 16-bit rotary encoder information from the 20-pin serial connector on the lens. Clutch type gearing significantly reduces normal backlash found in most ENG style lenses.

You can get the new Fujinon 3D-ready lenses separately or as part of a complete 3D system, which will also be shown. The 3D system self-calibrates, and, of course, controls both lenses. It can use normal TV style Fujinon controls. A sitcom or talk show camera operator will be familiar with these controls. The system will have fewer cables, fewer motors, less hassle, and a lower cost. However, this is for a broadcast market, probably not for motion picture style production. For most motion picture style shoots, systems will probably use external motors on cine lenses. Fujinon's 3D system does not adjust centering, inter-ocular, or convergence. It just zooms and focuses the lenses together, as a matched set from the factory.

Among many other products at NAB, Fujinon will show the TS P58 stabilizer. It is an external, "sandwich" image stabilizer that can be used on most Fujinon ENG 2/3" B4 mount lenses. Daisy-chained from the camera-lens 12 pin connectors, the stabilizer gets power and feedback for each focal length position of the particular Fujinon lens you're using. To maximize performance, you can dial in the Fujinon ENG lens model on a rotary selector, and select standard or high performance modes. For your next National Geographic or "Oceans II" job, bring along a TS P58 stabilizer. It's modular, light weight and very effective.

Four Fujinon PL Zooms

Lens	14.5-45 mm T2.0	18-85 mm T2.0	24-180 mm T2.6	75-400 mm T2.8-T3.8
Focal length	14.5-45 mm	18-85 mm	24-180 mm	75-400 mm
Zoom ratio	3.1	4.7x	7.5x	5.3x
Max Iris	T2.0	T2.0	T2.6	T2.8 (75-270) T3.8 (400mm)
Min Iris	T22	T22	T22	T22
Iris Blades	9	9	9	9
Close focus (from image plane)	0.71m (2.3ft)	0.82m (2.7ft)	1.24m (4.1ft)	2m (6.6ft)
Object size at close focus (wide end) *	14.5mm: 693 x 390 mm	18mm: 656 x 369 mm	24mm: 924 x 520 mm	75mm: 580 x 326 mm
Object size at close focus (tight end) *	45mm: 215 x 121 mm	85mm: 139 x 78 mm	180mm: 119 x 67 mm	400mm: 113 x 64 mm
Angular field of view (wide end) *	14.5mm: 79°13'	18mm: 67°23'	24mm: 53°08'	75mm: 18°11'
Angular field of view (tight end) *	45mm: 29°52'	85mm: 16°04'	45mm: 7°38'	400mm: 3°26'
Size: Diameter x Length	136 x 310 mm	136 x 352mm	136 x 405mm	136 x 444 mm
Weight	6.5kg / 14.3lbs	6.9kg / 15.2lbs	8.9kg / 19.6lbs	8.9kg / 19.6lbs
Model Number	HK3.1×14.5	HK4.7×18	HK7.5×24	HK5.3×75

* Calculated for 16:9 Aspect ratio with S35 24.0 x 13.5mm gate. We think they cover even more—the full frame 4:3 “Super 35” format.

All four Fujinon PL zooms have 136mm front diameters. Focus, zoom, and iris gears are all in the same position—which speeds up lens changes, since your follow focus or lens motors can stay in the same position on the rods. Focus barrel rotation is a uniform 280 degrees.



14.5-45 mm T2.0



24-180 mm T2.6



18-85 mm T2.0



75-400 mm T2.8-T3.8