

Digital Music SIG

Home Theater PC Project (Part 2)

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This month we continuing following a project I'm working on at home to set up a "Home Theater PC" – one that can record and play music and videos to a PC's hard drive, act as a bridge for streaming Internet video, music and other content and also support regular Internet surfing, using my HDTV as the PC's monitor.



"Before"

In Part 2, we will look at the details of what I did to put the HTPC together and deploy it in my family room.

Review of the Project Plan:

Adapt and upgrade an existing HP Pavilion PC to make it serve as a home theater PC, part of the home entertainment center. The current specs on the PC are:

- HP Pavilion a1610n
- 3 GB of DDR-2 533 RAM (originally was 1 GB)
- AMD Athlon 64x2 4200+ CPU (dual core, 2.2 GHz)
- Onboard NVidia GeForce 6150LE video chip (no HDMI or DVI)
- 250 GB SATA hard drive
- 6 USB 2 ports
- 100 M-bit Ethernet chip/connector (wired)
- DVD burner
- Windows XP Media Center Edition (SP3)

The Upgrades as of 9-15:

- Upgraded to Windows 7 Ultimate 64-bit (better version of Media Center) (\$0 – MS Technet license)
- Add an Airlink 101 wireless N USB network adapter (\$12)
- Add a Logitech X100 wireless keyboard and mouse (\$25)
- Added an EVGA NVidia GeForce 8400 video card with HDMI output (\$35)

(See following photo)



Upgrade Steps:

- Perform the upgrade to Windows 7 Ultimate (clean install).
- Install required applications: - iTunes, VLC Player, FireFox, MSE, WLE, ...
- Buy and install the new NVideo video card and drivers (Newegg).
- Buy and add the USB wireless network adapter and drivers. TEST!!!
- Buy and install the wireless keyboard and mouse. TEST!!!
- Move to the entertainment center, plug in power.
- Connect to the HDTV with a HDMI cable – (may need a HDMI switch).
- Connect Sound output to receiver with a stereo cable.
- Start up the PC; start up the HDTV; Select the HDMI input from the PC.
- Should see the PC desktop on the HDTV.
- Start IE or FireFox and do some surfing (tests the wireless LAN)
- Go to a site like Fox.com, find a recent TV episode and play it to see how the video quality is on the TV.



“After”

Status:

See the "After" photo above. The PC is in the family room on a TV table and the picture on the TV is coming from Hulu. It's a preview clip from an episode of "Bones".

The HDMI cable carries sound to the TV, so we have decent stereo sound. The stereo cable connection to the receiver doesn't seem to be working, but that may be a hookup issue, or I need to tweak the sound chip settings.

Since this TV only has two HDMI inputs, I am using the component video inputs for the DirecTV HD feed to the TV. This works fine, as DirecTV sends 1080i. I then used the freed up HDMI input for the PC.

I had to adjust the PC's video a bit to compensate for overscan. The Windows desktop's task bar was off the screen and the icons were off the left edge.

When I first installed the EVGA video card. I lost the PC's sound completely. The new card disabled both the old on-board NVidia GeForce 6150LE video chip and its companion sound chip. I was able to go into the BIOS and re-enable the sound chip.

The only disappointment so far is the wireless keyboard/mouse. At a distance of 8 feet, they are both very intermittent. If I have them right next to the wireless receiver on the PC, they work, but that's not how it was planned to work. I'll try changing the channel my Wireless N network uses to see if that resolves what looks like interference. If not, I may have to regroup on either how to network or on my choice of wireless keyboard and mouse.