

HP Pavilion 65-inch DLP HDTV

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What We Think

A superb first effort, this HDTV offers premium image quality and the most complete feature set a future-conscious shopper could want.

Hewlett-Packard is not the first computer brand to try stealing a slice of the lucrative rear-projection HDTV market from heavy-hitters like Sony and Mitsubishi, but its rookie effort should strike fear into the hearts of the veterans. Despite coming out of left field, the MD6580n has a respectable pedigree: HP invented the technique used to achieve DLP's 1080p resolution, known as "wobulation," and the company brings long-respected expertise in color printers and PCs to the game. The result is an extremely well-thought-out HDTV that will appeal to shoppers more concerned with video quality and future-readiness than about brand cachet.

One big reason for its appeal is that, incredibly, the MD6580n is one of only a few mass-market 1080p sets that can actually accept a 1080p signal through its primary video inputs. (Others include HP's smaller, 58-inch 1080p set, and some Mitsubishi models will accept 1080p on their computer inputs.) A bit of perspective before you drop the magazine to rush out and buy one, though: 1080p content is exceedingly rare today and pretty much restricted to material that can only be played back from a PC. When native (in other words, not upconverted) 1080p sources do appear, they'll likely be in next-generation DVD players or videogame consoles and not TV broadcasts. Still, if I were plopping down a few grand for a new HDTV, the ability to accept future 1080p sources would be a big plus.

HP didn't mess around with its first big screen — it's a huge presence even when turned off. It just seems to absorb light — almost every inch of its surface is matte black, and the 65-inch screen reflects back very little light. A 1/8-inch strip of silver that runs the width of the face below the screen, a tiny silver HP logo, and a nondefeatable status light provide the only accents. The optional stand (\$700, see photo) has distinctive rounded corners that match the television's top.

I liked the friendly remote. It fit easily in my hand and placed most keys, including a big beige cursor control that can access every function via onscreen menus, within thumb-reach. My only complaint is that its lack of illumination may confound unfamiliar users in the dark. HP plans to add backlighting later on.



SETUP

HP designed the MD6580n so you'd never have to go 'round back. The front panel has a full-width bottom-hinged door below the screen that swings open to reveal the lamp-replacement compartment (lamp life is rated at 6,000 hours, and replacements cost \$300) as well as the TV's full complement of inputs and outputs. And I mean full — there are no jacks on the rear of the set. The illuminated, color-coded input bay leaves plenty of room to insert connectors and manage A/V cables — they can be sent straight down or through a wide channel under the chassis. Imagine being able to add new sources without having to muscle the TV or squeeze behind it. This easy-access panel is hands-down one of the coolest improvements I've seen on any recent TV.

I came across another notable feature while exploring the well-designed menu system: Visual Select, which summons a grid showing video thumbnails of up to ten active sources. You use the arrow keys on the remote to navigate to the input you want to select. Though it worked fine with a couple of sources, when I loaded up the inputs, it completely froze my early production review sample — I had to unplug it and power up again to unfreeze it. HP says it will have fixed this bug before the TV hits the market.

The set also failed to play nice with the digital video output on our Scientific Atlanta 8300HD cable box. Despite the HP's being copyright compliant, the box didn't see it as such, shut down its HDMI output, and issued an onscreen error message. We've encountered this now on several HDTVs when using different samples of the 8300HD in different locales, and it appears to be an issue either with the box or with local cable providers.

The TV's Settings menu has more options than a pan-Asian takeout joint. I could scroll through letters and numbers to create custom input names, position the picture horizontally and vertically, and access advanced picture settings like gamma and color-temperature controls. If all that sounds like gobbledegook, relax: HP also provides four one-touch presets for quick picture customization. I mostly used the Studio preset for my tests since it eliminates as much processing as possible, and I loved that I could customize it (plus the other three presets) for each of my sources.

PICTURE QUALITY *The Machinist* stars an emaciated Christian Bale as guilt-ridden insomniac Trevor Reznik, and its menacing, ultra-dark tone came across splendidly on the big screen. Black and near-black areas looked richer and notably less noisy than I've seen on other microdisplay TVs, with shadow details and especially color accuracy preserved even in the dimmest areas. Many DLPs render near-black with a green or blue tinge, but not the HP. This is one set that handles dark scenes very well.

I did spot what we geeks call the "rainbow effect" a few times in my darkened theater. In one instance, instantaneous flashes of color trailed the white names in the credits and the reflections of the skyline lights in a window as Bale rolled a dead body up in a rug. This artifact is endemic to DLP RPTVs because of their color wheels and wasn't particularly bad on this set (indeed, many viewers never notice rainbows). I also saw tiny stationary specks caused by the set's high-gain screen, which became more apparent in white areas even with contrast greatly reduced. This effect, which comes with the territory on big-screen TVs, was slightly worse than on some sets I've tested but not a big deal.

Minor gripes aside, I really liked the HP's picture with DVDs, especially in 1080i format via my player's HDMI output (480p images from the component-video output were noticeably softer). The image appeared sharp and very clean, relaying every bone in Bale's tortured body and every pore in the big-toothed Ivan's grinning head. The individual pixels making up the picture were indistinguishable from normal viewing distances, and at no time did I detect any "screen door" grid. This smooth image is a hallmark of the wobulation technology used in 1080p DLP chips. (See ["Pixel Magic: How TI Puts the 1080p in DLP"](#).) The HP also had plenty of reserve to blast out bright pictures in almost any lighting environment.

Plus
<ul style="list-style-type: none"> •Deep, rich blacks. •Accurate, well-saturated color. •Excellent resolution with high-def. •Extensive Settings menu.
Minus
<ul style="list-style-type: none"> •Some rainbow effects.
Key Features
 <ul style="list-style-type: none"> •1080p DLP light engine •1080p input via HDMI •Illuminated front-panel input bay •Visual input selection •inputs CableCARD slot; 2 HDMI (1 with analog stereo for DVI sources); 2 component-video and 3 composite/S-video, all with analog stereo; 2 RF cable/antenna; VGA with minijack analog stereo; USB and RS-232C (both for service only) •outputs coaxial digital audio and analog stereo

Watching standard broadcasts from my 10-foot viewing distance, I appreciated the manual's admission that the set can't do much for low-quality sources: "The best viewing distance is about 9 to 25 feet, but personal preferences vary widely. For prolonged viewing of standard-definition TV channels, the upper end of this range might be more comfortable." I never expect a standard-definition picture to look good on screens this big, and like all HDTVs, this HP is happiest showing off clean HDTV.

HDNet's presentation of high-def highlights from the space-shuttle launch looked almost hyper-real. When the astronauts suited up I could discern numbers in the archaic-looking console gauges, and I made out a small human figure reflected in the glass helmet of the Japanese astronaut. As the morning sun illuminated the launchpad, I watched white-suited techs walking among the gantry's sharply defined struts on the bottom levels. The combination of high resolution and strong contrast really made the sunrise pop. Test patterns revealed that the MD6580n could resolve nearly every line of a 1080i HDTV source, making it the second-most detailed RPTV I've tested. (The \$13,000 [Sony Qualia 006](#), a 1080p LCoS HDTV, is the first.)

The shuttle launch made a spectacular demonstration of detail, but hungry for more color I turned to a DiscoveryHD screening of *HD Traveler* set in Ireland. The opening sweeps over a lush green meadow showed off the HP's excellent saturation. The grass looked fresh and realistic beneath the overcast sky, and the grayish blue water just beyond the jagged shoreline reflected the clouds beautifully. In standard travelogue fashion, the program cut from helicopter shots of the landscape to people — in this case pale to ruddy-skinned Irish folk making music. I spotted subtle differences in the light arms and freckled, apple-cheeked faces of a quartet of young female fiddlers. And a close-up on a craggy old man revealed variations in his deep red nose and slightly paler temples. The HP's natural color rendition topped off its excellent overall performance.

BOTTOM LINE Put simply, HP's MD6580n produced the best DLP-based rear-projection TV image I've seen yet, and in many ways its picture compared favorably with that of the much more-expensive Sony Qualia 006. If its rookie effort is any sign, HP should have no trouble successfully making that long trip from the home office to the living room

FULL LAB RESULTS

Unless indicated otherwise, all tests were conducted with 1080i-format test signals via the TV's HDMI connection.

Color temperature (Warm/Custom color temperature and Studio mode before/after calibration)

Low window (20-IRE): 7,750/6,426 K

High window (80-IRE): 7,431/6,555 K

Brightness (100-IRE window before/after calibration): 97/32 ftL

The HP MD6580n's Studio picture preset engages the Warm color-temperature mode, which measured slightly bluer — averaging about 1,000 K higher — than the standard of 6,500 Kelvin. Grayscale tracking measured nearly dead-on after calibration using only the user-menu RGB gain controls, varying by an average of only 55 K from the ideal. (Calibration needs to be performed by a qualified technician, so discuss it with your dealer before purchase, or call the Imaging Science Foundation at 561-997-9073.)

Like most HDTVs, the HP looked blindingly bright out of the box, so I lowered its brightness to about 32 ftL, which made the image easier on the eyes in my darkened theater. The HP retained an accurate grayscale with contrast reduced, although a setting above 50 in Studio mode reduced (clipped) detail in the brightest areas. The set reproduced a full range of black-to-white gradations via all of its inputs, HDMI included. Overscan was excellent at about 2% for most sources, although I noticed more overscan (about 5%) with 480i programs — a design move to eliminate noise along picture edges with lower-quality sources. Brightness uniformity was very good, with only minor hotspotting visible at the middle of the screen. Geometry was off very slightly, bowing a tiny bit along the top edges and bending outward incrementally.

Out of the box, component-video color decoding was very good, showing a -5% red bias with both standard and high-definition sources. Black-level retention was relatively good, varying slightly only in very dark areas during test-pattern changes. Minor edge enhancement was visible despite a zero sharpness setting in Studio mode, showing up as slight ringing on diagonal and thin vertical lines on test patterns. Tests of 480p-format resolution revealed excellent detail via HDMI and significantly less detail via component-video connections. The difference was less striking with HDTV, however. Although the HP wasn't able to resolve every single line of the 1080i test pattern from my signal generator via HDMI, it came very close.