To recap the news that leaked out of Europe yesterday, Pioneer is rolling out its 8th-generation plasmas, TVs whose black levels are 80% deeper than Pioneer's previous TVs. The end result is a 20,000:1 contrast ratio, and three times as many gradient steps. That means, in dark movie scenes, you'll see be able to see the action but also appreciate the depth of the shadows. Best of all, Pioneer says that because of the way the technology works, there's no sacrifice in panel brightness.

Under the corporate codename Project Kuro, the XGA and WXGA (768-line) panels will ship in June and July, while a full lineup of 1080p models will ship in September. Check out the gallery below, or follow the jump for screen size, price, press release and a Gizmodo interview with Pioneer home-entertainment honcho Russ Johnston.

**Pioneer 8G Plasma TV**

The Pioneer-branded XGA and WXGA sets will be available in June:

- Pioneer 42' XGA PDP-4280HD - $2,700
- Pioneer 50' WXGA PDP-5080HD - $3,500
The Elite-branded XGA and WXGA sets will be available in July:
Elite 42” XGA PRO-950HD - $3,200
Elite 50” WXGA PRO-1150HD - $4,500

All 1080p sets will be available in September:
Pioneer 50” PDP-5010FD - $5,000
Pioneer 60” PDP-6010FD - $6,500
Elite 50” PRO-110FD - $6,000
Elite 60” PRO-150FD - $7,500

When we talked to Russ Johnston, senior VP of marketing and product planning for Pioneer’s home entertainment division, he told us that Pioneer had essentially spent the last two years redesigning everything about its plasma technology. “We created a brand new panel, new color filter and new video processor, all from scratch,” he said. All that plus a room-light sensor embedded in the screen.

How do you get the 20,000:1 contrast ratio?
“In traditional plasma technology, there’s a priming charge which means idling luminance in each cell, even when it’s off. It’s a very slight charge, and it’s waiting for firing to bring it up to peak brightness.” By increasing the availability of electrons at the base of the cell using a ‘newly developed material,’ Johnston says, engineers were able to crank the idle down 80% without any compromise in brightness.

Did it reduce the energy consumption of the panel?
“It’s a give and take,” says Johnston. “We reduced the idling luminance but in order to maintain peak brightness, we had to keep same energy level.” He did add however that, in Japan, Pioneer has won awards for energy-efficient plasma technology.

What about the color filter?
“Another drawback [for plasma] was bright room performance. Plasma technology tended to wash out a bit on a retail floor under big bright mercury lights. Other technologies [and I think he means LCD] tended to look brighter and have more contrast.” The solution? “A new color filter that blocks all ambient light from the environment.” We’ll get more on that at today’s unveiling ceremony.

And the new processor?
“We’ve taken a six-chipset environment and created an ASIC—six chips in one—great for keeping cost down and condensing the board structure. We’ve replaced the entire software application for video processing in our chip.” His explanation was this: “We know not everybody is watching 100% HD content, and that’s disappointment in how TVs handle digital content that’s not HD. Numbers and letters on news programs sometimes have ‘mosquito noise,’ there might be interpolation of digital signals in the black areas, giving a noisy look to the blacks.”

Johnston says that much of the standard-def viewing is improved, as well as the content of broadcasters such as Fox Sports who use a lot of MPEG compression. He says the processor cleans up all signal coming in, and not just the analog input, like some TVs.

Pioneer has also added a light sensor on the face of the screen. “Depending on the type of content on screen and room light condition, the light sensor adjusts the content color and brightness. It’s a new thing for us, and a new thing for plasma technology. Other technologies need it, rely heavily on it because of drastic compatibility with room-light conditions. We’re using it to make an optimized picture.”

We’ll be hitting Pioneer’s launch today. If there’s anything more that we haven’t covered, we’ll clue you in soon. In the meantime, check out the press release below. - Wilson Rothman

PIONEER LAUNCHES NEW FLAT PANEL TELEVISIONS WITH GAME-CHANGING TECHNOLOGY FOR SERIOUS ENTERTAINMENT JUNKIES

NEW YORK (May 9, 2007) - With ten years experience delivering flat panel televisions to the U.S. market, Pioneer continually develops display technology that creates an emotional impact for those who experience its unrivaled picture quality. That’s why the company’s new flat panel televisions, launched worldwide this week, allow viewers to see, hear and feel an emotional experience like never before. The game-changing technology creates significantly deeper black levels, which ultimately lead to richer colors, sharper details and unrivaled performance. The eight new models, ranging in size from 42-inches to 60-inches diagonal, will be
available beginning next month.

Pioneer's engineering team originally selected plasma technology because its self-emissive nature creates the deepest blacks. Since black is the starting point for all colors, the deeper and more accurate the blacks, the more vivid and lifelike the colors become. The newest Pioneer technology is led with black level reproduction that is 80 percent darker than the previous generation. This is achieved through a series of proprietary technologies harmonized to work together.

Oscar winning cinematographer Dion Beebe ("Memoirs of a Geisha", nominated for "Chicago") spoke recently about the importance of black and light and color in the work that he does. "Where light becomes interesting to me is not just in blacks and whites but the shades between light and dark and the subtle tones and textures within shadows," Beebe said. "In terms of what I do as a cinematographer, it's the ultimate tool in terms of creating a situation and imposing a look on a situation. The interplay of light, darkness and color captures everything, without a word being said."

Pioneer's goal in creating its newest flat panel displays was to capture the images created by artists like Beebe and ensure they are reproduced in a form as close to the original as possible. As a result of these efforts, Pioneer flat panel displays evoke emotion from viewers unlike any other television.

- Colors Like Never Before. As the foundation for all color, the ability to create deep black results in the richest, most three-dimensional colors. The deep blacks and vivid colors are the result of Pioneer's newly developed cell structure, crystal emissive layer and newly designed filter.

- Performance Like Never Before. Pioneer's engineering goal was to create errorless and noiseless video signal processing for a heightened emotional experience. This was achieved through the company's new video processing and an "Optimum" mode that automatically processes images based on the signal and room conditions. Optimum mode can detect the difference between a news program, cartoon, sporting event, music video or other content based on the signal. It also detects the room lighting condition. Using internal intelligence, it adjusts the parameters that are used to process the image, optimizing it for the viewer.

- Sound Like Never Before. As a leader in audio technology for nearly 70 years, Pioneer placed significant emphasis on speaker technology to enhance the high definition experience. Without clear vocals, cymbals crashing and guitar picking, a music video would not make the viewer feel as if he/she were at the concert. Likewise, the lack of crystal clear sound effects minimizes the emotional impact of action films and video games. Pioneer is the first company to put an emphasis on the audio quality of its video products.

These new flat panel televisions developed as part of Pioneer's Project KURO bring game-changing performance to consumers who demand only the best. With this introduction, Pioneer breaks away from the commoditization model, placing focus on its premium position in the market. The company will maintain its focus on quality, performance and design.

"In the art world, a plain white canvas represents a blank slate waiting for an artist to create. In the world of television, a black screen is a similarly blank canvas ready for content to be displayed. Pioneer engineers reached a monumental achievement by creating black levels that are 80 percent deeper than previously possible - defining the ultimate "blank canvas" ready for high definition movies, television and sporting events," said Russ Johnston, senior vice president of marketing and product planning for the Home Entertainment and Business Solutions Group at Pioneer Electronics (USA) Inc.