Current Strategies for Eliminating Motion Blur in LCD Television

By Ken Werner*

For years, motion blur has been an issue in LCDs, and for years it was believed that the solution lay exclusively in speeding up the total cell response time – measured from full off to full on and back again – of the individual liquid-crystal cells. But motion blur continued to be objectionable even after response time became so short that blur should not have been visible.

We will bring the story up to date by reviewing response-time compensation (overdriving), blinking backlights, dynamic backlights, black data insertion and gray data insertion. Improvements in this area would be difficult to gauge without a reliable way to measure motion blur, so the development of motion picture response time (MPRT) and the test sets that implement it are an important part of our story.

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