



Flat panel fantastic

The quality of flat-panel TVs is rising – and free HD broadcast channels could soon be here

For many of us, owning an HD-ready TV hasn't meant watching programmes in stunning high-definition. HD-ready means the TV is just that – ready to display high-definition broadcasts. But you must also have an HD signal to get HD programmes on your set.

Up to now, that's largely been the preserve of those willing to pay monthly subscriptions for Sky or Virgin HD services. But all that is about to change with the imminent launch of Freesat from the BBC and ITV.

HDTV for free

Freesat (not to be confused with the Sky service of the same name) is a new digital satellite service that should be available to 98 per cent

of the UK population, compared with the current 75 per cent for Freeview. There'll be around 80 digital TV channels available, plus the bonus of a couple of HD channels.

To watch these new channels, you'll need an HD-ready TV, receiver and a satellite dish. But the new service does promise no monthly ongoing costs, and the added bonus of high-definition content from the BBC and Channel 4 – something you can't get on Sky's Freesat service. Check out www.freesat.co.uk for more information.

Freeview goes HD

As with buses, you wait for ages for one free HD source to arrive, and then two come along at once. Plans are afoot to launch

HDTV channels on terrestrial Freeview – many technical issues have been resolved and there's even a chance we could see it happen over the next couple of years. Details are sketchy, but you will need an HD-ready TV plus a special digital box to receive the HD content. Without this box, no IDTVs (see 'Jargon buster', right), PVRs or set-top boxes will be able to receive the new channels.

Standards rising

If you're not interested in HDTV, the news is still good. Standard-definition picture quality has improved on the sets we've tested over the years, and the mix of brands in our latest batch of Best Buys is testament to that.

How we test

Nobody goes to such extraordinary lengths to sort the marvellous from the mediocre

We test TVs almost every month, reviewing 120 sets each year and covering nearly all the best-selling models. Each set is put through an extraordinary six-week test – a mixture of technical laboratory testing and expert panel assessments – checking everything from picture and sound quality to energy efficiency and ease of use.

We go beyond just ticking off every socket we find. Our tests can reveal nasty surprises, as well as hidden functionality.

For instance, many TVs have a digital audio out socket for linking to a separate hi-fi or audio system. However, digital surround sound on Freeview is virtually non-existent, so to make use of the socket, surround-sound signals from other devices (such as DVD players) need to be channelled through the TV via the HDMI input



socket. But this trick only works on a few TVs (see table footnote on p61).

Widescreen switching

Scart sockets on widescreen TVs usually support auto-format switching – showing standard (4:3) broadcasts with black bands on either side, for example, so the images aren't stretched out of proportion.

We check for this and found some models don't automatically switch correctly – for instance, the Philips 32PFL9632D/10 (2) and one Hitachi set (20) display a 4:3 image as full screen, and have to be adjusted manually.

Jargon buster

We help you sort your Scart from your EPG

■ **IDTV** Integrated digital TVs have Freeview tuners built in, so you can receive digital TV and radio channels free. Most, but not all, of the TVs in this report are IDTVs.

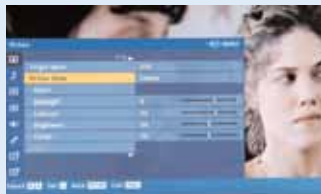
■ **EPG** An electronic programming guide showing programmes for the week ahead – a bit

like having an electronic TV guide at the touch of a button. Most EPGs show programmes at least seven days ahead.

■ **SCART LINK** Lets you trigger or program a compatible recorder via your TV's EPG. The TV usually has to be left in standby mode.

Choose the right setting

Digital TVs offer a bewildering number of picture settings. But are they really worth the bother?



To help you get the best picture out of your new TV, we list our ideal picture settings beneath each Best Buy summary and online at www.which.co.uk/tvs.

Yet it's not unusual to be puzzled by the bewildering array of options a modern TV menu can conjure up – even our lab experts were left scratching their heads when faced with Sony's 'reality' setting.

Our guide to picture enhancement settings will help sort the useful from the useless.

■ MOVIE/CINEMA MODE

A setting for watching movies – it's intended to smooth out juddering motion and/or match colours more closely to the original film.

We found it difficult to spot any effect on Sharp, LG, Sony and JVC models. On Philips and Samsung sets it can make panning shots smoother – but looks rather artificial.

VERDICT Best switched off. It solves minor problems, but the side effects can be worse.



■ COLOUR TEMPERATURE

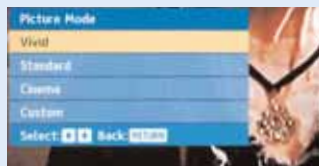
Lets you adjust the white balance of a picture. Most TVs offer a range of colour temperature settings like 'warm', 'normal' and 'cool'. It will depend on personal preference and

ambient lighting, but our viewing panel favours the 'cool' blue/white hue.

VERDICT Useful to have. Our panel tends to find 'cool' more impressive, but some may feel it's unnatural.

■ **SHARPNESS** Simply makes the picture sharper, but usually leads to unwanted side effects, such as more picture noise – grainy or distorted images. If you're watching a fuzzy old video tape it can be useful.

VERDICT Use it sparingly.



■ **PRESET PICTURES** Basic picture presets that adjust colour, brightness and contrast.

With names such as 'natural', 'vivid' and 'dynamic', picture presets certainly sound impressive. They allow a whole range of settings to be changed without fiddling with them individually. The disadvantage is that the changes can be too coarse.

VERDICT Presets are often quite stark. 'Natural' is usually the best option.

■ NOISE REDUCTION

Meant to reduce blocky and grainy pictures caused by weak reception, rather than noise in the audio sense.

Designed to tackle analogue or digital broadcasts, but often it's not always clear which. For example, 'digital noise reduction' often refers to the digital methods used to correct grainy pictures, rather than the signal type it is targeting.

VERDICT It can have a beneficial effect on weak analogue signals.



71% Panasonic Viera TX-37LZD70 £1,000



Panasonic's first foray into the larger-screened LCD sets is a triumph. This 37-inch 'HD-ready 1080p' (see p60) set is an outstanding choice for would-be telly addicts. Standard-definition pictures look natural and well defined, while the vibrant high-definition images are excellent. However, the dynamic bass is somewhat let down by some gritty higher frequencies. The TX-37LZD70 is available from Comet, Currys and John Lewis.

WORTH KNOWING

The Panasonic Viera TX-37LZD70 just misses out on a higher rating for standard definition pictures.

Screen resolution 1,920 x 1,080 Primary sockets Scart x 2 (both RGB), HDMI x 2, audio out, headphones, VGA, component, SD card slot Recording link Yes Weight 26.7kg Power (On/Standby) 130/0.44 watts

IDEAL SETTINGS FOR EVENING VIEWING
Brightness 34/63 Contrast 35/63 Colour 31/63
Picture profile Normal Sharpness 3/6 Colour balance Cool Colour management On
P-NR Off
Power saving over factory defaults as a result of using the above settings 24 per cent



63% LG 32LB75-ZB £600



LG breaks into the Best Buy TV league with this decent 32-inch LCD TV. Its picture quality is respectable, although standard-definition images are slightly soft. High-definition pictures boast good resolution. The sound is a little restricted and missing some sparkle, but still above average. The LG is available from Comet. **WORTH KNOWING** Screen resolution is too low to qualify

for the 'HD-ready 1080p' label – but the LG works fine with high-definition DVD players.

Screen resolution 1,366 x 768 Primary sockets Scart x 2 (1 x RGB), HDMI x 3, digital optical audio out, VGA, component Recording link Yes Weight 14.6kg Power (On/Standby) 101/0.87 watts

IDEAL SETTINGS FOR EVENING VIEWING
Brightness 48/100 Contrast 73/100 Colour 39/100 Picture profile User1 Sharpness 50/100 Colour temperature Cool XD Auto
Power saving over factory defaults as a result of using the above settings 24 per cent



66% Philips 32PFL9632D/10 £1,000

WHICH?
BEST
BUY

This 32-inch LCD is a great choice for eco-friendly viewers. Depending on settings, it typically consumes just 77 watts when switched on – half the amount of many other 32-inch LCDs. And green credentials do not come at the expense of the picture. Super colour and depth are complemented by outstanding high-definition quality. It's available from Comet and John Lewis.

BEAR IN MIND Maddeningly complex menus and below-par

sound quality are the only flies in the ointment of an otherwise worthy Best Buy.

Screen resolution 1,366 x 768 Primary sockets Scart x 2 (both RGB), HDMI x 3, audio out, digital coaxial, headphones, VGA, component, SD card slot Recording link Yes Weight 20kg Power (On/Standby) 77/0.81 watts

IDEAL SETTINGS FOR EVENING VIEWING
Brightness 76/100 Contrast 79/100 Colour 56/100 Picture profile N/A Sharpness 5/10 Tint Normal Perfect pixel HD On Digital natural motion Off 100Hz clear LCD On Dynamic contrast Minimum Noise reduction Medium Mpeg artefact reduction On Colour enhancement Medium Active control On Light sensor Off Power saving over factory defaults as a result of using the above settings 32 per cent



63% Panasonic Viera TH-42PZ70BA £1,100

WHICH?
BEST
BUY

Not even our picture setting adjustments could cut the high power consumption of this high-resolution, 'HD-ready 1080p', 42-inch plasma, but the light sensor can shave off almost 100 watts in a darkened room. The picture is a bit soft, but it's above average and looks great with high-definition DVD players. It's available from Currys and John Lewis.

WE LIKED As with all Panasonic models, the EPG and versatile screen menus are a cinch to use.

Screen resolution 1,920 x 1,080 Primary sockets Scart x 2 (both RGB), HDMI x 2, audio out, headphones, VGA, component, SD card slot Recording link Yes Weight 42.1kg Power (On/Standby) 434/0.36 watts

IDEAL SETTINGS FOR EVENING VIEWING
Brightness 28/63 Contrast 54/63 Colour 26/63 Picture profile Normal Sharpness 3/6 Colour balance Cool Colour management On P-NR Off Power saving over factory defaults as a result of using the above settings None



65% Panasonic Viera TH-50PX7B £1,300

WHICH?
BEST
BUY

This mammoth 50-inch Panasonic Best Buy is the best big-screen plasma we've tested in the past year. Our expert panel was impressed by the viewing angles and detailed picture, despite some occasional bleaching of bold colours. Dark, high-definition images are clear and depth is good, but there is slight panning judder on high-definition DVD. Sound is relatively clear and energetic. You can pick it up at Argos.

BE WARNED If you have any concerns about the planet heating up, we wouldn't recommend this TV. It uses more than four times the energy of the Philips.

Screen resolution 1,366 x 768 Primary sockets Scart x 2 (both RGB), HDMI x 1, audio out, component Recording link Yes Weight 38.8kg Power (On/Standby) 338/0.34 watts

IDEAL SETTINGS FOR EVENING VIEWING
Brightness 26/63 Contrast 55/63 Colour 30/63 Picture profile Normal Sharpness 3/6 Colour balance Cool Colour management On P-NR Off Power saving over factory defaults as a result of using the above settings 29 per cent



63% Sony Bravia KDL-40S3000 £800

WHICH?
BEST
BUY

The other Sony 40-inch LCDs we tested have the edge for picture quality, but as an overall package this relatively cheap set holds its own. It's a little more user-friendly than other Sony models, and it's energy efficient, too. However, it's not ideal for use with high-definition DVD as it doesn't process a 1080p signal. It is available at Currys.

WORTH KNOWING If you have a

keen sense of hearing you may be irritated by a background buzz.

Screen resolution 1,366 x 768 Primary sockets Scart x 2 (both RGB), HDMI x 3, audio out, headphones, VGA Recording link Yes Weight 23.1kg Power (On/Standby) 137/17.6 watts (reverted to 0.53 watts after 18 minutes)

IDEAL SETTINGS FOR EVENING VIEWING
Brightness 50/100 Contrast 69/100 Colour 54/100 Picture profile Standard Sharpness 15/30 Backlight 7/10 Colour tone Cool NR Off Power saving over factory defaults as a result of using the above settings 16 per cent

Making sense of HD

Why all the fuss about high definition? We reveal what it offers over standard-definition broadcast

Most of us watch standard-definition TV images. These are made up of 576 horizontal lines stacked up to form a picture. HD images can contain almost double that number. More lines mean more detail and more realistic images. The difference between standard and high definition boils down to the number of lines that make up a picture.

HDTV types

HDTV pictures come in two main formats – 1080i and 1080p. The four-digit number tells you how many horizontal lines make up the picture, and the letter shows how it is broadcast. All the TVs in the table are HD ready and can display

the 1080i signal. The 'i' means that the picture is sent to the screen in two parts, and the TV splices them together.

1080i versus 1080p

Most high-definition DVD players use the 1080p format. A 1080p picture is sent in a single sequence making the picture on

screen more detailed – but the difference is very subtle.

Many HD-ready TVs cannot process a 1080p signal, so will switch to a 1080i

picture when used with high-definition DVD. The new official 'HD-ready 1080p' logo increases your chances of getting the best possible high-definition DVD picture but is not an absolute guarantee.



GREAT SAVINGS WITH HUGHES DIRECT

Exclusive member discounts

This April, Hughes Direct is offering exclusive discounts for Which? members on the Best Buy Panasonic TX-37LZD70 and LG 32LB75-ZB from this month's report. There are savings of up to 33 per cent off these models – all special-offer prices include delivery.

To find out more details about this offer and other member-only discounts from Hughes Direct, log on to www.hughesdirect.co.uk/which or call 01473 321883. Offer valid until 31 May 2008 and is subject to availability.

Each month thousands of Which? members take advantage of the great

deals offered by Hughes Direct. All goods are guaranteed to be a minimum of ten per cent below high-street prices published in Which? product reports (even when delivery charges are taken into account).

In the unlikely event that you find the same product cheaper elsewhere (including delivery) within seven days of purchase, Hughes Direct promises to refund 110 per cent of the difference.



Don't Buy

Don't bother tuning in...

Acoustic Solutions and Wharfedale usually aren't the first names that spring to mind when LCD excellence is mentioned. And our tests show that these 32-inch TVs leave a lot to be desired. Jerky motion, graininess and poor detail bedevil standard-definition images on the Acoustic Solutions (30), and its high-definition images were poor. The Wharfedale (29) had 'just about everything wrong with it' for standard definition, while high-definition images weren't especially great, according to our viewing panel.

Toshiba has had a few Best Buys recently, but the standard-definition picture on the Toshiba Regza 40XF355D (28) got the thumbs down from our exacting panel.



Contacts

Acoustic Solutions 0870 600 8784
www.argos.co.uk

Beko 0845 600 4911; www.beko.co.uk

Freesat www.freesat.co.uk

Freeview 0870 111 1270
www.freeview.co.uk

Hitachi 01628 643000
www.hitachi.co.uk

JVC 0870 330 5000; www.jvc.co.uk

LG 0870 873545; www.lge.co.uk

Loewe 01294 315000; www.loewe.com

Logik 0844 5616263; www.currys.co.uk

Matsui 0844 5616263
www.currys.co.uk

Panasonic 0870 535 7357
www.panasonic.co.uk

Philips 0870 900 9070
www.philips.co.uk

Samsung 0870 726 7864
www.samsung.com/uk

Sharp 0800 262958; www.sharp.co.uk

Sky 0870 240 4040; www.sky.com

Sony 0870 511 1999; www.sony.co.uk

Technika 0845 456 6767
www.tesco.co.uk

Toshiba 0870 442 4424
www.toshiba.co.uk

Virgin Media 0845 840 7777
www.virginmedia.com

Wharfedale 0870 600 3030
www.wharfedale.co.uk

MODEL		PRICE (£)
1	PANASONIC Viera TX-37LZD70	1,000
2	PHILIPS 32PFL9632D/10	1,000
3	PANASONIC Viera TH-50PX7B	1,300
4	LG 32LB75-ZB	600
5	PANASONIC Viera TH-42PZ70BA	1,100
6	SONY Bravia KDL-40S3000	800
7	SONY Bravia KDL-40X3500	2,200
8	LOEWE Xelos A 32 HD+ 100	1,500
9	SAMSUNG LE32M87BDX/XEU	650
10	SONY Bravia KDL-40W3000	1,100
11	SONY Bravia KDL-37P3020	750
12	LG 32LT75 ^a	700
13	SAMSUNG PS50P96FDX/XEU	1,800
14	TECHNIKA LCD32-207	400
15	SHARP Aquos LC32X20E	900
16	JVC Dynapix LT-42DV8BJ	600
17	PHILIPS 42PFL9632D/10	1,500
18	SHARP LC-37AD5E-BK	650
19	TOSHIBA Regza 42Z3030D	1,600
20	HITACHI P42H01U	700
21	LG 42PT85 ^a	900
22	PHILIPS 37PFL9732D/10	1,600
23	LOGIK LOG32LW782	430
24	HITACHI P50XR01 ^a	1,500
25	JVC Dynapix LT-32DP8BJ	950
26	BEKO 32WLA530HID	380
27	MATSUI MAT42LW507	550
28	TOSHIBA Regza 40XF355D	1,150
29	WHARFEDALE L32TA6A	450
30	ACOUSTIC SOLUTIONS LCD32805HD	350

^a Features an integrated twin-tuner PVR – record one channel

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. If we couldn't find them at major high-street retailers, we give the most common online price. Prices for other models

SPECIFICATION					FEATURES						WHICH? TEST PERFORMANCE						SCORE %
TYPE	SCREEN (in)	SIZE (cm) (hxxxd)	HD-READY 1080p	IDTV	SCARTS (RGB)	HDMI	AUDIO OUT	DIGITAL AUDIO OUT	VGA	LIGHT SENSOR	SD PICTURE	HD PICTURE	SOUND	EASE OF USE	FEATURES	POWER USE	
LCD	37	63x104x30	✓	✓	2 (2)	2	✓		✓	✓	★★★★	★★★★★	★★★★	★★★★	★★★★★	★★★★	71
LCD	32	61x83x22		✓	2 (2)	3	✓	C		✓	★★★★★	★★★★★	★★	★★★★	★★★★★	★★★★★	66
Plasma	50	83x121x37		✓	2 (2)	1	✓				★★★★	★★★★★	★★★★	★★★★★	★★★★	★	65
LCD	32	62x81x28		✓	2 (1)	3		O	✓		★★★★	★★★★★	★★★★	★★★★	★★	★★★★	63
Plasma	42	69x114x33	✓	✓	2 (2)	2	✓		✓	✓	★★★★	★★★★★	★★	★★★★★	★★★★★	★	63
LCD	40	69x98x27		✓	2 (2)	3	✓		✓		★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	63
LCD	40	72x111x32	✓	✓	2 (2)	3	✓	O	✓	✓	★★★★	★★★★★	★★★★	★★	★★★★★	★★	61
LCD	32	62x85x26		✓	2 (1)	2	✓	C	✓	✓	★★★★	★★★★★	★★★★	★★	★★★★	★★★★	58
LCD	32	59x80x25		✓	2 (1)	3	✓	O	✓		★★★★	★★★★★	★★	★★★★	★★★★	★★★★	57
LCD	40	69x100x27	✓	✓	2 (2)	3	✓	O	✓	✓	★★★★	★★★★★	★★	★★	★★★★★	★★	57
LCD	37	66x91x27		✓	2 (2)	2	✓		✓		★★	★★★★★	★★★★	★★★★	★★★★	★★★★	56
LCD	32	60x82x28		✓	2 (1)	2		O	✓		★★★★	★★★★★	★★	★★	★★★★	★★★★	55
Plasma	50	81x129x32	✓	✓	2 (1)	3	✓	O	✓		★★★★	★★★★★	★★	★★★★	★★★★	★	55
LCD	32	60x81x20		✓	2 (2)	2	✓				★★★★	★★★★	★★★★	★★	★★	★★★★	55
LCD	32	57x78x27	✓	✓	2 (2)	3	✓	O	✓	✓	★★★★	★★★★★	★★	★★	★★★★	★★★★	54
LCD	42	71x101x30		✓	2 (2)	3	✓	O ^b	✓	✓	★★★★	★★★★	★★	★★	★★★★★	★★	53
LCD	42	74x106x26	✓	✓	2 (2)	3	✓	C		✓	★★★★	★★★★★	★	★★★★	★★★★	★★	52
LCD	37	65x92x29		✓	2 (2)	2	✓		✓		★★★★	★★★★★	★★	★★	★★	★★★★	52
LCD	42	70x103x35	✓	✓	2 (2)	3	✓	O ^b	✓		★★	★★★★	★★	★★★★	★★★★	★★	51
Plasma	42	77x107x31		✓	2 (1)	2	✓	C ^b	✓		★★	★★	★★★★	★★★★	★★	★★	49
Plasma	42	76x113x33		✓	2 (1)	2		O	✓		★★	★★★★★	★★★★	★★	★★★★	★	49
LCD	37	68x95x24	✓	✓	2 (2)	3	✓	C		✓	★★	★★★★★	★★	★★★★	★★★★★	★★★★	49
LCD	32	60x80x20		✓	2 (2)	2	✓				★★	★★★★	★★★★	★★	★★	★★★★	48
Plasma	50	89x125x43	✓	✓	3 (2)	3	✓	O	✓		★★	★★★★★	★★	★★	★★★★★	★	47
LCD	32	60x80x23		✓	2 (2)	2	✓	O ^b	✓	✓	★★	★★★★★	★★	★★	★★★★★	★★	46
LCD	32	57x92x26		✓	2 (1)	1	✓	C	✓		★★	★★★★	★★	★★	★★★★	★★	45
LCD	42	74x119x29			2 (2)	1	✓				★★	★★★★	★★	★★	★★	★★	40
LCD	40	63x94x30	✓	✓	2 (2)	3	✓	O ^b	✓		★	★★★★	★★	★★★★	★★★★	★★	37
LCD	32	62x82x25		✓	2 (1)	1			✓		★	★★★★	★	★★★★	★★	★★★★	33
LCD	32	62x82x18			2 (1)	1	✓				★	★★	★	★★	★★	★★★★	26

while watching another ^b Routes digital audio only from the Freeview tuner

are a guide. Go to www.which.co.uk/shopping for the latest prices. **Screen** Diagonal size in inches. **Size** Dimensions with stand. **HD-ready 1080p** Has a 1,080 line resolution, and can process the 1080p/24 HD signal used in high-definition DVD movies. **IDTV** Features a built-in Freeview tuner.

Features

Scarts Number of sockets (number with high-quality RGB signal in brackets). **HDMI** Number of HD media inputs. **Digital audio out** Coaxial (C) or optical (O) linking to audio equipment. **VGA** PC connection support. **Light sensor** Adjusts brightness according to ambient light.

Test performance

SD picture Rating of standard-definition playback. **HD picture** Rating of high-definition playback. **Sound** Based on expert panel assessments and technical measurements. **Ease of use** Based on expert assessment. **Features** Based on the versatility of features such as sockets.

Power use Measured consumption.

Score

Ignores price and is based on:

Picture quality	40%
Ease of use	20%
Sound quality	20%
Features	10%
IDTV functions	5%
Power use	5%