



The Wind and the X35



P+S Technik's prototype PS-Cam X35 camera premiered at Cine Gear in June. The X35 name is good. It's a workhorse camera, a digital take on the workhorse Arriflex 435 camera. The idea is that you can go out with one small camera that shoots both "sync sound" and motion effects from speeds of 1-450 fps: one camera for dialog, slow and fast motion, time lapse, and speed ramps.

Meanwhile, back at the ranch and on location in sweltering Tomball Texas, California and elsewhere, the first working prototype X35 is being tested by Yousef Linjawi and an enormous crew. They're shooting a music video, "Daughters of the Wind." The workhorse camera is focused on a different kind of horse: Arabian stallions. What better way to try out slow motion? From Muybridge to X35.

Yousef is a rising star. FDTimes readers will remember his beautiful still photos in these pages. He attended Savannah College of the Arts, AFI and Chapman University. Now he's directing and photographing *Daughters of The Wind*, based on a famous Arabic poem written by HRH Prince Khalid al-Faisal (Governor of Makkah, Saudi Arabia) and narrated by Mishary Rashed Alafasy, a well known Kuwaiti artist in the Middle East.

This project had its roots when "The New Merry Pranksters" Robert Primes, ASC, Dan Kneece, SOC (former president of The Society of Camera Operators) and Yousef Linjawi went out to Africa with a P+S Technik Weisscam HS-2 MKII and more



equipment than they could possibly clean.

Daughters of The Wind took the new pranksters on another journey with even more equipment, this time subjecting a P+S Technik X35 and a Weisscam HS-2 to blistering heat near Houston, sand and salt on California beaches and dusty trails, with camera cars, cranes, aerials, and remote heads.

Yousef described the production as "a quest to record the world's most astonishing Arabian horses running free in stunningly beautiful locations, exquisite light and in breathtaking slow motion. The results humbled all of us. We just weren't prepared for how powerfully these unbelievable creatures affected our emotions."

Bob Primes said, "We used the P+S Technik X35 in very cold conditions and in 110 degree heat and humidity. It never missed a beat. The footage is gorgeous. It shoots full HD, full color, from 1 to 450 fps. For regular speeds of 24-60 fps, you record directly from the HD-SDI output. Because there's so much data being churned out at high speeds like 450 fps, the only thing that can currently handle this is solid state internal memory. The X35's 18 GB version has 4 minutes of internal memory (at 24 fps), which translates to 40 seconds at 150 fps.

"Yousef was looking for serendipitous moments. You don't hit a start button—you hit the cut button. The X35 records continuously. As long as the viewfinder is on, you're shooting. Thomas Greiser



Bob Primes, ASC with first working prototype of PS-CAM X35. Photo: P. Levinas?



photo: Froeschke lo rez ?

The Wind and the X35



was with us, and it was helpful when he logged good parts of a shot and then counted down so we knew when to cut. If you don't cut in time, the camera records over your previous material. So, after cutting, you download the shot. We downloaded in real time to an AJA Ki Pro in ProRes. Of course, the faster you shoot, the less time you have in the internal memory. I've heard there are plans for a 36 GB version at P+S Technik.

"The breakthrough idea with the P+S Technik X35 is that with one camera, you can go out and shoot sync sound and then shoot 450 fps. Previously we would have two separate cameras, which takes time and space and manpower. For example, let's say you were doing a feature about an athlete. Before, you might use an Alexa for the sync sound scenes. For the sports sequences, you would have needed a slow motion camera. The X35 does both. It is very versatile."

Yousef added, "Downloading was a very important event. It was hot, humid and we had a huge crew working very hard. When it was time to download, everyone stopped what they were doing and came to the camera to watch the take in real time. We all formed a bond while watching the beautiful footage. It was very positive and stimulating to watch the amazing slow motion on the Transvideo 8" monitor, which was bright and clear even in the blazing Texas sunlight. The slow motion showed us things the human eye doesn't normally see: the beauty of the Arabian horses.

"With the X35, we found that 128 fps was a good speed for basic shots. At 220 fps, things looked really beautiful. At 450 fps, it took on a different dimension. We saw things people don't normally

get to see. The image looked clean, without distractions—just sand and sky and horse covering the entire frame. You see every muscle of the horse—it's like art. That's what this film is all about."

Partial Technical Credits: PS Technik, ZGC, Clairmont Camera, AJA Video Systems, Transvideo International, Clairmont Camera, Panavision, Griptrix, Ultimate Arm, Nettmann Systems International, 20/20 Camera, LibertyPak, Moviola, Motion Picture Marine, and Film and Digital Times.

Arabian Horses: Linjawi Arabians, El Capitan Arabians, DeShazer Arabians, Michael Byatt Arabians, Om El Arab International, Evergreen Arabians, Gallun Farms.

Locations: Santa Ynez, CA - Oceano Dunes in Pismo Beach, CA - Tomball, and New Ulm, TX - Scottsdale, AZ.

For more info: www.ps-cam-x35.de

See *Daughters of The Wind* screening of X35 footage at IBC Big Screen on Sept 10 at 3:30-5pm.

P+S Technik's IBC booth: 11.E28.



X35 Technical Stuff

Recording Time

“Ridiculous? Only 12 seconds of recording at 450 fps,” sputtered Rusty Gates, camera assistant of legend.

“It’s actually not much different from what you’re used to when shooting film at high speed,” explains P+S Technik’s Michael Erkelenz. Let us count the ways.

With 18GB you can record the following maximum time to the PS-Cam X35’s internal buffer.

Frame rate	18GB Time in Min:Sec at 1920x1080
24/25	04:08
100	01:02
150	00:41
450	00:12

In comparison, an Arriflex 435 with a 400’ (120m) Mag 4-perf shoots the following maximum time.

Frame rate	Full 400’ Magazine, 4 perf
25	3:50
50	1:55
75	1:16
100	0:57
150	0:38

If the 435 went up to 450 fps, the 400’ magazine would run out in about 10 seconds. “Aha,” you say. “What about a 1000’ magazine?” Well, that’s the equivalent of a larger buffer, coming when technology catches up.

Summary

P+S Technik’s new PS-Cam X35 can be thought of as an all-purpose, lower-speed alternative to the Weisscam. Or, imagine a digital 435 that is quiet enough for sync sound, sits on your shoulder, or mounts to tripods, dollies, remote heads, Steadicams, cars and 3D rigs.

The P+S Technik PS-Cam X35 shoots from 1 – 450 fps in HD 4:2:2 10-bit uncompressed, with 4:4:4 RGB planned. (P+S Technik’s Weisscam HS-2 goes up to 4,400 fps in HD resolution, and 1400 fps in 2K.)

The P+S Technik PS-Cam X35 will accept popular batteries (Anton/Bauer or V-Lock), HD-SDI recorders, lenses, accessories and camera supports.

Specs

- CMOS Super35 1920 x 1080 HD Sensor
- Frame Rates: Standard Speed 24–60 fps
- All Speed Range: 1-24-150-450 fps (stepless)
- Recording: HD 4:2:2 10-bit uncompressed
- 4:4:4 RGB (option planned)
- Internal Memory: 4:08 min 24 fps/18GB 0:40 min 150 fps /18 GB
- Output: 2 x 3G/1,5G HD-SDI
- Timecode: TC In/Out
- Genlock: In/Out
- Power: 12V-30V, approx. 90W
- Accessories 12 V, 30 W and 24 V, 60 W
- Dimensions: LxWxH 343x157x179 mm
- Weight: Approx. 6.8 kg

