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The Top 100

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# THE PERFECT VISION

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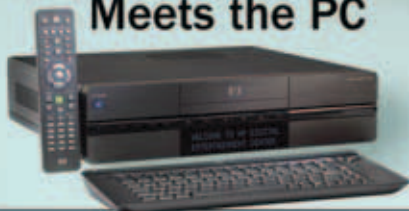


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**JVC's Stunning New  
1080p HDTV**



# JVC HD-56FH96 1080p HD-ILA Rear-Projection Television

What do you get when stepping up from 720p RPTV to a 1080p model?

Not long ago (Issue 64), I reviewed the HD-52G786, JVC's 720p HD-ILA RPTV. I liked the high brightness of that model, but I didn't find it to excel in any other areas, though it was a generally competent performer. On the downside, its blacks were not good and really held the entire set back.

Enter the 1080p version, and what a difference! I'll tell you right up front: This one's a different animal and a real contender for the best RPTV on the planet.

Since many features are the same, I won't dwell on the similarities—only the differences. Check out Issue 64 ([www.avguide.com](http://www.avguide.com)) for details about the earlier set's features that also apply to this model. Like the vast majority of 1080p sets this year, the HD-56FH96 upconverts all scan rates to 1080p, but it can't actually accept a 1080p signal (not that you could find one except perhaps from a very high-powered home-theater PC).

## Features

Like its sibling, the HD-56FH96 is a true high-end RPTV with digital tuner, PC input, and CableCARD slot, but this model has two HDMI inputs instead of one. There is no media card slot (for viewing digital photos); you'll have to get the 70-inch version for that.



Like the 720p set, this model also has HD EZ FILL to assure a full screen with any broadcast, four video presets, a signal-level indicator for tuning digital stations (important), and a button to select either digital or analog off-the-air channels, preventing them from mixing when channel surfing. These are neat and useful features often missing from other sets. Advanced audio features are missing from the audio menu and can only be accessed with the SOUND button on the remote.

One new feature that seems useful is called V1 SMART INPUT. If you plug your various component and S-video

sources into your surround receiver and connect the receiver's component and S-video outputs to the set's Component 1 and S-video 1 inputs, respectively, the set will detect which connection has a signal as you switch sources with the receiver.

More technical features include a true 1920x1080 pixel structure with an HD-ILA light system, fifth-generation scaler, 5-point color management, and (hurrah for JVC) a 3-step iris for improving black level. There are four different noise-reduction circuits, operated, in part, by the DIGITAL VNR and MPEG NR controls in the user



menu. The clock sets itself automatically with a signal embedded in the PBS broadcast signal.

As with the 720p set, I found the owner's manual to be sketchy and the remote cluttered. To its credit, the remote is backlit (though the LIGHT button is impossible to find in the dark), and the buttons used for typical operation (except changing inputs) are intuitive and fairly easy to find. Changing inputs was a royal pain in the neck, requiring sequential button pushes and long waits to scroll through the list.

## The HD-56FH96 is the king of light among 1080p sets, but it's not quite as bright as the 720p model.

One serious drawback is in the video-memory design. Most inputs don't have separate memories for user video settings (COLOR, TINT, etc.). Change settings on one input and you've changed them on most others. The component inputs do have a separate memory, but the tuner and both HDMI inputs must share. To work around this, you can assign the THEATER picture mode to your DVD player (component connection) and set-top box (HDMI), then assign STANDARD mode to the tuner to get independent picture adjustments.

Unfortunately, STANDARD mode exhibits nowhere near the accuracy of THEATER. Its color temperature, even in the LOW setting, is over 14,000K (way bluish), and because it has "enhanced" contrast, the detail in darkest grays is missing. An ISF calibration can correct STANDARD's color-temp idiosyncrasy (though you'll still have some contrast enhancement); calibration can also

perfect the THEATER mode by removing a slight greenish tint.

### Performance

The 720p version of this set nearly knocked me off the couch with light output when I first turned it on. The HD-56FH96 is still the king of light among 1080p sets, but it's not quite as bright as the 720p model. Initially, it starts up in DYNAMIC mode; I could find little use for that. STANDARD mode was still bright enough for viewing on the surface of the sun but didn't look nearly as cartoonish. It might be okay for viewing in bright environments, but this mode exhibits a very bluish color temperature and crushed blacks, although edge enhancement and noise are far less evident than with the 720p set.

THEATER mode's color temperature is close to the D65 industry standard (sometimes with just a bit of a greenish bias). It also lowers the overall light output some and adjusts the iris to its most closed position for a noticeable drop in black level. If you think it's not bright enough, you can increase CONTRAST up to +6 with no white crush and only a shift toward blue in the brightest whites. Turning it down significantly, however, is sometimes a problem. Black-and-white movies in a dark room often required setting CONTRAST to minimum, and even then it was too bright. THEATER mode might not impress you when you first switch from STANDARD, but give yourself some time to get over STANDARD's excesses of brightness and bluishness.

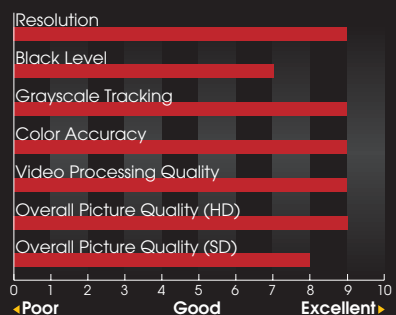
I usually disable any video-enhancement circuitry, but they weren't objectionable on this set. With last year's model, SMART-PICTURE, which changes contrast according to the average picture level, could make enormous changes in light output. On the HD-56FH96, its operation was subtler; still, it sometimes caused small but notice-

able fluctuations in picture level. I left it on anyway. DIGITAL VNR (video noise reduction) was highly effective in its AUTO setting and only slightly softened the picture.

The whole video-setup procedure is very much like the 720p model. With broadcast material, COLOR often had to be reduced to about -5 (though test patterns measured perfectly at 0), but other user controls were very close to ideal at the default 0 position. DETAIL could sometimes be run as high as +15 with no objectionable artifacts, especially with 1080i sources. Once it was set up properly, I was impressed with the picture of the HD-56FH96.

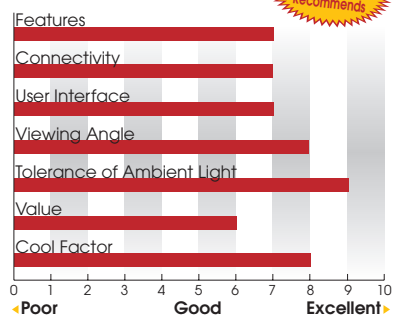
HD on this set is undeniably striking. The Voom HD channels from my DISH 942 receiver/DVR have never

### Technical Ratings



**Note:** Color decoder best I've ever tested; video noise reduction best I've ever seen; clean, smooth, artifact-free picture held back mostly by black level; THEATER mode grayscale flawed only by slightly greenish dark grays.

### Practical Ratings



**Note:** Some physical inputs must share selectable video inputs; lacks separate memories and program guide; input selection via remote is poor; brightest RPTV you can buy; among the most expensive RPTVs you can buy.

## JVC HD-56FH96

looked better. Even black-and-white movies looked superb with stunning smoothness and (in THEATER mode) very little color tint due to grayscale inaccuracies. Overall color balance was excellent. Colors themselves were mostly excellent with unusually

vibrant blues. Greens were good for a modern display, meaning they were less offensive than most.

HD with JVC's built-in digital tuner was equally impressive. Blacks always fell somewhat short of "inky black" despite JVC's new iris, but they were dark enough to make *CSI* and other darker network HD programs look excellent; in fact, the blacks were 80% lower than the JVC 720p set reviewed earlier. They were also 67% lower than the 55-inch Hitachi 55HDX61 plasma but still significantly higher than the Sony KDS-R60XBR1 SXRDPPTV reviewed in Issue 64. Of course, sports looked spectacular, in part because of this set's remarkably high light-output capability and the fact that it doesn't make playing fields either squirm with video noise or scream with dreadful lime greens.

With an interlaced component connection, DVD showed just how good the component inputs are and just how well JVC's scaler performs. *Star Trek: Insurrection* can look really bad with poor deinterlacing, edge enhancement, and 3:2 pulldown, but it was clean and impressive on this set. *Vanilla Sky* was rendered with absolutely no false contouring. Its dark scenes had acceptable (but not particularly exceptional) detail. *Cruel Intentions* was displayed with an unusually good mix of detail and smoothness. Flesh tones were particularly convincing. This DVD is not forgiving of excess red, either in a set's grayscale or color decoder.

Finally, the HD-56FH96 scored better than most on regular old low-res cable. This was due in part to good scaling and excellent noise filters.

In THEATER mode, I noticed occasional shifts in color temperature from nearly ideal to noticeably greenish. Measurements were made with the set on its best behavior. This may have been a problem with my review set.

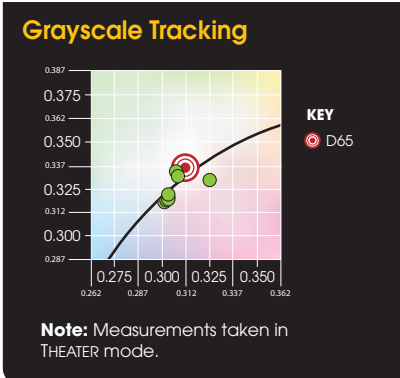
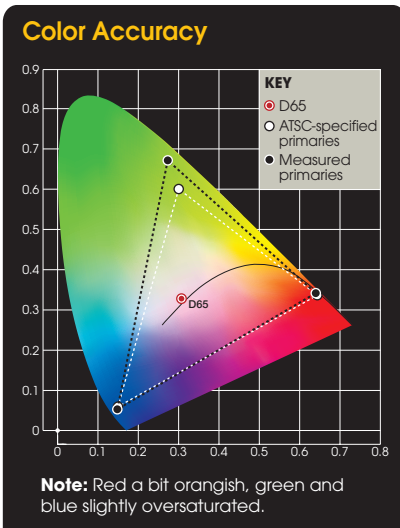
### Conclusion

I wasn't completely enthusiastic about the 720p set, but I am very enthusiastic about this one. Finally, JVC has found black levels to complement the

excellent light output and great color rendition of the earlier model. Video noise and artifacts have been reduced, and the overall picture has detail with a certain smoothness that's undeniably beautiful and totally involving.

I wish I still had the Sony SXRDP set I raved about as "the best you'll see this year" for a direct comparison. But even lacking such a comparison, I feel confident that this JVC can make a picture that's just as compelling except on the darkest program material (where it's still not bad), and it can go a whole lot brighter if you really want it to. Plus, it doesn't have tacky speakers on the sides making it larger than it needs to be. So now I have to say, "these sets—both the Sony and the JVC—are probably the best RPTV pictures you'll see this year." This one, except for a few important operational caveats, is mostly right up there. ■

Randy Tomlinson is an independent ISF-certified calibrator in the Atlanta area and can be contacted via his Web site at [www.advancedtechservice.com](http://www.advancedtechservice.com).



### Measurements

|                                                            |                          |
|------------------------------------------------------------|--------------------------|
| ▶ <b>Peak white level</b><br>Full screen<br>100 IRE window | 77fL<br>84fL             |
| ▶ <b>Black level</b>                                       | 0.0036fL                 |
| ▶ <b>Contrast ratio</b><br>Peak<br>ANSI (checkerboard)     | 2333:1<br>141:1          |
| ▶ <b>Horizontal resolution</b><br>HDMI/DVI<br>Component    | 1920 lines<br>1920 lines |

**Note:** Measurements taken in THEATER mode, which produced the best picture; Standard mode is much brighter, useful in high ambient light. Horizontal resolution exhibits slight HF rolloff.

### The Last Word



- Brightest 1080p picture available
- Very good color rendition
- Smooth, noise-free picture



- Some inputs must share user video settings
- Selecting video sources via remote is agonizingly slow
- Black level is somewhat short of the best

### Specifications

- Technology: HD-ILA (LCoS) rear-projection
- Screen Size: 56"
- Pixel Resolution: 1920x1080
- Contrast Ratio: 5000:1
- Max Light Output: 900 cd/m<sup>2</sup> (265fL)
- Video Inputs: 2 HDMI, 2 component, 3 S-video, 4 composite, VGA (DB15), 2 FireWire, 2 RF
- Dimensions: 52" x 38.1" x 17.1"
- Weight: 95 lbs.
- Warranty: 1 year (parts & labor) in-home
- Price: \$4999.99

### Manufacturer Information

**JVC**  
 (800) 252-5722  
[www.jvc.com](http://www.jvc.com)