Radified Guide to ASPI

The term '**ASPI**' is an acronym that stands for: **A**dvanced **S**CSI **P**rogramming **I**nterface. All the following terms are synonymous: **ASPI layer**, **ASPI drivers**, **ASPI interface**. The term '**SCSI**' [scuzzy] is an acronym that stands for **S**mall **C**omputer **S**ystems **I**nterface.

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An **ASPI layer** consists of four files [see gray box below] that 'lie between' various programs [software] and certain devices, such as CD/DVD-ROM drives and CD/DVD burners/writers [hardware]. Software programs such as CD digital audio extractors **[**commonly known as 'Rippers'**]** and CD-writing utilities such as CDRWin use/require **ASPI drivers** to 'communicate with' SCSI devices.

Many people don't realize however, that the files contained in an **ASPI layer** are also used in systems that *don't* contain a SCSI adapter, or SCSI devices .. for things such as ripping CD audio and burning CD/DVDs, which is why you'll find **ASPI** -related files and info posted at sites such as CDRWin , Nero , Feurio , Doom9 and FireBurner . Let's get busy.

It's not vital you know this, but **ASPI drivers** consist of the following four files (with directory locations):

Windows 98 / ME:
- windows\system\iosubsys**apix.vxd**
- windows\system**aspienum.vxd**
- windows\system**winaspi.dll**
- windows\system**wnaspi32.dll**

Windows 2000:
- winnt\system32\drivers**aspi32.sys**
- winnt\system**wowpost.exe**
- winnt\system**winaspi.dll**
- winnt\system32**wnaspi32.dll**

Windows XP:
- windows\system32\drivers**aspi32.sys**
- windows\system**wowpost.exe**
- windows\system**winaspi.dll**
- windows\system32**wnaspi32.dll**

The latest **Adaptec ASPI layer** [for Windows XP] looks like this:

Version info for Windows 2000 should show the middle two files listed as v**4.60** [like this], or at least that's what the aspiinst.pdf file says that comes with the latest ASPI layer drivers [v4.71.2]. If your ASPI-installation info doesn't look like this, it doesn't mean there is anything necessarily wrong with your system configuration. But if you're having trouble ripping or burning, I might be able to help.

Note: In order to get *wowpost.exe* and *winaspi.dll* updated to the latest version, I had to **rename** the two files in the 'adaptec' folder: wowpost.ex_ becomes wowpost.exe, and winaspi.dl_ becomes winaspi.dll. Then I manually copied these two files to my \system folder. But first I renamed the current ones to wowpost_old.exe and winaspi_old.dll, so I could go back if I had any problems. I got this tip from Hendrick. Steve Ryan writes to say:

> Adaptec compressed **wowpost.exe** & **winaspi.dll** in their download - calling them wowpost.ex_ and winaspi.dl_. Although ASPI_check notes them as v4.71.2 when compressed, they are really v4.60 when uncompressed using the expand utility. I confirmed this using the Nero InfoTool program.

If you experience problems with this ASPI configuartion, you have several options to consider. First: If you can't see your CD-ROM or burner [in Windows XP], you might want to try double clicking on the **reg_xp.exe** file that comes with the latest drivers from Adaptec. This will tell your system that you have a burner and CD-ROM and where they are located [logically]. I would expect these types of problems to be more common with brand-new systems [no previous ASPI layer installed].

You might also want to try manually deleting *wowpost.exe* and *winaspi.dll* in WinXP, as some people claim that WinXP doesn't need these two files. But try beginning with all **4** files first. Read the posts by Hendrik here for more info along these lines. Or you can try reverting back to the old, stable v**4.60** using **ForceASPI** [see below].

> Update 29oct2002 - Adaptec released v**4.71.2** of its ASPI drivers (thx Tarrant). See here. Anyone having problems with these new drivers?

You can download two different copies of *Adaptec's ASPI checker* from my Downloads page. This utility will scan your computer and report what version of **ASPI drivers** are currently installed in your system.

If you are have trouble ripping and/or burning with WinXP, v**4.71** [or later], you might want to check out this file. It contains a registry fix that might help. It didn't help me. I found it while searching the CDex FAQs.

Update 02apr2003 - I have gone back to **v4.60** in WinXP because neither of my two favorite CD audio rippers [EAC & CDex] work with v**4.71.2**. They both lock up (not responding). I'm not sure why. Soon as I installed v4.60 however [via ForceASPI], they both worked flawlessly again.

First I backed-up my current ASPI layer [via DUMPASPI]. Then I removed my old ASPI layer [via KILLASPI, because Windows will not let you replace system files with older versions]. Finally I re-installed v**4.60** [via INSTASPI] and then rebooted. Voila! Both rippers work again. It's magic.

Force ASPI

ForceASPI is a popular utility that will install version 4.60 (1021) of **Adaptec's ASPI drivers**, *without* an Adaptec card or software in your system [hence: force]. **Force ASPI v1.7** is the latest version. Many folks, such as those at Sony and Adobe, find these drivers work best. If the latest version is giving you headaches, definitely give these a try.

Force ASPI will also *back-up* your current **ASPI** configuration. So, if you encounter problems, you can easily restore your original **ASPI drivers**. The command *dumpASPI* creates a backup of your existing **ASPI layer**.

You can also back-up your current ASPI configuration by copying files [individually] listed above to a back-up directory of your choosing [such as **aspi_old**].

[While we're on the subject of **back-ups**, I want to mention <shameless plug> my User's Guide for Norton Ghost. Ghost is perhaps the ultimate back-up utility for the home user. </plug> Back to Force ASPI...**]**

The command *instASPI* will install version 4.60 (1021) of **Adaptec's ASPI drivers** to your system. ForceASPI works with Windows 98, WindowsME, Windows NT, and Windows 2000 .. regardless of your particular system configuration. It also works fine with Windows XP, as reported by many happy WinXP users.

Your existing **ASPI layer** will be *overwritten* and you'll *need to reboot* before changes take effect. The file named *index.html* that comes with ForceASPI contains all the instructions you'll need. It looks like this.

You can download Force ASPI **here**, or from doom9 (listed under *Support Utils*, near the bottom), or a million other places. Wimpy was the original author of ForceASPI, but his site is no longer operating. [I want to give credit where credit is due.]

An Alternate Method

You can also install the latest **Adaptec ASPI drivers** *without* the requisite Adaptec hardware or software in your system, by 'virtually' installing an *Adaptec 2940 SCSI adapter* (even if you don't actually have one).

Do this by opening your *Install New Hardware* wizard: Start > Settings > Control Panel > Add/Remove Hardware. This will trick your system [and the ASPI32.exe installer program] into *thinking* you have an Adaptec SCSI card installed in your system.

After you have 'virtually' installed the phantom Adaptec SCSI adapter, you will be able to install the **Adaptec ASPI layer**. You can download this file directly from the Adaptec site: ASPI32.exe installer for ASPI Layer 4.60 (1021) [that link may no longer be valid]. Note the **Caution!** from the *ASPI layer 4.60 download installer* page linked above:

> "Do NOT install ASPI32.EXE with Windows 2000, Windows ME, or Windows Media Player 7.0. If you have one of these applications (or OS), you will be using a different ASPI layer that will conflict with this one."

Many people have reported using these **Adaptec ASPI layer 4.60 drivers** with a variety of operating systems, including Win98, WinME, Win2K, and WinXP .. all with NO PROBLEMS.

I've heard many people say things like, "*All my ripping and burning problems disappeared once I updated my ASPI drivers to v4.60 (1021).*" In fact, I haven't heard of a single problem. I use them myself, with W2K, WME and WXP. When you consider that my system contains multiple SCSI hard drives, a SCSI burner & CDROM, you can see that these ASPI drivers from Adaptec get the job done without generating conflicts.

After installing/updating your **ASPI layer drivers**, you can then remove/delete the phantom (virtual) Adaptec hardware from your system (via your *Device Manager*).

I forget where I learned this trick. Plextor support, perhaps. **ForceASPI** is easier & quicker, which is why I recommend that route. People who are uncomfortable using 'hacked' software [ForceASPI] might prefer this alternate method, even tho it's a bit more complicated.

Another trick is to download and decompress Adaptec ASPI layer v4.71.2 **[**the executable decompresses to a default folder named "\adaptec\aspi"**]**. Rename WNASPI**XP**.DLL to WNASPI**32**.DLL and copy this renamed file to your \windows\system32 directory/folder. You should then be able to download and install Adaptec ASPI layer v4.60 without a qualifying Adaptec product installed in your system.

This method has only been tested/verified with Windows XP. If anyone verifies that it works for Windows 2000, let me know. Note that there is also a file named WNASPI2K.DL_ that comes with the Adpatec ASPI drivers v4.71.2. I would expect this to be the one to use [renamed to WNASPI32.DLL .. but I could be wrong].

Burning & Ripping with Force ASPI

I regularly rip CD audio with Exact Audio Copy, and burn CDs using a variety of software programs such as: Nero Burning ROM, Fireburner, BlindWrite, Feurio, Jeff Arnold's CDRWin (Goldenhawk), Plextor's PlexTools, and CD Architect, Alcohol 120% .. and a few others - all with NO PROBLEMS.

I use a Tekram DC-390U3W SCSI controller. Note that **Adaptec ASPI drivers** work fine with a non-Adaptec SCSI card. The SCSI standard is apparently well defined.

If you still have problems ripping or burning *after* installing the latest **Adaptec ASPI layer drivers**, it's usually due to a problem with your burner or CD-ROM drive. It might be a good idea to try ripping with a program such as AudioCrusher, which doesn't require/use an ASPI layer. Perhaps you might try updating your drive's firmware. Or perhaps you installed a program that loads proprietary drivers for *packet-writing* software.

For info on the kinds of problems this can cause, check out the FireBurner FAQs. Scroll down about halfway & read the answer to the question: *Will Fireburner co-exist peacefully with other CD-R software?* UPDATE: Seems the folks at IgD Software, who develop Fireburner, are in the process of redesigning their site, and I can no longer find the Fireburner FAQ. It was nice, little explanation about the problems packet-writing software can cause.

Another potential problem might come from installing *both* Adaptec's (now Roxio?) and Nero's burning software in your system. I wrote to both Adaptec and Nero's tech support groups, and they both confirmed that there is indeed a **driver conflict** between the two programs.

The solution offered by each tech support group was: *don't install the other company's software* (duh). There are some workarounds available, but these digital gymnastics weren't worth the hassle.

I've never used Adaptec's (Roxio's) burning software, which is designed for the beginner. It's popular cuz it's easy to use, and comes free with many burners. My information dates from well over a year ago, so perhaps this driver conflict has since been resolved. Reader have recently written to say the problem has been resolved, while others say it hasn't.

Plextor drives are generally considered the best rippers (DAE) & burners. See here for more info about -> **[**Ripping CD Audio with Exact Audio Copy**]**.

Using Non-Adaptec ASPI Drivers

Companies other than Adaptec (such as LSI Logic, for example) also write **ASPI drivers**. These other **ASPI drivers** *should* work fine .. but you don't have to use a PC for very long to know that things don't always work the way they should. =/ Can I get an amen, somebody?

There is a chance that the particular burning or ripping program that you use was developed [by program developers] using **ASPI drivers** *different* from the ones you're currently using. If your **ASPI drivers** are different from those used by the developer of your particular burning or ripping software, there's

a chance that your system may experience quirky compatibility problems.

I've even seen instances where a *different version* of the same brand of ASPI drivers (Adaptec) generated quirky compatibility issues with a particular ripper. Adaptec's ASPI drivers are the closest thing there is to a *standard*. At one time, the '**A**' in **ASPI** stood for **A**daptec.

USB/Firewire devices

Update 15may2003: Dick Johnson writes to say:

> I run both Win2K and XP. According to Goldenhawk, using all four Adaptec ASPI drivers won't work with *any* USB or Firewire devices. Their proposed solution is to use the Nero driver wnaspi32.dll in Win2K/XP, which supports all CD/DVD recorder interfaces.
>
> I just replaced this file in my WINNT\system32 folder and it solved the problem I had with my USB burner. Note this Nero driver won't work in W98/ME! My ASPI layer looks like this:
>
> ASPI32.SYS [Adaptec] 4.71.2
> WOWPOST.EXE 4.6 (1021)
> WINASPI.DLL 4.6 (1021)
> WNASPI32.DLL [Nero] (2.0.1 = 131072 bytes)
>
> Now I use the following software without a problem: Roxio 5 & 6, Nero, CDRWin, CloneCD, Alcohol 120, Musicmatch 7.5, Burn to the Brim, Click-n-Burn Pro, DVDXCopy, NTI, Plextor, Power CDR Express, Total Recorder, Fireburner, Veritas, Sonic, and a few others.

If you have trouble downloading the file from Nero, I've mirrored it here: wnaspi32.dll [156-KB, v2.0.1.59]. Another reader wrote to say:

> WXP uses a SCSI "Pass Through" Interface which does not require wnaspi32.dll unless a SCSI host adaptor is installed. Then the proprietory drivers should be used.
>
> The only driver required, that is 100% safe (it seems), is the Ahead **wnaspi32.dll** copied into the \system directory, regardless whether Nero is installed or not. It more forgiving than the Adaptec version.
>
> Other versions of wnaspi32.dll should be avoided as they are not compatible with XP's deep level of hardware access.
>
> Anyone with Nero installed on an XP system will find that disabling *IMAPI services* will allow their PC to start faster. Nero will also start faster, since it will be able to scan the bus faster.

Fireburner ASPI with Windows XP

I heard reports of problems with Fireburner when it is used in systems running Windows XP. Fireburner is apparently a front-end for **ASPI**, and Windows XP won't let you access **ASPI** as a *User*. The solution is to log in as an *Administrator*. The folks at Fireburner are reportedly working on a fix, and may already have one.

Dusty wrote to say that he got Fireburner to work with Windows XP by copying the following files to the Fireburner folder:

> 1. **wnaspi32.dll** (one copy in *system32* folder; another in *Fireburner*)
> 2. **xaudio.dll**

You can download these files here (199KB), compliments of Dusty. He even included a nifty **.**nfo file containing quick-n-dirty instructions. [You can open his **.**nfo file with any text editor, such as NotePad.]

Update 02feb2002 - The nice folks at Firburner sent word that Fireburner no longer requires ASPI drivers for Win2K or WinXP.

More ASPI-related Info

Learn more about the wonderful world of **ASPI** at Bart's, .. Computall, .. Plextor,.. Terry Burke's,.. Chicken Systems and Mike Richter's. For your hypertext convenience, this **ASPI guide** can be found at any of these fine Radified URLs:

- **[**http://aspi.radified.com/**]**
- **[**http://aspi.radified.com/aspi.htm**]**
- **[**http://radified.com/ASPI/aspi.htm**]**

It has become surprisingly popular since search engines discovered it. Try searching for **ASPI** in either Google or Yahoo, and you'll see what I mean. It began as a short note, containing a few links, to a computer-illiterate friend who was having trouble burning CDs. It has since become the site's second most popular feature, and is currently translated into more languages [such as German, French and Italian] than any other Radified guide. Only the Norton Ghost User's Guide is requested more frequently.

Before closing, I want to mention <shameless plug> a few other Radified guides you might find helpful. For example:

- **[**Doc's FDISK Guide to Hard Drive Partitioning**]** is referenced by several Universities.
- Doc's guide comes with a companion titled **[**Hard Drive Partitioning Strategies**]**.
- The newest feature is a **[**Windows XP Installation guide**]**. </shameless plug>

If I did a good job explaining the **ASPI** mojo, you shouldn't have any further questions. But if you do, I started a thread in the Rad forums, where you can post your ASPI-related queries or share insights I might've overlooked. **The end**. Happy ripping & burning.

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