

The Academy of Plumbing 35

Sound & Vision

Part 1

The Digital Plumber

By Paul Ellis

This month, a bit of a change from my usual hectoring about backup. My 18-year-old 14" Sony telly gave up the ghost in March and prompted me to finally look into setting up a media centre. Here's what happened.

The great analogue TV switch-off is already under way and due to be completed by 2011. I live in a terrestrial TV blackspot, so FreeView is out. I've had a basic cable TV package at around £15 per month for 10 years, just to be able to get a signal. That's £1,500 in total to Richard Branson for the privilege of being able to watch the BBC News, CBeebies, David Attenborough and not a lot more, as we're not committed TV viewers in my house. Mmm. Apart from sticking it to Grinnin' Dickie...

WHAT DID I WISH TO ACHIEVE?

- 1) Obviously, a working replacement for the departed 14" telly, preferably without the Branson Tax
- 2) A family computer on which our young daughter could do her homework, occasionally play online games on the BBC and NHK's websites, and video Skype with her grandparents in Tokyo
- 3) Easy access to iTunes, with good sound quality
- 4) Equally easy access to our DVD collection, transferred to hard disk to prevent the disks themselves from being scratched by our daughter and her pals
- 5) Some means of watching iPlayer broadcasts in decent quality
- 6) A way of transferring programme on VHS and camcorder tapes to

hard disk, to avoid that material disappearing into the ether when the VHS deck finally dies

- 7) ...and the same for my dusty boxfuls of cassette and DAT tapes archiving my and my wife's careers as session musicians in the 1980s and '90s
- 8) A general-purpose backup and web server for my client web galleries and downloads
- 9) A system that would last a good few years without requiring significant upgrading.

Obviously a Mac was going to be the centerpiece of this setup, but a further complication is that I'm lucky to live in a very quiet flat, so the Mac had to be nearly silent in operation, ruling out the old repurposed-G4 approach. I'd been successfully using my old 12" PowerBook to run iTunes for a year or so but it wasn't up to running iPlayer full screen and even iTunes caused its fans to whirr.

STEP FORWARD THE MAC MINI

It's always made a very good small home/studio file server, but the current model could have been built exactly to my requirements. It's small and unobtrusive, has Gigabit Ethernet, FireWire 800 and five USB2 ports, has both DVI and DisplayPort video outputs, supports full 1920x1080p HDTV screen resolution, is inaudible in operation even when working hard, and has a very low power consumption.

All Mac minis support HDTV screen resolution but only the Intel Core2Duo models have the ability to manage full-screen playback of H264-encoded iPlayer

video and run the software encoders to record live TV at full quality. Unlike PowerPC Mac minis, Intel Mac minis also work with the Apple Remote and have combined analogue and digital audio inputs and outputs, a consideration if your sound system has digital inputs.

The Mac mini's only significant drawback is that it doesn't have a dedicated video card with its own VRAM but uses main memory for screen display. This has no effect whatsoever on iPlayer, DVD or live TV playback but makes it unsuitable as a platform upon which to run those graphics-intensive PC shoot-'em-up games your adolescent son is addicted to.

I ended up getting a 2GHz 120GB HD / 2GB RAM Mac mini from the AOP Apple Store, along with a wireless keyboard and mouse that live in a drawer until needed. I already had a couple of Apple Remotes that had come with MacBook Pro's. I also acquired a pair of 1.5TB hard disks in a dual-disk enclosure for media storage and backup, of which more next time.

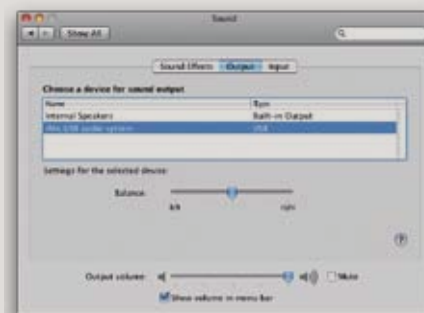
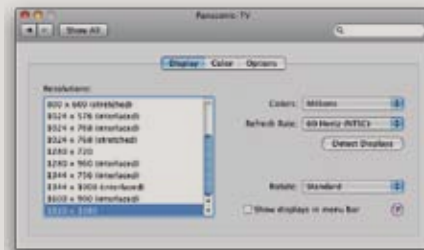
WHAT ABOUT A DISPLAY?

Before choosing the Mac mini I'd been considering getting a 24" iMac for the job, but its fatal flaw is its lack of external input to the screen. There's no way to connect a Blu-Ray player to it. So, the display was going to have to be a telly. But which? An enquiry on the AOP email forum produced Nick Wilcox-Brown's friendly and informed recommendation of the Panasonic TX-37LZD800, so I nipped out to John Lewis to take a look, only to find that it had been discontinued.

I decided that a 37" screen was too large and overpowering for my flat and 32" was more suitable. After an hour of going cross-eyed comparing screen displays I finally settled on a Panasonic TX-32LZD81 32" LCD TV (also now discontinued) with built-in high-definition FreeSat tuner, solving my Branson Tax problem at a stroke. It also had the best-looking picture in the shop, to my eyes.

With Mac, TV/tuner and media storage organized, what other kit was going to be required to make this work? My iTunes PowerBook's analogue audio output sounded a little gritty so I'd fitted it with a Griffin iMic USB audio adapter, which sounds excellent for its price but only does stereo. I have an aging but beautiful-sounding hi-fi and am not particularly interested in 5.1 surround sound, so the iMic does it for me. If I'd needed genuine 5.1 surround I'd have picked up a discontinued but still-available-if-you're-quick Griffin FireWave audio adapter instead. If you plan on using a home cinema receiver/amplifier that has a digital audio input this won't be a consideration, as the Mac mini will output in Dolby Digital format for you.

The Mac mini's DisplayPort is compatible with the TV's HDMI inputs and being an encrypted output will display encrypted HD programme material, should I ever decide to go by that route. DisplayPort to HDMI adapters are hard to find at the moment, so for the time being I'm using the mini's DVI output with a DVI – HDMI adapter cable, which works a treat. Of course the TV has no built-in webcam



for Skype but I had an Apple iSight camera knocking about, which I attached to the TV's base and connected to the Mac mini with a FireWire 400 – 800 adapter cable. Any decent USB webcam with microphone would do.

PLUGGING IT UP

Setup was surprisingly straightforward. The satellite dish installer ran a pair of cables from the dish for me, one to the TV, the other to be connected to a second

DVB-S tuner for recording FreeSat broadcasts. The TV was very easy to set up; its controls clear and logical, satellite signal strength good and reception excellent. The Mac mini immediately recognised that it was connected to an HDTV and configured itself appropriately, even choosing the correct monitor profile. However, by default the TV does a lot of aggressive signal processing to the picture to minimise the effects of upscaling a grotty standard-definition picture to HD resolution. It also expands the picture and crops it to hide sideband visual artefacts present in analogue TV broadcasts. The result was the Mac's screen display looking horribly over-sharpened and smoothed, and lacking a menu bar.

Ten minutes with the TV's manual sorted this out. After turning off the default sharpening and noise reduction, finding the screen expansion function (called Picture Overscan by Panasonic) and turning it off, and setting the aspect ratio to 16:9 I was looking at a sharp, pixel-perfect display on what had become a neutral, pleasing and very creditable monitor. Splendid, and entirely tax-deductible!

Next month: the system in operation.

LINKS

FreeView: <http://www.freeview.co.uk/>
 FreeSat: <http://www.freesat.co.uk/>
 Panasonic FreeSat TVs: <http://tinyurl.com/r8o3w2>
 Griffin iMic & FireWave: <http://tinyurl.com/ojbg6gk>
 DVI - HDMI cables: <http://tinyurl.com/r9lsud>

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