

Creating a Recovery Disk

Odds are your [computer](#) came with a recovery disc, a CD with all the programs and drivers that were installed on your PC's hard drive when it was new. And odds are you have absolutely no idea where that disc is.

The good news is that it probably doesn't matter. First of all, the recovery media most PC manufacturers provide is designed for a singular purpose: to restore your computer to the state it was in when you bought it. This process typically involves wiping your hard drive (say bye-bye to your spreadsheets and vacation photos) and then reinstalling Windows and the handful of programs originally included with your system.

Second, the [hardware](#) drivers on your recovery CD are almost certainly out of date, either made obsolete by newer and better versions available online, or simply irrelevant to new hardware you've subsequently installed.

Instead of fretting about the old recovery CD you lost (or perhaps never got), why not take a few minutes and make one of your own?

Ideally, a recovery disc should act as a safety net should anything disagreeable happen to your PC's hard drive or its data. (Think crash, virus, spyware attack, driver corruption, and so on.) A good recovery disc allows you to reinstall Windows to fix a minor problem or rebuild your PC from scratch to recover from a major one.

Here's the problem: Once you upgrade your XP installation to Service Pack 3, Windows won't ever allow you to install an older version (including earlier editions of XP) without either wiping the hard drive clean or installing to a different drive. Even if you do install "fresh," you'll still have to then endure a separate SP3 upgrade. The solution is to create a new hybrid installation disc from whatever installer CD you have and a special version of SP3, using a process known as *slipstreaming*.

Step 1: Take Stock

To prepare a recovery CD, you'll need only three things: a [Windows XP](#) install CD (any edition), a valid Windows product key, and about 1.5 gigabytes of free space on your hard drive. Of course, as with many recipes, procuring the ingredients is often the hardest part.

The install CD can be any version, including Service Pack 2, Service Pack 1, or the original release from 2001. If you already have a disc labeled "Windows XP with Service Pack 3" (as opposed to merely an SP3 *update* disc), then you don't need this procedure. Go ahead and [read another story](#).

The CD can be difficult to come by if you bought your PC with Windows preinstalled, mostly because so many manufacturers omit [Microsoft's](#) installer CD these days in favor of some sort of customized "express install" recovery disc. (This is done for a variety of reasons, including to simplify customer support and also, in the penny-pinching tradition, to reduce Microsoft licensing fees.) Some PC

manufacturers are service-conscious enough to send a true XP CD to any customer who asks for one, but if you're not so lucky, you can get a genuine disc on eBay for as little as \$10.

The 25-digit key, of course, you should already have handy if you own a legal license to the [software](#). If XP came with your PC, it's printed on a sticker somewhere on the PC case; if you bought XP, it's on a sticker on the CD sleeve. (You may also have been compulsive enough to save the hologram-laden Certificate of Authenticity, which should have the key as well.) If you can't find it, contact your PC's manufacturer or, barring that, Microsoft for a proper key. You might also try the simply awesome (and awesomely named), open-source [Magical Jelly Bean Key Finder](#), a tiny little utility whose sole purpose is to find the registration keys hidden away in your Registry.

Step 2: Slipstream Service Pack 3

To create a slipstreamed XP SP3 CD, first create a new folder called *XP* in the root folder of your hard drive. Insert your original XP CD, start Windows Explorer, and then [navigate](#) to your CD drive. Highlight everything in the root folder of the CD, and copy all of it to the C:\XP folder you just created.

Next, create a second new folder alongside C:\XP, and name it *SP3*. Go to download.microsoft.com, type *sp3 network install* into the search box, and click the link for [Windows XP Service Pack 3 Network Installation Package for IT Professionals and Developers](#) in the search results. Download the 324MB file, *WindowsXP-KB936929-SP3-x86-ENU.exe*, and save it to the new C:\SP3 folder.

From the *Start* menu, select *Run* (or press Windows key-R). Type the following command at the prompt and click *OK*:

```
c:\sp3\WindowsXP-KB936929-SP3-x86-ENU /integrate:c:\xp
```

Type the entire command on one line with only a single space between *ENU* and */integrate*—there should be no spaces surrounding the colons.

If all goes well, the process should take a minute or two and then conclude with a simple "Completed" message box. Otherwise, if you see an error, here's what it means:

Failed to copy some or all of the files necessary for integrated install: This can happen for any number of reasons, most likely because you mistyped the */integrate* command. But do make sure you have plenty of free hard drive space, and that all of the files from your older XP CD are present in the C:\XP folder.

...is not recognized as an internal or external command: Either you mistyped the SP3 update filename, or you didn't save it in the C:\SP3 folder.

...is not a valid Win32 application: This error usually means the file you downloaded is corrupt, or has not finished downloading. Delete the file and try downloading again.

...not the correct version: You're trying to slipstream the U.S. English version of the SP3 update with a non-English copy of Windows XP, or vice versa. Just return to the Microsoft download page, choose your language from the *Change language* list, and download the correct file.

Step 3: Bootstrap and Burn

You're not done with your old XP disc yet; you still need to pull the boot loader off the old disc so you can make the new one bootable.

The easiest way to do this is using ImgBurn, available free from www.imgburn.com. Install ImgBurn, start the app, and click *Write files/folders to disc* on the first screen. Choose the *Advanced* tab, followed by the *Bootable Disc* tab, and from the *Extract Boot Image* list select the drive containing your XP disc. Click the *Save* icon and save the *BootImage.ima* file to your *C:\SP3* folder.

Now it's time to burn a new CD. You'll need CD-burning [software](#) capable of creating a bootable CD, such as ImgBurn, Nero Burning ROM (part of [Nero 8 Ultra Edition](#)), or [Roxio Media Creator](#), and you'll need to customize the burning settings carefully.

If you're using Roxio or Nero, choose *Bootable CD* or *CD-ROM (Boot)*, respectively, from the list of project types. Or, if you're using ImgBurn, choose the *Advanced* tab, followed by the *Bootable Disc* tab, and turn on the *Make Image Bootable* option.

Next, use `0x7C0` for the load segment, and 4 for the sector count. Make sure you're using the Joliet [file system](#), and if prompted to choose a bootable disc emulation type, select *no emulation*. Specify the *BootImage.ima* file you just created as the boot image; copy the CD volume label from your original XP CD, and paste it as the disc label for your new project.

Drag the entire contents of the *C:\XP* folder into your CD project and burn the CD. For good measure, use a Sharpie pen to write your XP key right on your CD, and then put the disc in a safe place for that rainy day.