

High definition equals high price

High-definition DVD players offer unrivalled picture quality, but at a cost. We tell you why you may be better off with a £70 Best Buy standard DVD player or even a games console

High-definition DVD players boast pictures that, provided that you view high-definition discs on a suitable HD TV, beat standard DVDs. But there are drawbacks.

For a start, high-definition players cost about ten times more than a standard player. Basic features like resume from standby are missing (see 'What you should look for', below), they're generally more complex and sluggish, use more power and are pretty noisy. And there are two

rival disc formats to choose from: Blu-ray and HD-DVD. Currently, it's impossible to predict which, if either, will dominate the market.

Thankfully, there is a solution – the Best Buy LG (14) works with both types of disc. But it may not work properly with every HD-ready TV on the market (see *Which?*, November 2007, p36).

Standard DVD players, on the other hand, work with all TVs and generally produce pretty good pictures. And a Best Buy will set

you back only £70, as opposed to £829 for a Best Buy high-definition player (see p51).

Many standard players feature a high-definition socket (HDMI) that claims to improve standard-definition pictures when used to connect the player to an HD TV. On most models the picture rarely improves – see 'Which should you choose?', p50, to find out which model gave the best results. But if you want high-definition DVD, you're going to have to pay for it.



There's more than one way to watch a DVD. We try them all

Each player is connected via Scart leads to a Best Buy TV and compared with a benchmark Sony DVD player. Our viewing panel watches a series of movie clips plus a test pattern, chosen to illustrate different picture qualities, including colour and motion.

Clear signal

We watch the same clips with the player connected via an HDMI socket – manufacturers claim this gives standard-definition discs a pseudo high-definition effect known as upscaling. This gives the option to watch different types of video signal: either 576p or 1080i/1080p.

Our experts preferred the 576p option every time. Using this setting means the TV, instead of the DVD player, carries out the digital processing. Because our Best Buy TV has great software, this makes for the best picture. If your TV isn't as good, experiment to see which picture you prefer.

Higher calling

For high-definition players, we watch both high-definition and normal DVD discs.

GET MORE

Go online at www.which.co.uk/dvdplayers for details of models previously tested. This information is regularly updated with new models, availability and prices. See www.which.co.uk/loginhelp if you would like help logging in.

What you should look for

DIVX PLAYBACK

DivX is a format commonly used when copying footage from a computer on to a disc. All of the standard players on test, apart from the Philips (6), Wharfedale (12) and Technika (13), support it. None of the high-definition players does



SCART AND HDMI CABLES

Only the Panasonic (7) is supplied with a Scart lead – a decent Scart costs about £10 and is essential for a good picture. All the high-definition players come with HDMI cables, bar the Sony (16). A new HDMI 1080p cable typically costs £20 to £40

SURROUND SOUND

There are two types of digital surround-sound connection – coaxial (below left) or optical (below right). If you have a surround-sound system, buy a player with the same connections



BLACK-LEVEL CONTROL

This feature can improve the picture quality of particularly dark sequences in a film, otherwise you could miss detail hidden in the shadows, particularly on LCD screens

RESUME

Provided you leave the player in standby with the disc still in, resume lets you start the disc where you stopped it, instead of returning to the beginning each time. Models with multi-disc resume remember where to start playing several discs, even after you've removed them



1 STANDARD DEFINITION

78% Samsung DVD-HD870 £70

This Samsung shows good, detailed images with a nice depth to the picture. Like the other Samsung (3), we had to turn up the TV's colour, but many TVs can save two lots of picture settings – which means you can switch between one set for watching DVDs and another for viewing TV broadcasts. Motion problems and grainy backgrounds mean it's not worth the effort to connect via HDMI. It's cheapest at Comet.

WHICH? BEST BUY

WORTH KNOWING When playing back an old box-like (4:3) broadcast, the Samsung stretches the image to fill the screen, rather than automatically placing black bands on either side of the picture. You have to use your TV remote control to adjust it.

Available Comet Resume Yes (1) Black-level control Yes
Digital audio output Coaxial and optical HDMI output Yes
Best setting for upscaling to HD 576p



2 STANDARD DEFINITION

77% Philips DVP5980/05 £70

Our expert viewing panel really rated the picture on this Philips Best Buy. Despite some slightly soft images, it was ranked on a par with our reference Sony DVD player (see 'How we test', opposite). The high-definition upscaling was pretty good, too. This model also has plenty of useful extras, such as five-disc resume (see 'What you should look for', opposite) and a digital audio output for connecting to a surround-sound system. However, the disc drawer is maddeningly slow to open. It's cheapest at Comet.

WHICH? BEST BUY

WORTH KNOWING The advanced child-lock system can prevent prying eyes from viewing up to 20 barred discs at a time.

Available Comet Resume Yes (5) Black-level control No
Digital audio output Coaxial HDMI output Yes Best setting for upscaling to HD 576p



3 STANDARD DEFINITION

77% Samsung DVD-1080P7 £76

Nice levels of detail and good motion make the picture on this Samsung stand out from the crowd. Connecting via HDMI revealed even more picture detail, but at the expense of motion judder and clearly noticeable digital processing. Despite some wobbly buttons, like the other Samsung (1) this model's remote control has an instant replay and a ten-second skip button – allowing you to rewatch or skip scenes with ease.

WHICH? BEST BUY

WE LIKE The black-level control on this and the other Best Buy Samsung (1) works especially well, so films with lots of dark shots still look crisp and well defined.

Available Online Resume Yes (1) Black-level control Yes
Digital audio output Coaxial and optical HDMI output Yes Best setting for upscaling to HD 576p

Console conundrum

A games console can do the same job as a high-definition DVD player, and for much less money

As well as allowing you to play games, the Microsoft Xbox 360 plays HD-DVD discs – provided that you've plugged in an £115 add-on – and the Sony PS3 can play Blu-ray DVDs. Both consoles are typically cheaper than current standalone high-definition players. The PS3 costs around £350, while the Xbox360 is approximately £365 in total (about £250 for the console and £115 for the HD-DVD add-on).

Both consoles initially failed to match the frame rate of high-definition discs, leading to jerky pictures. But the PS3 has since been updated by a software upgrade via the internet so, just like the high-definition

players in the table (p51), it produces smooth motion when used with a compatible high-definition TV.

The Xbox 360, however, still doesn't match the frame rate recorded on the discs and suffered from a noticeable juddering movement on every TV that we tested it with.

The £350 Sony PS3 can play Blu-ray discs in their full high-definition glory



14 HIGH DEFINITION

73% LG BH100 £829

If you're determined to go down the high-definition route, the LG BH100 is the machine to choose. This excellent player is the first on the market to play Blu-ray, HD-DVD and standard DVD discs. Fantastic depth, vibrant colours and sparkling detail all impressed our exacting viewing panel. It's cheapest at John Lewis.

WE LIKE It's the best high-definition player we've tested to date and our lab experts will be using it as their reference model from now on.

WHICH? BEST BUY

Available John Lewis Resume No Black-level control No
Digital audio output Coaxial and optical HDMI output Yes Best setting 1080p/24 for 24fps compatible TVs; 1080i for standard HD-ready sets; 576p for standard DVD playback

Insider information

What you need to know about watching overseas DVDs



This map shows standard-definition DVD region coding

To tackle DVD piracy, film companies prevent discs released in one part of the world from working with players sold in another. To do this, discs are coded according to the region they're released in. Europe is region two – see the map above for more about other regions.

Breaking region coding

If you're keen on, say, Asian cinema or want to buy cheap US DVDs, there are things you can do to play discs from other regions. Many players are sold as modified or 'chipped' multi-region models. They can be found online for around the same price as region two players. However, the internal modification

may invalidate the warranty.

Some players can be hacked by typing in a code using the remote control. You can find these codes online – use a search engine such as www.google.co.uk.

Blu-ray discs use a similar, but not identical, regional coding system. Region A covers the Americas and Southeast Asia; region B is Europe, Middle East, Africa and Australasia; and C relates to Central and South Asia and Russia.

HD-DVD discs don't have regional coding yet, but pressure from the movie industry may change this in the future. In the UK, high-definition players work with region two standard-definition DVDs.

OUR RESEARCH

When selecting DVD players to test we consult manufacturers, market intelligence reports and industry experts, then check availability on the high street and online. Tested models include top-sellers from the most popular brands, products with innovative features, models from some lesser-known brands and widely available Best Buys from previous tests.

High definition costs

High-definition DVD looks fantastic on screen but the costs can soon mount up

Thinking of upgrading to high-definition DVD? Once you've bought a new player and, more than likely, a new TV, you probably won't have much change left from £2,000. And then there are the new discs to consider. High-definition players can play back standard discs but to get the best out of the new technology, a whole new movie collection is required. Replacing a typical collection of 30 DVDs with high-definition equivalents will set you back around £540.



**30 high-definition
DVDs = £540**

Which should you choose?



Best on a budget

PHILIPS DVP3120/05 £30 This standard-definition player (6) doesn't boast Best Buy picture quality, but for £30 it's difficult to quibble. It's also the greenest model on test, using less than 1 watt in standby and 6.4 watts when playing a disc. The high-definition players on test typically consume four times the energy of a standard player when in use.



Best for upscaling

PIONEER DV-400V-S £100 The standard-definition Pioneer (9) may not have impressed our expert viewing panellists when they watched standard-definition discs via a Scart connection, but it's excellent if you watch the same discs when plugged into an HD-ready TV via the high-definition HDMI socket. Pictures are sharp, clear and boast good colours.

Contacts

Daewoo 0870 100 2525
www.daewooelectronics.co.uk
LG 0870 873 5454
www.lge.co.uk
Panasonic 0870 535 7357
www.panasonic.co.uk
Philips 0870 900 9070
www.philips.co.uk
Pioneer 0870 600 1539
www.pioneer.co.uk

Samsung 0870 242 0303
www.samsung.com/uk
Sony 0870 511 1999
www.sony.co.uk
Technika 0845 722 5533
www.tesco.com
Toshiba 0870 442 4424
www.toshiba.co.uk
Wharfedale 0870 600 3030
www.wharfedale.co.uk/argos-support.html

MODEL	SPECIFICATION						WHICH? TEST PERFORMANCE						SCORE %
	PRICE (£)	SIZE (cm) (h x w x d)	RESUME	BLACK-LEVEL CONTROL	DIGITAL AUDIO OUT	HDMI OUTPUT	PICTURE	UPSCALING PICTURE	SOUND	EASE OF USE	FEATURES	POWER USE	
STANDARD DEFINITION													
1 SAMSUNG DVD-HD870	70	5x43x22	1	✓	C,0	✓	★★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	78
2 PHILIPS DVP5980/05	70	4x44x24	5		C	✓	★★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	77
3 SAMSUNG DVD-1080P7	76	5x43x23	1	✓	C,0 ^a	✓	★★★★★	★★★	★★★★	★★★★	★★★★	★★★★	77
4 PANASONIC DVD-S53	100	4x43x28	1		C	✓	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★★	69
5 PANASONIC DVD-S33	55	4x43x26	1		C		★★★★	n/a	★★★★	★★★★	★★★★	★★★★★	68
6 PHILIPS DVP3120/05	30	4x36x25			C		★★★★	n/a	★★★★	★★★★	★★★★	★★★★★	67
7 PANASONIC DVD-S511	79	4x43x29	1		C	✓	★★★	★★★	★★★★	★★★★	★★★★	★★★★★	60
8 TOSHIBA SD-270EKB	35	4x43x30			C		★★★★	n/a	★★★★	★★	★★★★	★★★★	58
9 PIONEER DV-400V-S	100	5x42x27	5		C	✓	★★	★★★★★	★★★★	★★★★	★★★★	★★★★★	51
10 DAEWOO DV-2500H	48	5x43x28			C,0	✓	★★★	★★	★★★★	★★	★★★★	★★	50
11 TOSHIBA SD-370EKB	60	4x43x24			C	✓	★★	★★★	★★★★	★★★★	★★★★	★★★★	50
12 WHARFEDALE DVD3210HDMI	35	5x42x27			C	✓	★★	★★★	★★★★	★★★★	★★★★	★★	50
13 TECHNIKA DVD1031	23	5x26x30			C		★★★	n/a	★★★★	★★	★★★★	★★★	49

^a Optical output didn't work on the model we tested

MODEL	SPECIFICATION					WHICH? TEST PERFORMANCE						SCORE %
	PRICE (£)	SIZE (cm) (hwxwd)	TYPE	BLACK-LEVEL CONTROL	DIGITAL AUDIO OUT	HD PICTURE	SD PICTURE	SOUND	EASE OF USE	FEATURES	POWER USE	
HIGH DEFINITION												
14 LG BH100	829	8x43x26	HD-DVD/Blu-ray		C,0	★★★★★	★★★	★★★★	★★★★	★★★★	★★★★	73
15 TOSHIBA HD-XE1 KE	433	8x44x39	HD-DVD		C,0	★★★★	★★★	★★★★	★★★★	★★★★	★★★★	64
16 SONY BDP-S1E	700	11x43x42	Blu-ray	✓	C,0	★★★★	★★★★★	★★★★	★★	★★★★	★★★★	58
17 PIONEER BDP-LX70	1,000	10x42x42	Blu-ray	✓	C,0	★★★	★★★★★	★★★★	★★	★★★★	★★★★	50

Facts & scores

Hot news uncovered by our tests

Thanks for the memory

The **Philips Best Buy (2)**, **Pioneer (9)** and **Daewoo (10)** all feature a USB slot that lets you connect a USB Flash drive and view photos or listen to audio tracks.

Below par

We bought two samples of the **Pioneer (9)** but both had picture problems when viewed via the Scart socket. We also found the **Toshiba (11)** makes a lot of mechanical noise.

USING THE TABLE

The more stars the better.

Specification

Price For Best Buys we give the cheapest widely available high-street price as we went to press. Prices for other models are a guide. Where models are available only online, the prices are in *italics*. **Resume** Remembers where you stopped watching a DVD, even if the machine is left in standby. The number in the table indicates how many individual discs each

machine can hold data on.

Digital audio out Links to equipment such as a surround-sound system. C = coaxial; O = optical.

Test performance

Picture Applicable to standard players and based on viewing via Scart input. **Upscaling picture** Applies to standard players and based on viewing the same material via HDMI input. **HD picture** Applicable to high-definition players and based on viewing high-definition discs.

SD picture Applicable to high-definition players and based on viewing normal discs.

Sound/Ease of use Based on assessments by our expert panel. **Power use** Measured in standby, when switched on, and when playing a disc.

Score

This ignores price and is based on:

Picture quality	35%
Sound quality	30%
Ease of use	20%
Features	15%