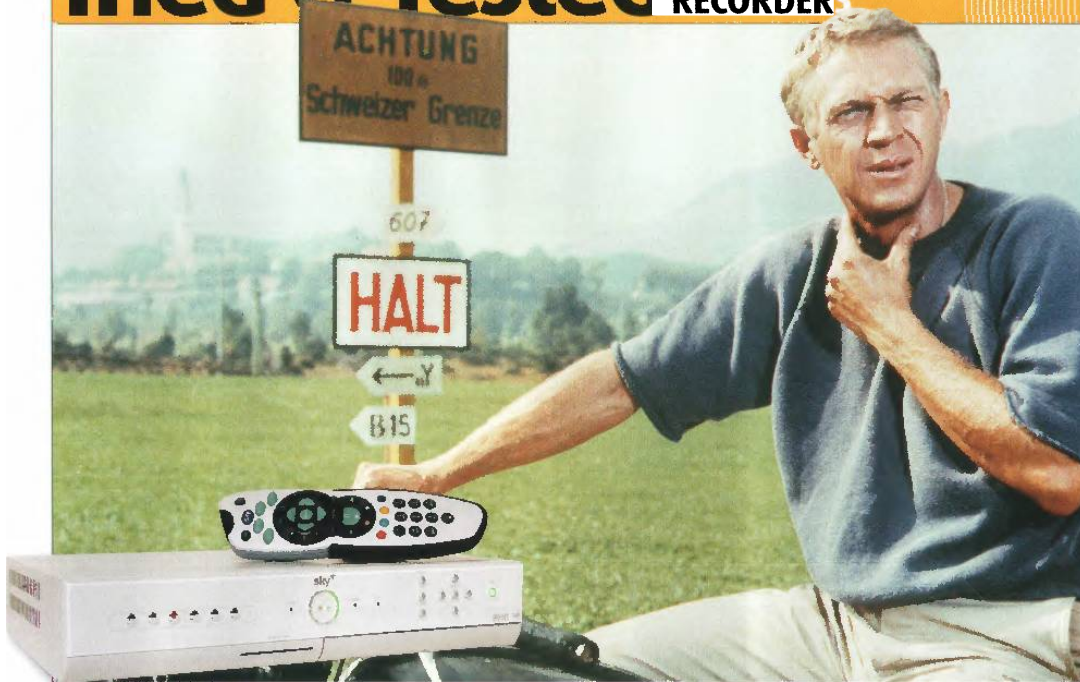




Tried & Tested PERSONAL VIDEO RECORDERS



Personal video recorders will do away with cassettes and DVDs to make the home viewing experience more user-friendly

Couch potato heaven

PVRs don't use tapes, are easily programmed, and can now record 40 hours or more of TV, as **Rahiel Nasir** discovered

What is a personal video recorder? Measuring around the same size as the average VCR, a personal video recorder (PVR) records using a hard disk. There's no need for tapes, and there's no need to search for space to record on. A PVR automatically records on the next available space and if there's not enough left, it'll warn you. Not that that's likely. The smallest hard disk on test here offers 80 gigabytes and that's good for around 40 hours of recorded telly. Of course, you can create more space by deleting old recordings, or you can archive them by connecting an external DVD recorder or that old VCR that's now gathering dust.

What about performance? Unlike VCR, hard disk recordings won't deteriorate through repeated playback, so you can wave goodbye to video nasties such as picture noise and rolling. A PVR records digitally and should deliver superior picture and sound quality, although PVRs have built-in TV tuners and reception quality can be dependent upon local conditions. Where available, recordings will also capture widescreen pictures and digital surround sound.

Sounds good. What else can I do? This is where the fun begins. You can pause live TV – simply hit 'pause' on the remote to freeze the on-screen action and the PVR automatically begins recording. Press 'play' and the programme continues from where you left it. What you're now seeing is actually the recording, and as you continue to watch, the PVR automatically continues to record to the programme's end. You can ➔

Jargon buster

Aspect ratio Describes the shape of a TV screen. A box that is 16cm wide and 9cm high is therefore 16:9 or 'widescreen'. The BBC uses a compromise ratio: 14:9.

EPG Electronic programme guide. This on-screen display shows programme listings for each digital TV channel over the next seven days.

Freeview Offers around 50 free-to-air TV and radio stations including the five existing terrestrial channels.

Gigabyte One billion bytes. The bigger the number of bytes, the greater the amount of digital data a hard disk can handle or store.

MPEG Developed by the Motion Picture Experts Group, MPEG is a standard system of compressing digital audio and video data so that it can be squeezed over the internet or stored on a drive. MPEG2 is the system used for DVD and the PVRs here.

Trick play The features that control playback speed: pause, rewind, fast forward, slow motion, live rewind, A-B repeat and commercial skip.

HOW WE TESTED THEM

Performance is always important, as are good ergonomics, especially when comparing PVRs to VCRs. Features and build quality are also factored in. And let's not forget aesthetics...

PERFORMANCE While performance can be subject to local reception conditions, we would expect a solid and clean picture, accurate aspect ratio switching and solid sound (surround or otherwise)



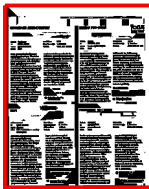
ERGONOMICS PVRs should make the business of recording your favourite telly a doddle. Intuitive and user-friendly operation and ease of set-up are crucial



FEATURES As well as record and playback functions, genuinely useful features will enhance a product's functionality – and we're not talking bells, whistles and flashing lights

BUILD Good-quality components built into a robust chassis point to solid engineering geared towards performance, reliability and longevity





RATINGS Don't bother Dodgy Average Good Excellent

GOODMANS GHDD1782DVBT



Maker: Goodmans
☎ 08705 357357
www: goodmans.co.uk
Price: £120

Hard drive: 80GB
No of Tuner(s): 1, Freeview
WxHxD: 420 x 55 x 255mm

While this may be the electronic equivalent of a minger, it has to be said that Goodmans often gives you a lot of bang for your buck. Inside that bland and ludicrously oversized chassis is a single Freeview tuner and an 80GB hard disk which gives around 35 hours of recording. That's not bad for £120. Wired and fired, what immediately strikes you about the Goodmans is the relative clarity of its EPG. A simple colour palette makes it easier on the eye and less garish than the Panasonic's and it's therefore less daunting to use. Picture quality is okay – we experienced a slight moment of signal break-up during our test, but otherwise the performance is glitch-free. Scheduling a recording using the EPG doesn't present too many problems, either. While it

requires a similar operation to the Panasonic, the Goodmans makes the process much simpler thanks to the remote's multifunctional arrow keys. These make menu navigation quicker and far more intuitive. If you're on a tight budget and don't need fancy features, this could be just the ticket. It lets you pause live TV but without the functional versatility of a twin tuner, this machine can make you feel as if there's a PVR party going on and you haven't been invited.

IN A NUTSHELL:

- Nice price; easy-to-use EPG
- Limited functionality; oversized chassis

FOCUS RATING: 3/5

HUMAX PVR-9200T



FOCUS
BEST BUY

Maker: Humax
☎ 0208 547 4240
www: humaxdigital.com/uk
Price: £230

Hard drive: 160GB
No of Tuner(s): 2, Freeview
WxHxD: 380 x 70 x 281 mm

The moment you whip out the gleaming Humax, you know you're onto something good. The Korean manufacturer says that the PVR-9200T is the UK's first Freeview receiver to offer a 160GB hard drive, but that huge 80-hour capacity is not the most remarkable feature here. What adds to the Humax's fat appeal is a neat armoury of features, including PC connectivity. But first let's mention the EPG. This PVR's on-screen graphics are the best of the Freeview tuners in this line-up and they make its operation easy and enjoyable. Like Sky's remote, the Humax's handset also has multifunction navigation keys and this simplifies menu access and option selection. What we like best though is the button which instantly shows a list of the recordings made. But why

is this useful key hidden away beneath a flap? As well as handy functions such as commercial skip (press this to automatically fast-forward a recording by 30 seconds), instant replay, and the option to edit recordings, the machine also features USB ports. Use them to hook up a PC device and transfer JPEG images and MP3 tracks to turn the '9200T into a home entertainment hub. Despite a slight softness in picture quality, the Humax is easy to use and a corker to look at. A great buy.

IN A NUTSHELL:

- 160GB hard disk; good menus and remote; PC-connectivity
- Not much apart from a slightly soft picture

FOCUS RATING: 5/5

SKY+



Maker: Amstrad
☎ 08705 800 866
www: sky.com
Price: £99 + installation + monthly subscription

Hard drive: 80GB
No of Tuner(s): 2, satellite
LCD monitor: 1.8-inch
WxHxD: 400 x 78 x 246mm

Amstrad's elegant and understated Sky+ PVR oozes class and sophistication. Yet everything about this system is simple, well thought through and a delight to use. The remote handset is well designed, robust and a great example of good layout – almost every button is where the user feels it ought to be. But what really sets Sky+ apart from rivals is its ultra-easy EPG – no garish colour schemes, no multiple sub-menus accessed via multiple buttons, no text that has you squinting like the last line on an optician's wall chart. Instead, the menus are easy on the eye, easy to read and easy to navigate using the same five multifunctional navigation keys on the remote. To record, just use the TV Guide to find the desired programme and press the record

button. So is there any bad news to report? Well, although the AV performance is generally very good, we experienced sound and picture problems on a couple of recordings. What's more, some channels and functions had a tendency to freeze. Cost may also be an issue. Standard price for hardware is around £100 plus installation. There are also monthly Sky+ subscription fees priced from around £36 which will have to be considered.

IN A NUTSHELL:

- Superb ergonomics – this is the ultimate user-friendly gadget; good AV
- Some gremlins during operation; high price

FOCUS RATING: 5/5

PANASONIC TU-CTH100



Maker: Panasonic
☎ 08705 357357
www: panasonic.co.uk
Price: £250

Hard drive: 80GB
No of Tuner(s): 2, Freeview
WxHxD: 350 x 65 x 253mm

Smaller and more compact than a VCR, this slender box from Panasonic is well screwed together and is one of the best-looking Freeview receivers you can currently buy. It's quick and easy to install and has a neat display which shows you the programme currently being viewed – if it's a live broadcast it tells the channel name or if it's a recording, the programme title. The TU-CTH100's picture quality is excellent – we didn't see any signal break-up during our test. The 80GB hard drive allows for around 45 hours' worth of recording and the direct navigator screen lists the contents of the hard disk complete with moving thumbnail images and time of recordings can even be edited. Niggles? The Panasonic is sometimes very slow to react to commands, and

programming recordings is also an unnecessarily long-winded affair. It's done by using a variety of non-intuitive buttons: you first access the TV Guide, then select the channel you want to see listings for, and then you add the desired programme to the Timer Menu using a blue button. No icon appears to confirm recording. To check, you need to exit the TV Guide and access the Timer Menu, which is not exactly quick.

IN A NUTSHELL:

- Smart and well-engineered box; superb picture quality; neat features such as recordings which can be edited
- Can be slow to react to commands; cumbersome schedule recording

FOCUS RATING: 4/5

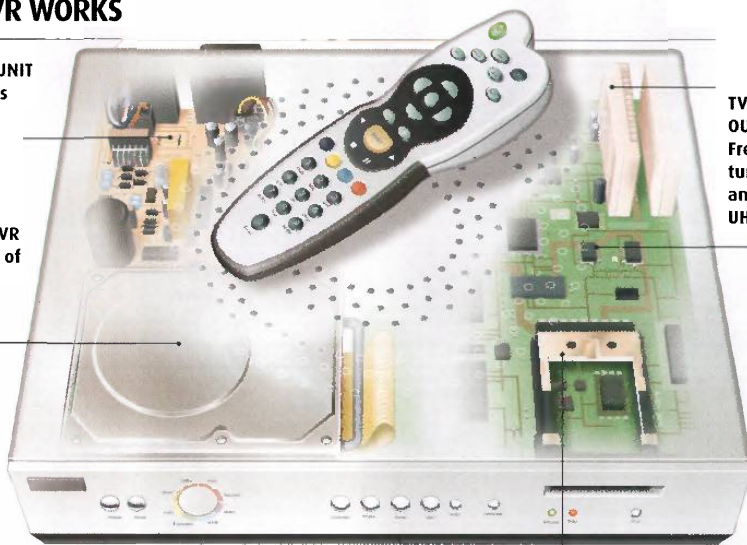


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HOW A PVR WORKS

POWER SUPPLY UNIT
 Regulates mains electric feed

THE HARD DISK
 The heart of a PVR – the same type of storage device used in a desktop PC



TV INPUT/OUTPUT
 Freeview PVR tuners receive analogue UHF signals

THE MPEG2 ENCODER/DECODER
 Analogue TV signals must be converted into digital data so that the PVR can handle them, and then reconverted so that your TV can output them

VIEWING CARD READER
 Used to access subscription services

WHAT THE FUTURE HOLDS



We're heading towards a home entertainment hub

JUST ARRIVED
 Neuros has launched its portable PVR. The Neuros uses standard data cards to create, store and transfer video for playback on a laptop, Sony PSP or other device.

Next Year
 Humax has also revealed a portable PVR. Sky plans on enhancing its service – you'll be able to schedule recordings on your Sky+ PVR by sending a mobile phone text message.

BY 2007
 Hard drives will continue to get bigger – the realms of the terabyte cannot be far off. IP television – using a set-top box connected to your TV and the internet – will be common across Europe.

BY 2008
 Once wireless technology becomes more stable, it could be used for transferring video around the home without the need to physically link equipment with cables.

WITHIN TEN YEARS
 Homes will be equipped with a central hard drive that can receive internet content, digital audio and digital TV from any source and feed it to any display. Viewers will also be able to interact with what they see, or upload their own video content for their local area network – their personal video channel!

Inside a typical PVR you'll find a handful of key components, the most obvious of which is the hard drive or disk. This stores all the recorded content and just like a PC, it uses a random access memory. The models on test

here offer 80-160GB capacities, but you only get to use part of that. A portion of the hard drive is reserved by the PVR to store live TV pauses and live rewinds where available. As many PC users will know, full-

resolution video takes up a lot of disk space – unless you compress it. That's where the MPEG2 decoder comes in. Sky broadcasts are already in digital format, but in the case of Freeview, the MPEG2 encoder digitises the

incoming analogue TV signal, ready to be processed by the onboard computer and stored onto the hard disk. An MPEG2 decoder then converts the digital signals back into an analogue format to send to your TV.

abort the recording at any time and return to the live broadcast and, unless you instruct it otherwise, the PVR doesn't permanently store the contents. Some PVRs even let you rewind live TV. How? PVRs equipped with this feature have buffer memories which constantly record the channel that's currently being watched. These recordings aren't permanent and are only accessed when you hit 'rewind'. When you switch channel or turn your machine off, the buffer empties or is refreshed.

How easy is it to record?

A PVR not only makes the whole process easier, but also quicker and generally far more reliable. One of the services offered by digital TV is the electronic programme guide (EPG). To program the PVR to

record, just scroll through to find what you want to watch and press the record button. Some PVRs may then take you to a timer record menu but otherwise that's it. The PVR will record your programme even if it's rescheduled or overruns. EPGs allow for other niceties such as 'series link' which, when selected, automatically records each episode of a series. PVR recordings are instantly accessible – an on-screen menu shows you all the programmes you've recorded so just select the title you want and press play to jump straight in. PVRs equipped with two digital TV tuners are even more versatile. They let you record two different digital TV channels at the same time – even if the programmes overlap. Or, you can simultaneously record two channels while watching a previously recorded programme.

THE VERDICT

There's no doubting the sheer brilliance of Sky+. It's one of those rare pieces of technology that just gets on with the job it was designed for. It's a close call, but the winner for us is the new **Humax PVR-9200T**. This PVR offers so much that it's hard to resist. If it was all about the best EPG, Sky+ would win. And if it was all about ease of recording, Sky+ would clinch it again. But at the moment, the **Humax** gives you so much for so much less. Its EPG is the best of the Freeview offerings here, it's the easiest to use for recording, and that 160GB hard drive cannot be ignored. Useful trick play features, such as commercial skip, picture-in-picture and PC-connectivity, as well as good looks, seals it for us.

ILLUSTRATION BY PATRICK MURPHY