



Cutting edge

Our testing cuts through the TV showroom jargon to ensure that you buy only the best

Walk into any TV showroom and it's impossible not to be impressed by the chic flat-panel sets on show. Fantastic high-definition broadcast pictures plus logos sporting claims of high resolutions, more colours and even better pictures are now the norm. However, we've found that some logos can be confusing and misleading (see 'Logos explained', p40).

But don't worry – you can rely on our unrivalled tests to cut through the surface gloss and reveal what really makes a top TV. To pass muster, a TV has to look good when showing both standard- and high-definition footage, have decent sound and be straightforward to use.

Our testing is so thorough that we can even tell you which settings you need to

You can rely on our unrivalled tests

use to get the best possible picture – see the Best Buy summaries, opposite and on p38, and www.which.co.uk/tvs. We also test just as rigorously in areas our rivals wouldn't even dream of covering in such depth, such as power consumption (see 'How we test', p43).

Panasonic leads the way

Because we test so many TVs, we can give you advice about the best brands – see p42. But in this test, Panasonic has come out on top. The Panasonic TX-32LXD700 (1 in our table) is our highest-ever-scoring full-sized flat-panel TV. It's a brilliant set, as are all the other models in the same range.

For instance, the £300 cheaper entry-level Panasonic TX-32LXD7 (2) is missing a few additional sockets and has less sophisticated digital-processing software, but the picture still looks fantastic. Similar savings can be made on Panasonic plasma and Toshiba Best Buys, without compromising too much on overall quality.

Even more test results

We haven't got space in this article to include every single TV we've tested, so check the Best Buy summaries for alternatives to our featured models or go to our website to see the latest reviews.

If you're considering upgrading your DVD collection, all of our Best Buys, except the Panasonic PX700 and PZ700, work properly with high-definition DVDs. See 'Insider information', p43, for more about high-definition compatibility.

PHOTOGRAPHY JOHN TRENNHOLM ALAMY

Fight the power

A blend of technology, common sense and our expert advice will help keep your electricity bills down and your carbon footprint in check

The less power a TV uses, the greener it is and the lower your energy bill. To reduce the energy used by your TV, try out our ideal picture settings (see the Best Buy summaries, opposite and p38, and www.which.co.uk/tvs).

Also, avoid using standby by always switching off your TV when it's not in use. TVs still use power in standby and it costs

UK households £76 million a year in wasted electricity. If you have an IDTV (see 'Jargon buster', opposite), still switch it off but avoid missing over-the-air software updates by checking www.dtg.org.uk/retailer for scheduled updates.

If you're in the market for a new model, any Sony or Panasonic LCD TV on test is a sensible

green choice, but the Philips 32PFL7562D (12) is the best. It uses the least power when switched on – just 81.3 watts – and less than one watt in standby. The picture isn't half bad, either.

The Philips is the cheapest model in the table (see p40) to run, at just £12 a year. Bigger 42-inch plasma TVs typically cost three times that much (see 'How we test', p43, for more) and the Panasonic TH-42PZ700 (6) will set you back a rather sizeable £63 a year.





78% Panasonic Viera TX-32LXD700

£900

For the best 32-inch LCD money can buy, look no further than the exceptional LXD700. The depth and clarity of pictures are truly stunning, the bass sound impressed our experts and it's absolutely bursting with features, such as a memory-card slot for viewing photos. It's cheapest at Comet.

WHICH?
BEST BUY

ALSO TESTED If you want a slightly cheaper model, look for the £850 32-inch Best Buy TX-32LXD70. It has comparable picture and sound quality and the same overall score, but lacks a surround-sound output and an extra high-definition socket.

Available Comet, Currys and John Lewis **Screen resolution** 1,366 x 768 **Primary sockets** Scart x 2, HDMI x 3, VGA, audio out, digital audio out **Scart link** Yes **Light sensor** Yes **Weight** 18.5kg **Alternative model** TX-32LXD70, 78%, £850 from Comet and Currys

IDEAL PICTURE SETTINGS FOR EVENING VIEWING Brightness 36/63 Contrast 38/63 Colour 28/63 Picture profile Normal Sharpness 3/6 Other settings Colour balance – Cool, Colour management – On, P-NR – Off



77% Panasonic Viera TX-32LXD7

£525

If you want to get close to the quality of the illustrious LXD700 (!) but don't have the budget, this 32-inch LCD TV is a superb compromise. This model has fewer high-definition sockets but, just like its upmarket cousin, boasts excellent standard- and high-definition pictures and pleasing, well-balanced sound. It's the cheapest 32-inch Panasonic LCD available, at just £525 online.

ALSO TESTED For another £100, the Best Buy TX-32LMD70 has an extra HDMI and PC input. Like the other Panasonics LCDs on test, it doesn't boast a 24fps logo but its superior digital-processing software means it avoids high-definition DVD judder.

Available Online **Screen resolution** 1,366 x 768 **Primary sockets** Scart x 2, HDMI x1, audio out **Scart link** Yes **Light sensor** Yes **Weight** 18.5kg **Alternative model** TX-32LMD70, 78%, £650 from Comet and Currys

IDEAL PICTURE SETTINGS FOR EVENING VIEWING Brightness 41/63 Contrast 52/63 Colour 32/63 Picture profile Normal Sharpness 3/6 Other settings Colour balance – Cool, Colour management – On, PNR – Off

WHICH?
BEST BUY

Jargon buster

We explain techie terminology in plain English

■ ANALOGUE TUNER

This picks up the old-style analogue TV signals for terrestrial channels. These signals will be switched off between now and 2012. See 'News from the TV front line', p29.

■ ASPECT RATIO

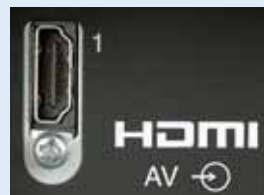
Shape of the screen (width:height). All the TVs in this report are widescreen (16:9).

■ ELECTRONIC PROGRAMME GUIDE (EPG)

An on-screen channel guide found on all IDTVs. See p39 for more information on EPGs.

■ FLAT-PANEL DISPLAY

A general term used for both LCD and plasma screens.



■ **HDMI** High-capacity audio and video socket for connecting high-definition equipment to your TV.

■ HIGH DEFINITION (HD)

The picture has roughly double the picture resolution of a normal standard-definition signal, making it sharper, more detailed and more realistic to the eye.

■ **IDTV** Integrated digital TVs have Freeview tuners built in, so you can receive dozens of digital TV and radio channels free.

All of the TVs included in this report are IDTVs.

■ **LCD TV** A type of flat panel where light shines through a screen of liquid crystal cells (see 'LCD TVs explained', p28).

■ **PLASMA TV** A type of flat panel where tiny gas cells emit ultraviolet light that strikes red, green and blue spots on the screen to make up a picture.

■ **STANDARD DEFINITION (SD)** Pictures from regular digital and analogue broadcasts and from DVDs.

■ **RGB** A high-standard analogue video signal that splits the red, green and blue components to give the best picture. The best Scart sockets carry an RGB signal.

■ **SCART** All-purpose socket to connect equipment – such as DVD players, VCRs and set-top boxes – to your TV.

■ **SCART LINK** This lets you trigger or program a compatible recorder via your TV's EPG (electronic programme guide).

■ **VGA** Analogue socket that connects to your

computer, turning your TV into a PC monitor. Some TVs have digital HDMI sockets that support PC screen resolutions (the PC needs a DVI output).

■ 1080i AND 1080p

The two main types of high-definition pictures. Most HDTV broadcasts are transmitted in 1080i but high-definition DVDs are recorded in 1080p. A 1080p image is sharper and more detailed, but this improvement is actually quite subtle.



The Philips (12) and all of the Sonys on test come with a light sensor. This dims the TV's backlight according to the ambient light of the room, and can reduce its energy use. In a dimly-lit room, light sensors on the super-efficient Sony models on test can more than halve power consumption.

If you like listening to digital radio via your TV, consider the Best Buy Sony Bravia KDL-32D3000 (3). It blanks the screen if you tune into a digital radio channel, cutting power consumption from 155 watts to 33 watts. But this is still four times as much as a typical tabletop digital radio (for our latest digital radio test results, turn to p54).

Sony Bravia KDL-32D3000 power use

SPECIFICATION	
TV SETTINGS	POWER USE (watts)
As delivered	136.1
Ideal picture settings	121.5
Light sensor in dim room	64.2
Screen blanking (radio)	33.1
Standby	0.24



69% Sony Bravia KDL- 32D3000 £1,000

This excellent 32-inch LCD Best Buy goes one better than HD-ready and sports the 24fps logo (see 'Logos explained', p40) and is suitable for both HD broadcasts and high-definition DVDs. But whether you watch standard- or high-definition TV, the vibrant picture is awash with colour and good detail. The sound lacks some punch but clarity is OK. Cheapest at Argos, Comet, Currys and John Lewis.

**WHICH?
BEST
BUY**

ALSO TESTED The Best Buy 40-inch version also impressed our experts. The cheaper 32S3000, £750, is pretty good, too, but doesn't work properly with high-definition DVD.

Available Widely available **Screen resolution** 1,366 x 768 **Primary sockets** Scart x 2, HDMI x 3, VGA, audio out, digital audio out **Scart link** Yes **Light sensor** Yes **Weight** 16.5kg **Alternative models** KDL-32S3000, 60%, £750; KDL-40D3000, 65%, £1,200. Both widely available

IDEAL PICTURE SETTINGS FOR EVENING VIEWING
Brightness 59/100 **Contrast** 65/100 **Colour** 52/100
Picture profile Standard **Sharpness** 15/30 **Other settings**
Backlight – 10/10, Noise reduction – Medium, Mpeg noise reduction – Low, Colour temp – Neutral, Light sensor – Off, Power saving – Off



67% Toshiba Regza 37X3030D £1,000

This 37-inch high-resolution LCD from Toshiba works properly with high-definition DVD players, although it's not as good as the other compatible Best Buys. Freeview pictures look OK and HD boasts great depth and detail. Its sound quality lacks some clarity but still sounds pretty good when listening to jazz music – probably our most telling audio test. However, it has a cluttered and unresponsive EPG. It's cheapest at Argos, Comet, Currys and John Lewis.

**WHICH?
BEST
BUY**

WORTH KNOWING Check out www.which.co.uk/tvs for full results of the Best Buy 42-inch version.

Available Widely available **Screen resolution** 1,920 x 1,080 **Primary sockets** Scart x 2, HDMI x 2, VGA, audio output, digital audio output **Scart link** Yes **Light sensor** No **Weight** 22.5kg **Alternative model** 42X3030D, 66%, £1,200 from Comet and Currys

IDEAL PICTURE SETTINGS FOR EVENING VIEWING
Brightness 65/100 **Contrast** 98/100 **Colour** 40/100
Picture profile N/A **Sharpness** 0/±50 **Other settings**
Backlight – 75/100, Tint – 0/±50, Black stretch – Off, Mpeg noise reduction – Low, Cinema mode – On, DNR – Auto, colour temp – Mid high, 3D Colour management – Off, Active backlight Control – On



67% Toshiba Regza 37C3030D £700

This cheaper 37-inch C series LCD TV is virtually the same as the other Toshiba Best Buy, although the screen resolution is lower and HD picture marginally inferior. Like the other Toshiba (4), the slightly soft standard picture isn't on a par with that of Panasonic LCDs, but the sound quality impressed our panel. It's cheapest at Comet, Currys and John Lewis.

**WHICH?
BEST
BUY**

ALSO TESTED The smaller 32-inch 32C3030 just missed out on Best Buy status due to slightly inferior sound quality. The C series is compatible with high-definition DVD.

Available Widely available **Screen resolution** 1,366 x 768 **Primary sockets** Scart x 2, HDMI x 2, VGA, audio output, digital audio output **Scart link** Yes **Light sensor** No **Weight** 21kg **Alternative model** 32C3030, 59%, £600 from Comet, Currys and John Lewis

IDEAL PICTURE SETTINGS FOR EVENING VIEWING
Brightness 65/100 **Contrast** 85/100 **Colour** 50/100
Picture profile N/A **Sharpness** 0/±50 **Other settings**
Backlight – 75/100, Tint – 0/±50, Black stretch – On, Mpeg noise reduction – Low, Cinema mode – On, DNR – Low, Colour temp – Cool, 3D Colour management – Off, Active backlight control – On

The slightly soft standard picture of the Toshiba Regza 37C3030D isn't on a par with the Panasonic LCD sets

OUR RESEARCH

When selecting TVs to test, we consult manufacturers, market intelligence reports and industry experts, then check availability on the high street and online. We test most new models from the leading manufacturers, products with innovative features, models from some lesser-known brands and widely available Best Buys featured in previous tests.

BEST BUY COMPETITION

Win a Best Buy TV and high-definition DVD player

Become the envy of all your friends with our Which? Best Buy Sony Bravia KDL-32D3000 flat-panel TV and an LG BH100 high-definition DVD player, worth a total of £1,829

TO ENTER, SIMPLY ANSWER THE FOLLOWING QUESTION

According to our report, what does IDTV stand for?

(a) Integrated digital TV (b) Invisible display TV (c) Incredible definition TV

To enter our Best Buy competition online, go to www.which.co.uk/bestbuycompetition or send your entry on a postcard to 'Best Buy November 07', Which?, PO Box 44, Hertford X, SG14 1SH. Include your name, address and postcode, daytime phone number

and Which? membership number (on your Which? membership card as your user name). Entries received by 21 November 2007 will be entered.

Our competition is open only to current Which? members. Only one entry per household.

Usual rules apply. See www.which.co.uk/bestbuycompetition or Which?, June 2007, p69, for a full set of rules.

August 2007 Best Buy competition winners
Congratulations to our five members

who each won a Best Buy Panasonic NV-GS320 digital camcorder:
Mr F Chandler, Rugby
Mr W Fleetwood, Sheffield
Mr J Gratton, Plymouth
Mr I Lapsitch, Evesham
Mrs K Murray, Bridgewater





63% Panasonic Viera TH-42PZ700B

£1,700

We've been getting lots of member queries about this high-resolution 42-inch plasma set. It doesn't quite hit the same heights as Panasonic's LCD range, but it's easy to use and, despite some slight screen reflections, the picture is beautifully detailed. However, it's power hungry, has mediocre sound quality and an irritating fan noise that's audible in a quiet room. Available online.

ALSO TESTED The Best Buy 42PX700 is £200 cheaper and more energy efficient. It has a lower screen resolution but the picture quality doesn't suffer. Neither model works properly with high-definition DVD.

Available Online Screen resolution 1,920 x 1,080 Primary sockets Scart x 3, HDMI x 3, VGA, audio output, digital audio output Scart link Yes Light sensor Yes Weight 49.5kg Alternative model TH-42PX700, 70%, £1,500 from Curry's

IDEAL PICTURE SETTINGS FOR EVENING VIEWING
Brightness 40/63 Contrast 51/63 Colour 31/63 Picture profile Normal Sharpness 3/6 Other settings Colour balance - Cool, Colour management - On, P-NR - Off



62% Panasonic Viera TH-42PX7B

£900

This entry level 42-inch plasma TV boasts just as good a picture as the top-of-the-range Panasonic PZ700B and PX700 models. Our expert viewing panel loved the level of detail, despite some occasional graininess, and were bowled over by the outstanding depth of HD. The sound is OK and, like the rest of the Panasonic range, it's a pleasure to use, with on-screen menus and EPGs that are well designed. It's cheapest at Argos.

ALSO TESTED The Best Buy 37-inch TH-37PX70 is the smallest plasma TV in the Panasonic range. Both this and the TH-42PX7B plasma TVs work properly with high-definition DVD players.

Available Argos Screen resolution 1,024 x 768 Primary sockets Scart x 2, HDMI x 1, audio out Scart link Yes Light sensor No Weight 28.1kg Alternative model TH-37PX70, 64%, £800 from John Lewis

IDEAL PICTURE SETTINGS FOR EVENING VIEWING
Brightness 34/63 Contrast 48/63 Colour 28/63 Picture profile Normal Sharpness 3/6 Other settings Colour balance - Cool, Colour management - On, P-NR - Off



Using an electronic programme guide

An onscreen guide won't improve the quality of TV programming but it will help you plan an evening's viewing

If you buy an IDTV (see 'Jargon buster', p37), then at the touch of a button you can get the equivalent of a TV listings magazine appear on your screen.

features a Scart link (see 'Jargon buster', p37), you can record via the EPG.

The ease of use, format and time it takes to load up programme data to the



Known as an EPG (electronic programme guide), its format depends on the particular model of TV. But most list programmes at least seven days ahead, and let you see what's on now and what's on next.

The best EPGs show several channels over a fixed time - say, two hours - making it easy to compare channels and plan your viewing. Some show the programme you're currently watching in a small box while you search, so you needn't miss a second of your favourite show. If the TV

EPG all count towards the overall total test score in the table on p41. To ensure that the TV you're buying has an EPG that suits your viewing needs, when you're in the shop ask to watch with the EPG switched on and try a few out for yourself.

However, if you don't live in a Freeview reception area - although most of us do; check www.freeview.co.uk if you're not sure - you won't be able to access the EPG.

Sky and Virgin Media supply their own EPGs to subscribers.

SAVE MONEY ON YOUR NEW TV

This November Hughes Direct is offering exclusive discounts for Which? members on Best Buy TVs from this report. There are minimum savings of 13 per cent and as much as 20 per cent off Best Buy models this month - 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 0845 680084. This offer is valid until 31 December 2007 and is subject to availability.

Each month Which? members can take advantage of the competitive deals offered by Hughes Direct. All goods are guaranteed to be a minimum of 10 per cent below high-street prices

published in Which? product reports (even when delivery charges are taken into account). If 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.



Logos explained

Confused by the labels and logos adorning flat-panel TVs? Our guide will tell you what they really mean

■ **HD READY** This official logo means the TV has the minimum screen resolution (at least



720 horizontal lines) and digital sockets to view high-definition TV broadcasts from Sky and Virgin. All the TVs mentioned in this report are HD-ready.

■ **HD READY 1080p** This new official logo from EICTA (the same people behind the official HD-ready logo) means the TV will work properly with high-definition DVDs.



Crucially, similar logos – such as HD Full, 1080HD or 1080HD-ready – do not guarantee high-definition DVD compatibility. So be careful and look for the exact match.

■ **24FPS** In the absence of the official HD-ready 1080p logo, check for labels like this.



It means you should be able to watch high-definition DVD without the juddering images.

■ **DIGITAL TICK** The digital tick is an assurance that the TV will work after the digital switchover. However, obtaining the logo costs manufacturers money, so it's not widely used.



■ **FREEVIEW OR DVB** These logos mean the TV has a built-in digital tuner.



■ **SCREEN RESOLUTION** The number of lines or pixels on screen (width x height).

But a good TV picture often relies more on decent digital-processing software

– most Panasonic Best Buys don't come with the highest resolution but have the best standard-definition pictures.

■ **DIGITAL PROCESSING** Many of the fancy-sounding labels refer to the TV's digital-processing software. For



instance, Philips uses Pixel Plus and Panasonic

Vreal. Decent processing software usually equals good pictures – all the Panasonic TVs feature Vreal and they have great pictures.

■ **100HZ** This is one of the newest logos. It means the TV has digital-processing software, which should make panning and



motion sequences appear marginally smoother.

■ **COLOURS** When a manufacturer claims that a TV can display more colours, it's unlikely that you'll actually see more colours on screen. However, it is a sign that the TV has faster processing technology and potentially better picture quality.

Facts & scores

Some of the TVs we test come with hidden surprises. And not all of them are pleasant

Light sensors

At first glance the 'Active control' feature on the **Philips 37PFL5522D (15)** and 'Intelligent Eye' mode on the **LG** models seem to be power-saving light sensors. However, Philips has neglected to actually fit a sensor and the LG design fails to save any power.

Audio description (AD)

Found on some Freeview programmes, this describes significant visual information, such as body language and scenery, for visually impaired people. **Panasonic** and **Sony** TVs in this article have AD.

High definition DVD

The **Toshiba** and **Pioneer** models, the Best Buy **Sony (3)** and the **Samsung LE40M87BDX/XE (27)** can all cope with 24 frames a second and are compatible with high-definition DVD. **Panasonic's** LCD TVs and its **TH-42PX7B (7)** plasma set don't make any 24fps claims, but work without the judder problem thanks to superior digital-processing software. We're invested in new testing equipment and are carrying out more high-definition DVD-compatibility tests.

Judder

LG's manual and website claim the **42PC55-ZB (22)** supports 1080/24p. But in our tests the image stuttered badly when connected to a high-definition DVD player.

MODEL	PRICE (£)
1 PANASONIC Viera TX-32LXD700	900
2 PANASONIC Viera TX-32LXD7	525
3 SONY Bravia KDL-32D3000	1,000
4 TOSHIBA Regza 37X3030D	1,000
5 TOSHIBA Regza 37C3030D	700
6 PANASONIC Viera TH-42PZ700B	1,700
7 PANASONIC Viera TH-42PX7B	900
8 PHILIPS Cineos 32PF9731D	850
9 SONY Bravia KDL-32S2530	600
10 SONY Bravia KDL-32V2500	700
11 PIONEER Kuro PDP-4280XD	1,800
12 PHILIPS 32PFL7562D	700
13 PIONEER Kuro PDP-428XD	1,600
14 SHARP LC-32RD2E	615
15 PHILIPS 37PFL5522D	800
16 SAMSUNG LE37R87BDX/XEU	800
17 HITACHI L32H01U	500
18 LG 37LY95-ZA	775
19 SAMSUNG PS42Q97HDX/XEU	950
20 SANYO CE32LD81-B	445
21 LG 42LF66-ZE	1,100
22 LG 42PC55-ZB	900
23 SHARP LC-32AD5E-BK	600
24 SAMSUNG LE37S86BDX/XEU	750
25 HITACHI P50T01U	1,300
26 JVC DynaPix LT-42DG8	825
27 SAMSUNG LE40M87BDX/XEU	1,150
28 JVC DynaPix LT-32DA8	500
29 ATEC AV371DS	660

a See 'Light sensors' in 'Facts & Scores', left

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 to what you can expect to pay. Prices for models available only online are in *italics*. **Screen** The diagonal measurement of the

SPECIFICATION			FEATURES						WHICH? TEST PERFORMANCE						SCORE %
TYPE	SCREEN (in)	SIZE (cm) (hxxxd)	SCARTS	SCARTS (RGB)	HDMI	AUDIO OUT	DIGITAL AUDIO OUT	LIGHT SENSOR	SD PICTURE	HD PICTURE	SOUND	EASE OF USE	FEATURES	POWER USE	
LCD	32	54x85x10	2	2	3	✓	0	✓	★★★★	★★★★★	★★★	★★★★	★★★★	★★★★	78
LCD	32	57x80x12	2	2	1	✓		✓	★★★★	★★★★★	★★★	★★★★	★★★★	★★★★	77
LCD	32	53x79x10	2	2	3	✓	0	✓	★★★★	★★★★	★★	★★★	★★★★	★★★★	69
LCD	37	61x92x13	2	1	2	✓	0		★★★	★★★★	★★★	★★★★	★★★★	★★	67
LCD	37	61x92x13	2	1	2	✓	0		★★★★	★★★★	★★★	★★★★	★★★★	★★	67
Plasma	42	70x108x14	3	2	3	✓	0	✓	★★★	★★★★	★★	★★★★	★★★★	★	63
Plasma	42	68x102x11	2	2	1	✓			★★★★	★★★★	★★	★★★★	★★★★	★★	62
LCD	32	63x87x13	2	2	2	✓	C	✓	★★★	★★★★	★★★	★★★	★★★★	★★★	61
LCD	32	55x79x10	2	2	2	✓		✓	★★★★	★★★★	★★	★★★	★★★★	★★★★	60
LCD	32	55x79x10	2	2	2	✓		✓	★★★	★★★★	★★	★★★	★★★★	★★★★	60
Plasma	42	68x104x12	3	2	3	✓	0		★★★★	★★★★	★★	★★★	★★★★	★★	59
LCD	32	55x81x12	2	2	2	✓	C	✓	★★★	★★★★	★★	★★★	★★★★	★★★★	58
Plasma	42	68x104x12	3	2	3	✓	0	✓	★★★★	★★★★	★★	★★	★★★★	★★★★	57
LCD	32	53x79x12	2	2	2	✓		✓	★★★	★★★★	★★	★★	★★★★	★★★★	56
LCD	37	63x94x12	2	1	2			see ^a	★★★★	★★★★	★★	★★★	★★	★★★★	55
LCD	37	66x92x10	2	1	3	✓	0		★★★	★★★★	★★	★★★	★★★★	★★	55
LCD	32	55x81x12	2	2	2	✓			★★★★	★★★★	★	★★★	★★★★	★★	51
LCD	37	59x101x14	2	1	2		0	✓	★★	★★★	★★★★	★★	★★★★	★★★	51
Plasma	42	70x105x10	2	1	3	✓	0		★★	★★★★	★★★★	★★★★	★★★★	★	51
LCD	32	57x83x14	2	2	2	✓	C		★★★	★★★	★★	★★	★★★★	★★	51
LCD	42	69x103x14	2	1	2		0	✓	★★	★★★★	★★	★★★★	★★★★	★★★★	49
Plasma	42	71x105x14	2	1	2		0		★★	★★★	★★	★★★★	★★	★	47
LCD	32	53x80x12	2	2	2	✓			★★★★	★★★★	★	★★	★★★★	★★	47
LCD	37	60x101x11	2	1	2	✓	0		★★	★★★	★★	★★★★	★★	★★	46
Plasma	50	82x124x13	3	2	2	✓	0		★★	★★★★	★	★★	★★★★	★	43
LCD	42	68x103x11	2	2	2		0		★★	★★★	★★	★★	★★★★	★★	43
LCD	40	54x80x10	2	1	3	✓	0		★★	★★★★	★	★★★★	★★★★	★★	43
LCD	32	63x97x11	2	2	2		0		★★	★★★	★	★★	★★★★	★★	39
LCD	37	65x95x12	2	1	1	✓	0		★★	★★	★	★★	★★	★★	33

television screen in inches. **Size**
Dimensions without stand.

Features

Scarts The total number of sockets available to connect audiovisual equipment. **Scarts (RGB)** Number of Scarts that carry the superior RGB video signal. **HDMI** Number of high-definition media inputs available to connect HD equipment. Also an alternative for

compatible standard-definition equipment. **Digital audio out** Whether connections are coaxial (C) or optical (O). Make sure the connections of whatever set you buy match the sockets that are on your home-cinema system. **Light sensor** A ✓ means the TV features a sensor that adjusts the brightness of the picture according to the ambient light of the room that you have your TV in.

Test performance

SD picture Assessment of standard-definition material viewed via ordinary DVD and broadcast TV. **HD picture** Assessment of high-definition images broadcast via satellite. **Sound** Based on a combination of technical measurements and expert panel assessments. **Ease of use** Ratings based on expert assessment.

Features Ratings based on the presence and versatility of features such as sockets.

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%**

Brand overviews

A unique insight into the leading brands – based on the many TVs that we've tested in the past year plus data from our annual reliability survey

Because we test so many TVs, we have been able to build up a picture of how most of the major brands tend to perform in our tests. When we combine this data with the results of our annual reliability survey (see *Which?*, July 2007, p28), we can give you an idea of which brands to look for in the shops, and which to avoid.

Our guide, below, will show you what the average overall score is for each manufacturer's TVs, and tell you how many of its TVs that we've tested have been awarded Best Buys. Where possible, we've also added in information about how the individual manufacturers performed in our reliability survey.



HITACHI

Average overall score 48.7%

Brand reliability No data

Best Buys 0 from 6

The Hitachi TVs we've tested have all been fairly mediocre but some models feature money-saving extras like motorised stands or wall-mounting kits.

JVC

Average overall score 49.7%

Brand reliability No data

Best Buys 2 from 9

The current JVC range is a massive disappointment. Standard-definition picture quality and ease of use are well below par.

LG

Average overall score 49.7%

Brand reliability Average

Best Buys 0 from 11

For the most part, our tests have found that LG TVs have poorer picture quality than we expect.

They are in no immediate danger of troubling Panasonic.

PANASONIC

Average overall score 68.9%

Brand reliability Average

Best Buys 11 from 15

Panasonic TVs routinely excel in almost every performance test we do, but it's the superior picture quality that keeps them on top.

PHILIPS

Average overall score 52.1%

Brand reliability Average

Best Buys 0 from 15

The 2007 Philips range boasts a real improvement in picture quality. If Philips sorts out some issues with using its EPGs and on-screen menus, Best Buys are sure to follow.

SAMSUNG

Average overall score 48.8%

Brand reliability Good

Best Buys 0 from 14

Glossy black Samsung TVs look fantastic on the showroom floor but are mediocre performers in our tests. On the plus side, they usually work well when used as a PC display.

SONY

Average overall score 57.8%

Brand reliability Good

Best Buys 5 from 13

Sony TVs tend to have good features and are energy efficient and great for HD. Its new top-of-the-range sets are compatible with high-definition DVD.

TOSHIBA

Average overall score 59.9%

Brand reliability No data

Best Buys 4 from 8

Toshiba TVs tend to be easy to use with good pictures. It was among the first to produce TVs fully compatible with high-definition DVD.

Don't Buy

Panasonic is dragging the standards of TVs ever upwards, but this 37-inch Atec AV371DS LCD TV (29) bucks the trend. Next time you're in Asda, remember to push your trolley straight past this woeful TV.

In addition to its awful sound quality and jerky pale pictures, our ergonomics experts found they had the most cause for concern.



Rarely have our experts come across a more basic TV that is more frustratingly difficult to use (with the exception of the new 32-inch 3210DVB LCD TV from high-street store Marks & Spencer – see 'First look', p11). For example, we were unable to record any digital channels from the Atec set, the EPG covered only four days instead of the standard seven and there was no digital Teletext.

The 32-inch JVC DynaPix LT-32DA8 LCD TV (28) isn't quite as bad but it's important not to get carried away with any unwarranted accolades.



When we watched DVDs, we experienced problems such as colour banding, grainy images, and smearing on motion.

Its sound is thin and unpleasant and the stereo effect is poor. And the less said about the jazz music test the better.



Our extensive energy tests reveal what a TV will cost you and the environment

Which? experts helped establish international standards for measuring energy consumption, and these form the basis for our power consumption tests. Using standardised video footage, we take energy readings in 16:9 (widescreen) mode with the TV settings as delivered.

However, in some respects, we exceed the minimum standard and take further readings while using a moving test pattern. We also check everything in 4:3 (old box



shape) mode and do the whole test again, using the optimum picture settings as selected by our expert panel. We then take additional measurements five minutes and two hours after switching to standby.

To assess power-saving light sensors, we take measurements in three typical environments: bright daylight, dim light and, for horror movie fans, in the dark.

Plasma versus LCD

Some manufacturers point out that the power use of a plasma TV is directly dependent on picture brightness, whereas an LCD picture requires a constant source of illumination. So, theoretically, a plasma set should use less power over time. But on average, plasma TVs use around 50 per cent more energy than similar-sized LCD models, as they require more power to achieve the same brightness level as an LCD TV.

We helped establish international standards for measuring energy

WHICH? ONLINE

Because we now test so many TVs, it's impossible to fit them all in a single report. For monthly updates on new models, and full reviews on more than 100 currently available models, regularly check www.which.co.uk/tvs. And if you like your TVs big, we're adding reviews of four new giant 50-inch plasma TVs from Pioneer, Panasonic, Samsung and LG. We've also got first looks of brand-new Sony and Toshiba models plus the 37-inch Panasonic TX-37LZD70 LCD. See www.which.co.uk/loginhelp if you would like help logging in.

Contacts

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Insider information

An HD-ready logo means a TV will work with high-definition broadcasts. But what about high-definition DVDs? Mike Briggs explains the issues

Q WHAT IS HIGH-DEFINITION DVD?

A It's a new type of DVD that boasts more detailed and realistic pictures. There are two rival high-definition formats: HD-DVD and Blu-ray.

Q CAN I WATCH THEM ON AN HD-READY TV?

A Many HD-ready TVs will not work properly with high-definition DVD players. In order to show the best-possible picture, a TV has to be able to process 1080p signals (see 'Jargon buster', p37) and display pictures, or frames, at the same rate as they are recorded on to high-definition discs. The HD-ready logo guarantees neither.

Q SO THE FRAME RATES ARE DIFFERENT FROM NORMAL DVD DISCS?

A Yes. The new discs are manufactured at the movie industry standard of 24 frames per second (fps), not the

traditional European standard of 25fps. Unless the TV can match this frame rate, high-definition movies judder during fast-motion or camera-panning scenes (see 'The devil's in the detail', *Which?*, August 2007, p39).

Q HOW DO I KNOW WHICH TVS WILL WORK?

A The HD-ready 1080p logo (see p40) guarantees 1080p output, 24fps and a high screen resolution of 1920x1080. This logo should be adopted by manufacturers, but it's still early days.

Q CAN I GET AWAY WITH A LOWER SPECIFICATION?

A The 1080p and 24fps points are crucial. If the TV has both of these features it is compatible with high-definition DVD. A screen resolution of 1,920x1,080 is certainly preferable, but it's neither essential nor a guarantee of a great picture.

Q IS THERE ANY WAY MY HD-READY TV WILL BE COMPATIBLE WITH HIGH-DEFINITION DISCS?

A In theory, it should be possible for some existing HD-ready TVs to be upgraded to accept the 24fps signal. We asked leading manufacturers whether they planned to do this but the response was underwhelming.

If you want your TV set-up to be compatible, make sure both the player and the TV pass the crucial 24fps question. We'll have the latest test results of high-definition DVD players in next month's *Which?*

