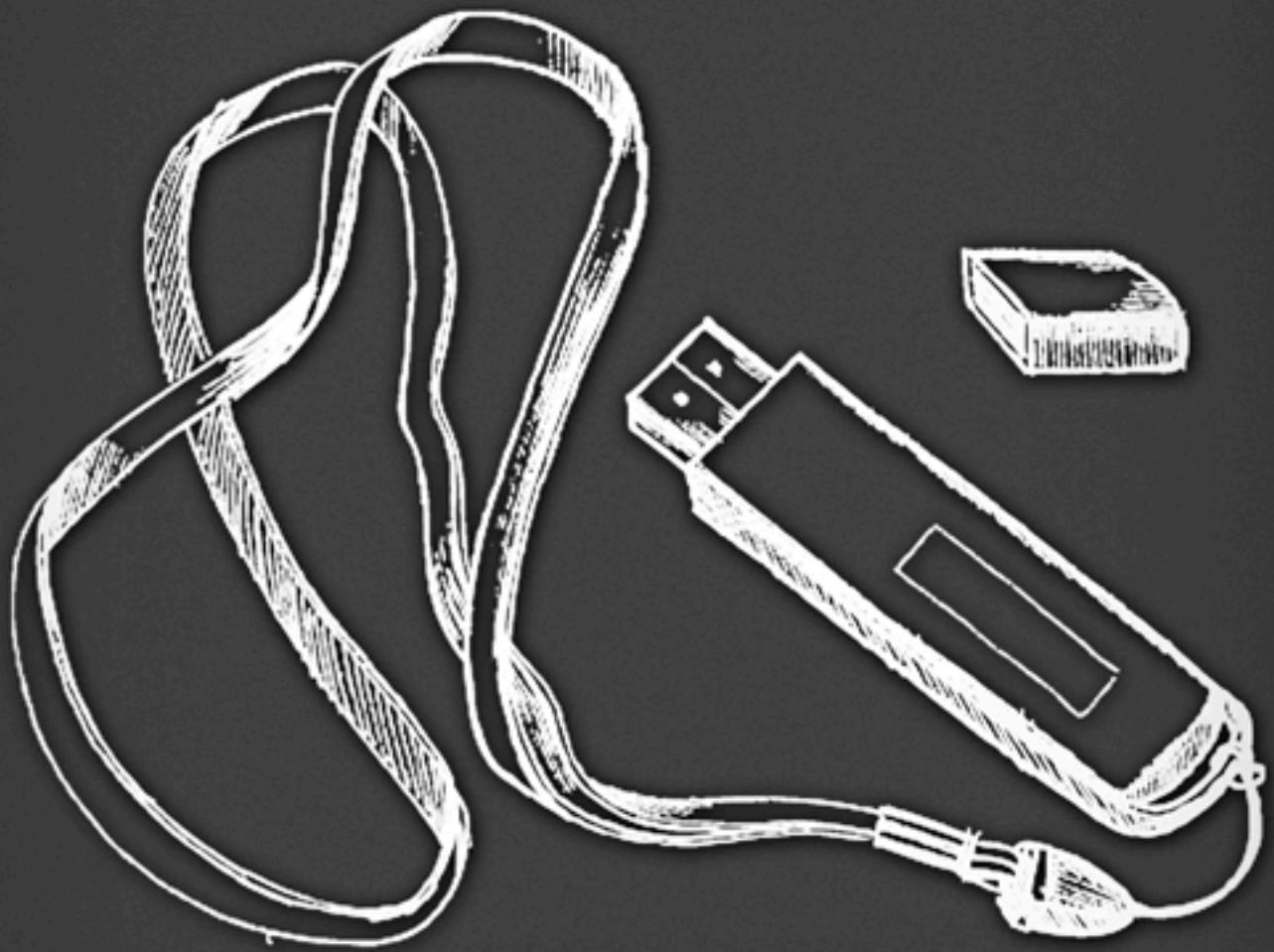


# the office worker's guide to a usb thumb drive



written by  
tina sieber

By: Tina Sieber  
MakeUseOf.com

This manual is intellectual property of MakeUseOf. It must only be published in its original form. Using parts or republishing altered parts of this guide is prohibited.

## Table of Contents

Introduction and Technical Background.....	5
What is a USB flash drive? .....	5
What is a memory stick used for? .....	6
What should I know before buying a thumb drive? .....	7
Case:.....	7
Capacity: .....	7
Transfer rate: .....	8
What type of flash drive do I need? .....	10
Generic .....	10
High Performance.....	10
Secure.....	11
Durable.....	12
Working With Your USB Flash Drive.....	13
Flash Drive 101 .....	13
Formatting.....	13
Remove Flash Drive .....	15
Backup and Synchronize Your Files .....	16
How to Set Up and Use SyncToy .....	16
Setup SyncToy AutoPlay in Windows Vista and Windows 7: .....	18
Setup SyncToy AutoPlay in Windows XP:.....	21
Alternative Backup and Sync Tools .....	23
How to Keep Your Data Safe.....	24
Never Forget Your Flash Drive .....	24
Encrypt and Password Protect Your Data.....	25
Use Your Thumb Drive to Lock Your PC.....	28
Securely Wipe Data From Your Flash Drive .....	30
Recommended Portable Apps .....	32
Firefox Portable .....	32
Thunderbird Portable.....	32
Open Office Portable .....	33
Toucan.....	34
How to Speed Up Your Computer with Virtual Memory .....	36

Windows Vista and Windows 7 .....	36
Windows XP.....	38
Summary .....	39

# Introduction and Technical Background

---

The present guide provides a thorough introduction to USB flash drives for office workers. Being written with a broad readership in mind, the guide is equally suited for the newbie, as well as the more experience user. The novice will appreciate the detailed explanations and instructions, while the old hand will discover many useful tools and tricks along the way.

Before you invest in a new piece of hardware, it is important to understand its characteristics. Like any other device, not every USB thumb drive is the same. Apart from coming in all shapes and sizes, they also sport various inner values, for example transfer rates or the presence of hardware encryption. Whether or not you want to spend the cash for these extras depends on what you're planning to do with your flash drive. This is where we try to help you understand the benefits of these features and subsequently make a decision.

Once you start playing with the new toy, you will wonder what you can actually do with it other than store data. We show you how to properly work with your hard drive and which mistakes to avoid. This guide also shows you how to backup, sync, or secure your data. Moreover, you can use your flash drive as a key to secure your computer. And finally, you can speed up your computer by outsourcing virtual memory to your thumb drive. Whether you use Windows XP, Windows Vista, or Windows 7, this guide provides solutions for all three operating systems.

## What is a USB flash drive?

A USB flash drive (UFD) is a compact portable device used to store data. It pairs a USB (Universal Serial Bus) interface with a flash memory data storage unit. The USB flash drive is also known as memory stick, key drive, jump drive, or simply USB drive. The shape typically resembles a human finger or thumb, hence also the name thumb drive.



Image credits: [Ramasamy Chidambaram](#)

Technically, a UFD is not a drive because the flash memory technology is purely digital, meaning it does not contain any moving parts. Flash memory is non-volatile, i.e. it does not need power to maintain the stored information. On the one hand, these characteristics make flash drives less prone to physical damage and on the other hand they are perfectly silent. The term *flash* indicates that blocks of data are erased and reprogrammed in a flash, rather than deleting them one byte at a time.

For a more in-depth review of the technology and history behind USB flash drives, please refer to the following Wikipedia articles:

**USB flash drive:** [http://en.wikipedia.org/wiki/USB\\_flash\\_drive](http://en.wikipedia.org/wiki/USB_flash_drive)

**Flash memory:** [http://en.wikipedia.org/wiki/Flash\\_memory](http://en.wikipedia.org/wiki/Flash_memory)

### What is a memory stick used for?

The original purpose was to transfer small amounts of data between computers, e.g. documents or media files. But with the rapid growth of their storage capacity, alternative ways of using these devices have opened up. People no longer just store data on flash drives, they also run applications from them, enhance the performance of their operating system, or boot an entire operating system from the stick. UFDs can be powerful tools if you know how to use them. This guide focuses on how you can get the most out of your memory stick to enhance your work.

# What should I know before buying a thumb drive?

Before making a purchase, three important characteristics must be considered: case, capacity, and transfer rate. Last but not least, the price decides which model offers the best value.

## Case:

The case should be durable, provide a hook to attach a lanyard, and most of all, the shape should not interfere with its use! A massive thumb drive may not fit into a USB docking station or block surrounding USB ports. Smaller devices will usually fit anywhere. Besides, they tend to be lighter and easier to carry around.

### TIP

Make sure you get a slim flash drive, so that it won't block nearby USB ports.



Image credits: [Philippe Ramakers](#)

## Capacity:

The latest flash drive model from Kingston can store 256 GB. Affordable models range from 2 to 16 GB. What size you go for depends on two factors: what is the intended use and how much can you afford? The table below provides some orientation regarding the size you will need.



Decide how you want to use your flash drive, add up the recommended storage space, and you will know how many GBs your memory stick should have. Keep in mind that it can make sense to purchase more than one thumb drive, e.g. one to transfer files and another to run portable applications and store profile information.

**TIP**

Buy two smaller flash drivers to use for different purposes, e.g. data transfer, data storage, or for running portable applications.

Intended Use	Add Up	Your Notes
Transfer documents	1 to 2 GB	
Transfer photos and music	2 to 6 GB	
Transfer movies	4 to 12 GB	
Run portable applications	1 to 2 GB	
Portable eMails or profile information	1 to 4 GB	
Encrypt and secure your flash drive	1 to 2 GB	
Use as virtual memory or ReadyBoost	1 to 4 GB	

**Transfer rate:**

The transfer rate is the speed at which data can be read from and written to the flash drive. A USB 2.0 interface should not limit the performance of your flash drive because it offers more bandwidth than a flash drive can use: up to 60 Mbyte/s (480 Mbit/s). If your computer is fairly old and only supports USB 1.0, you won't have to worry about transfer rates. USB 1.0 only does 1.5 Mbyte/s (12 Mbit/s), which is way below the average read / write speed of even a low performance flash drive.

The read speed typically is higher than the write speed. Thus the write speed is a limiting factor, especially if you are going to work from and save to your storage device. Read speeds go up to 34 Mbyte/s (272 Mbit/s), while write speeds reach a maximum of 28 Mbyte/s (224 Mbit/s).





Image credits: [Jean Scheijen](#)

The maximum read / write speed is dictated by the type of memory. SLC (single-level cell) stores only one bit of data per memory cell, while MLC (multilevel cell) stores two bits of data per cell. This means that SLC is twice as fast as MLC, yielding higher read / write speeds. Of course it's also more expensive. However, it is worth the investment because with SLC each cell can go through approximately 100,000 cycles of writing and erasing data before failing. Subsequently, SLC lasts about 10 times as long as MLC type memory. Unfortunately, SLC offers less storage space.

If you already have a flash drive and would like to check its speed, check out the tools described in this article from Saikat Basu: [5 Apps to Check the Speed of Your USB Flash Drive](#)

Are you wondering about USB 3.0? Please read my article [USB 3.0: Everything You Need To Know \[Technology Explained\]](#) for all the background information.

# What type of flash drive do I need?

---

The above characteristics can roughly be translated into three different types of flash drives: generic, high performance, and durable. Secure flash drives form the fourth noteworthy category. The below summaries will give you an idea of what you might or might not need.

## Generic

Plastic case, dull design, not very fast, doesn't come with extra features, and offers the best price per MB. When you purchase a generic thumb drive from one of the market leaders, you can still get a high quality product at a very low price. This kind of thumb drive is sufficient for occasional use, especially if you only need to transfer data of little importance or data that is always backed up on another drive.

### TIP

Buy the cheapest you can find, but try to go with well-known brands like Kingston, SanDisk, or Transcend. This should guarantee better quality. Here is a [Top 10 list of Best USB Flash Drives](#) to guide you.

## High Performance

Flash drives that carry the label "high performance" are equipped with higher-binned flash memory chips and better memory controllers, which enable increased transfer speeds.

If you have a need for speed and are going to use the device on a daily basis, you should go for high performance. It also means better quality and will last you longer than a generic model.

### WARNING

Sadly, many thumb drives are labeled "high performance" and no actual transfer rates are displayed. Don't hesitate to ask a shop assistant for help or contact the manufacturer. If you cannot find out the transfer rates for sure, don't buy!

**TIP**

Check the package for the read / write speeds. Specifically the write speed should narrow in on 28 Mbyte/s (224 Mbit/s).

**Secure**

Secure flash drives typically provide hardware encryption via an additional mini processor. This way the flash drive can maintain better read and write speeds than generic drives secured with software encryption. The Advanced Encryption Standard (AES) can encrypt data with up to 256-bit. Access to the data is provided only after inserting the correct password. Some models even go as far as to self destruct, i.e. delete all data, after a wrong password was entered several times. You should opt for a secure flash drive if you frequently deal with sensitive data.

**TIP**

Look for the label “AES hardware encryption” (or similar). A 256-bit encryption is to be preferred, but 128-bit is also ok.



Image credits: [Christian Kitazume](#)

## Durable

These flash drives can have any characteristic of the above described, with one exception: a robust design. They are made to withstand extreme conditions, for example harsh temperatures, extreme kinetic shock, or high moisture. Durable flash drives are typically encased in rubber or metal alloy and may also be watertight. If you tend to carry important data on your flash drive and fear dropping it, throwing it into the laundry, or damaging it in some other way, you might want to invest in a durable flash drive.

# Working With Your USB Flash Drive

---

Basically a UFD works just like any other storage device. However, if you want to do more with it than just store data, you should set it up properly.

## Flash Drive 101

A flash drive is not as sensible as a hard disk, since it has no moving parts. However, it's still a piece of computer hardware, which can break. Hence, your little storage device should never be dropped, get wet, be exposed to extreme heat, or be otherwise maltreated.

Being small comes with its own risks. Like a coin, your thumb drive can disappear quickly. Try to carry it on a lanyard around your neck or attach it to your keys. You should in fact treat a flash drive with utmost care, like your external hard drive, and watch it like the keys to your house.

### TIP

If your flash drive got wet, do not connect it to your computer! An electrical shortcut will certainly destroy the hardware and data on it. Dry the device manually as good as you can, then store it in a dry and warm place (max. 40°C) for at least 48 hours. You could also use a blow-dryer at low or medium heat. When you are sure that residual liquid has dried, you can try using it again.

## Formatting

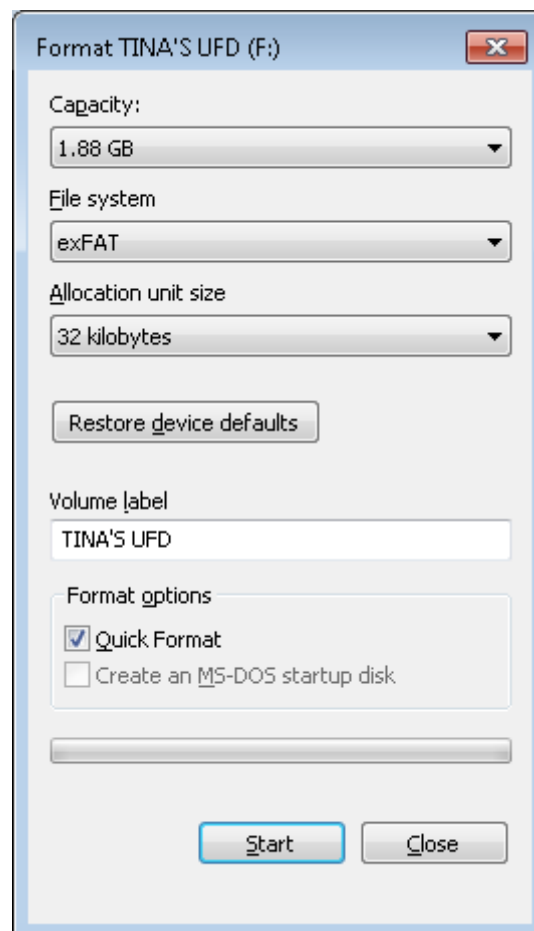
Per default, flash drives are formatted in FAT32. This ensures cross-platform compatibility. However, FAT32 limits the storable file size to 4 GB. If you would like to store larger files on your flash drive, you should reformat it to NTFS. This file system is supported by Windows NT / 2000 and up, Mac (drivers required), and newer Linux distributions. NTFS is not supported by embedded devices, including TVs and media players.

If the flash drive will be used on Windows Vista and Windows 7 computers only, I recommend using the exFAT file format. It was designed for flash drives and ensures best performance.

## WARNING

Windows XP generally does not support exFAT. A flash drive formatted in exFAT will simply not be recognized. However, installing update [KB955704](#) (click the link) from Microsoft will fix this issue.

Before you format, backup any data stored on the drive, including software that came with it. Then go to > *Start* > *Computer*, right-click onto your flash drive and select > *Format...* from the menu. In the > *Format* window select the > *File system* (discussed above) and the > *Allocation unit size*. The latter depends on the average file size you wish to store. The larger the files you wish to store, the larger the allocation unit size should be. If you're unsure, simply go with the default. Click > *Start*, confirm your intend to format the flash drive, and wait until formatting has completed.

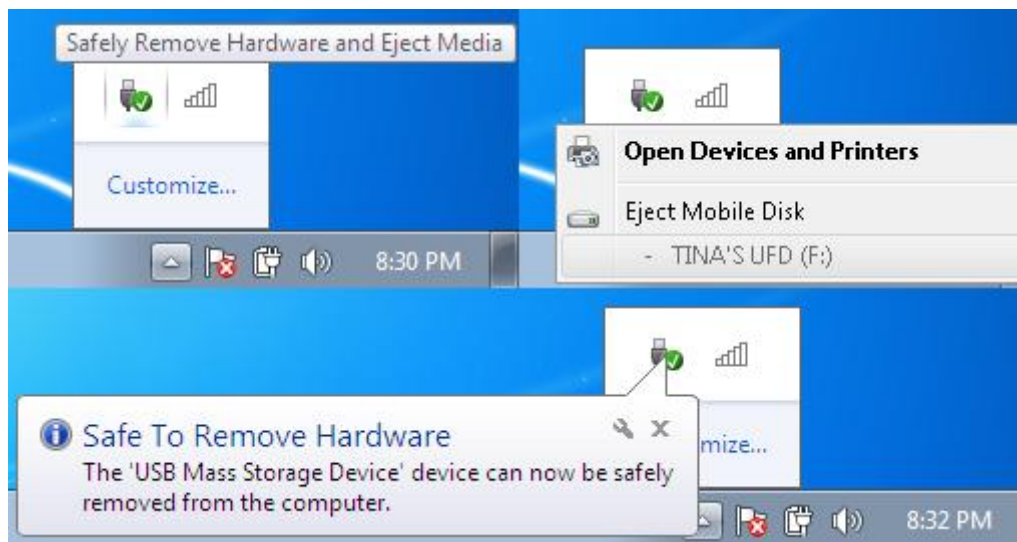


## Remove Flash Drive

### WARNING

To prevent loss of data and extend the life of your storage device, you should never unplug your thumb drive without first ejecting it through the Windows taskbar.

To safely remove any USB drive, close drive folders and all files stored on the device, otherwise Windows will refuse to eject it. Go to the notification area of the taskbar and look for the USB icon. Left-click the icon and wait for a little window to pop up. Then click on the device you wish to eject and wait for the confirmation that it is now safe to remove the hardware.



Should this method fail, i.e. should you receive an error message that the USB mass storage device could not be removed, try the following steps:

1. Close the device folder and all documents or applications running on the device.
2. Try ejecting it again.
3. Close all programs that could potentially access the device.
4. Try to eject it again.
5. If you still cannot eject it, reboot Windows and remove the flash drive after you were logged off.
6. If the issue persists, check whether any installed software on the device continues to connect to Windows. This could be a portable security or backup software installed on the device. Check with the software manufacturer whether this problem is known and how it can be stopped.
7. Last but not least, ask us as [MakeUseOf Answers](#).



## Backup and Synchronize Your Files

Essentially, syncing and backing up files is the same. While a backup generally just works one way, i.e. files on storage device A are copied to storage device B, syncing can work both ways. Syncing provides more flexibility, as you can select various settings to copy files just the way you need it.

If you always want to work with the latest versions of your files, no matter which computer you're currently using, that's when you should sync your files. And if you never want to lose your files due to a hardware failure, you should always have a backup. What if you could use just one tool to achieve both?

There are many free tools to backup and sync your files. I have picked SyncToy because of its clear interface, easy to understand options, and flexibility. Since you can set up many different folders, each with its own sync settings, you can use this one tool to handle both old school backups and efficient synchronization. Alternatives to SyncToy can be found at the end of this chapter.

## How to Set Up and Use SyncToy

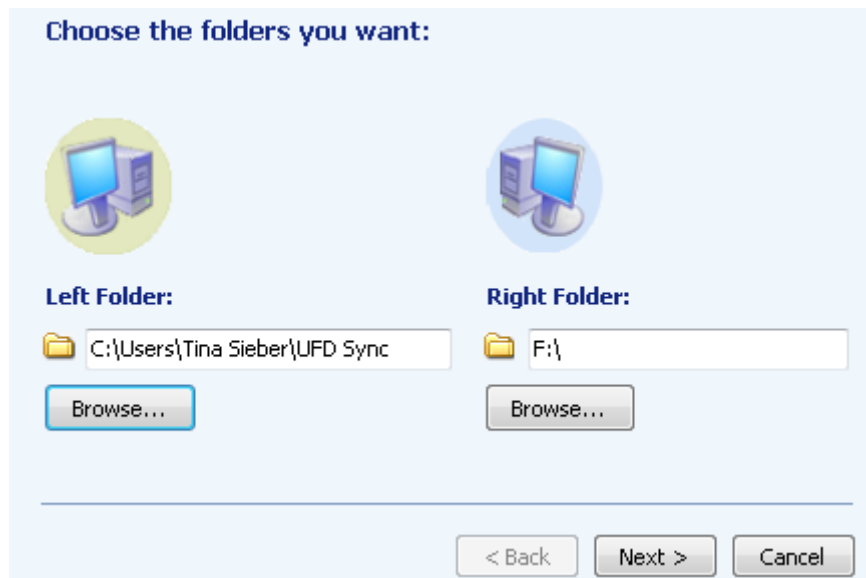
[SyncToy](#) is a small tool from Microsoft that will sync pairs of folders. You can designate your entire flash drive to be synced with a folder on your computer or pick single folders on each side. And as mentioned in the introduction, you can assign different settings to each folder pair.

### Set up Sync Toy in five simple steps:

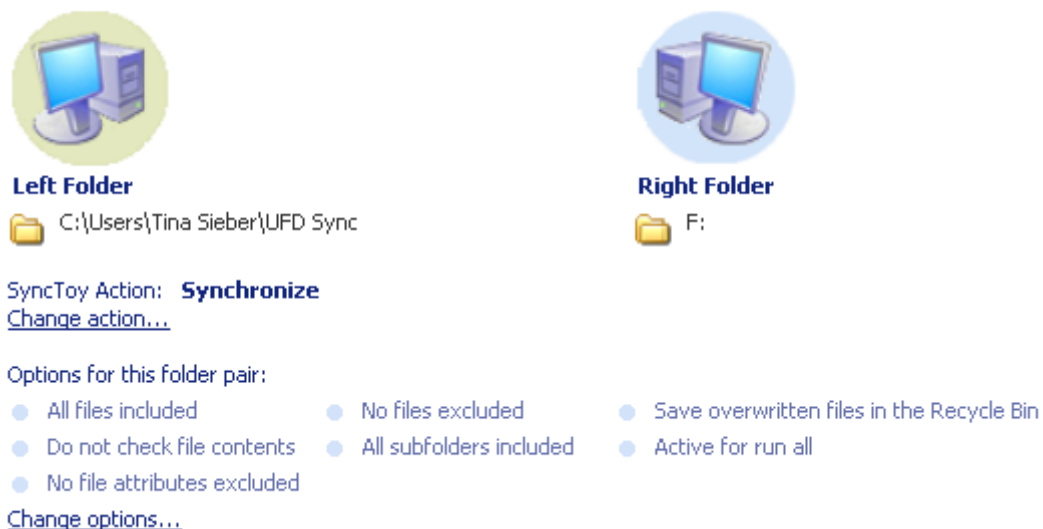
1. Download and install SyncToy.
2. Run SyncToy from the Start Menu.



3. Click on > Create New Folder Pair.  
The left folder represents your computer and the right folder is your flash drive.



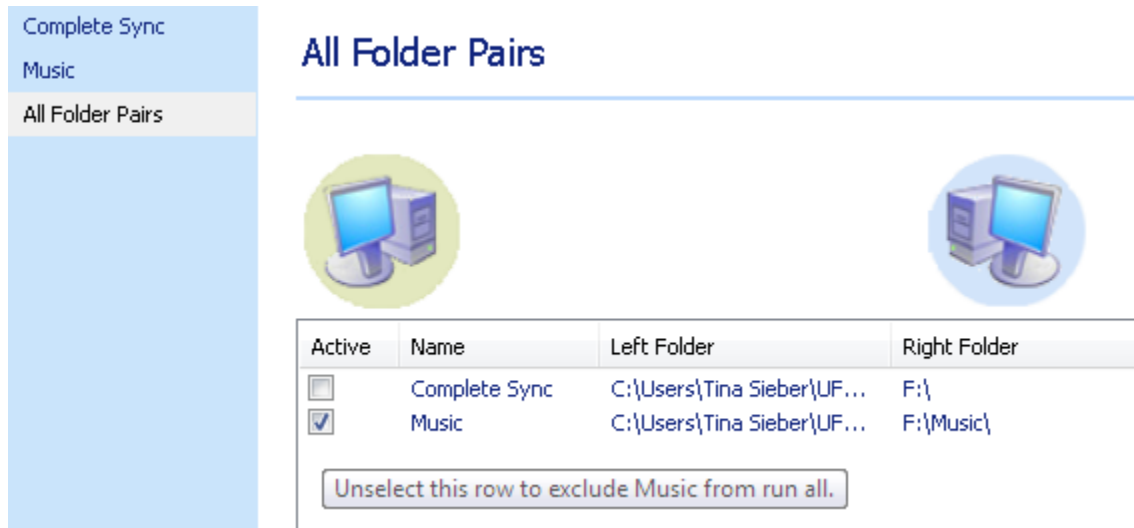
4. Now select the mode of synchronization.
  - **Synchronize** will update all changes both ways.
  - **Echo** will update left to right only (backup).
  - **Contribute** will update left to right, but it will not repeat deletions.
5. Name your folder pair and click > *Finish*.



You can go back and change the action and options anytime.  
You have to set up SyncToy on every computer that you wish to sync your flash drive with.

## Run SyncToy:

1. Select > *All Folder Pairs* or one of > *your folder pairs* from the menu on the left.
  - In **All Folder Pairs** you can select all the folders you wish to sync.



2. Click on > *Run* or > *Run All* in the bottom right.
3. Click > *Close* after the run was completed.

The disadvantage of SyncToy is that it doesn't run automatically. A workaround is to set up SyncToy AutoPlay in Windows, as outlined below.

## Setup SyncToy AutoPlay in Windows Vista and Windows 7:

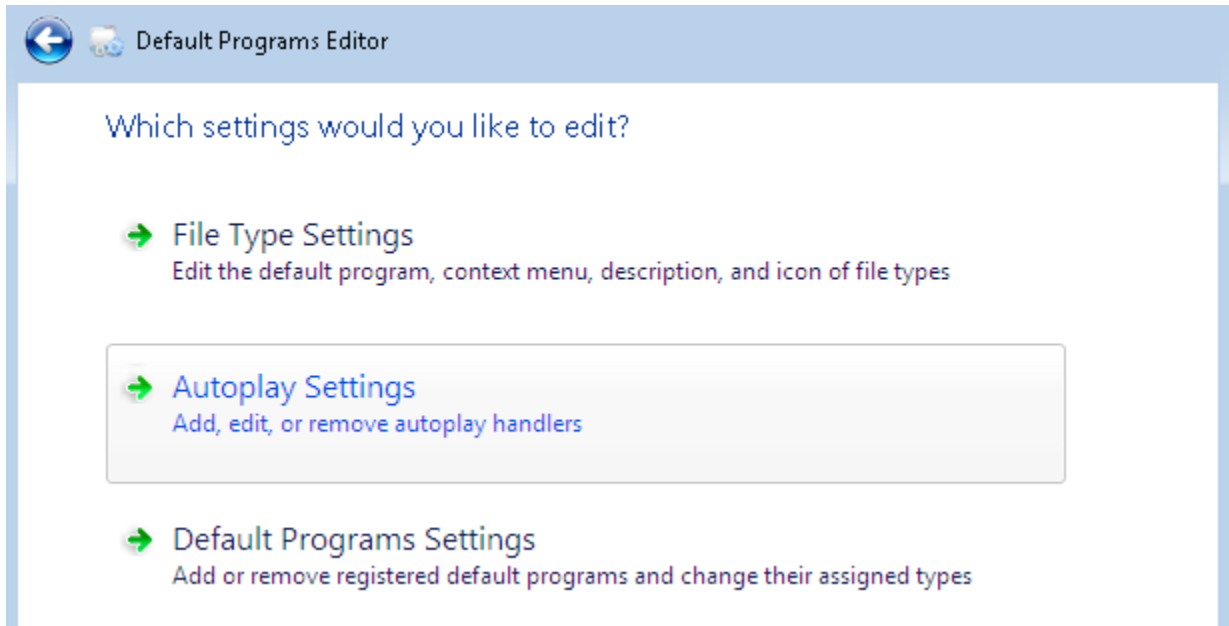
Steps 1 to 6 will add SyncToy as an option to the AutoPlay window that comes up when you insert your flash drive. Steps 8 to 11 will let you autorun SyncToy.

### ATTENTION!

If the AutoPlay window does not come up upon connecting your external storage device, chances are AutoPlay was disabled. Check out one of the following articles on how to disable or enable AutoPlay.

[How to Disable AutoPlay in Windows 7](#) (or Windows Vista)  
[Disable Autoplay of Audio CDs and USB Drives](#) (Windows XP)

1. Download and unpack [Default Programs Editor](#).
2. Run Default Programs Editor and click on > *Autoplay Settings*.



3. Select > *Mixed content* from the Media Type list and click > *Next*.

Media Type	Autoplay assignment
Enhanced audio CD	Do Nothing
Enhanced DVD movie	Do Nothing
EnhancedStorage	Do Nothing
Mixed content	Ask me every time with Windows Explorer
Pictures	Ask me every time with Windows Explorer
Software and Games	Do Nothing
Super Video CD	Do Nothing
Unknown	Ask me every time with Windows Explorer
Video CD	Do Nothing
Video files	Do Nothing

4. In the following window click > *Add* and then > *Add a new handler*.
5. Enter an > *Action name*, click > *Browse* next to the > *Program path:* to point to SyncToy.exe, and click > *Next*.

### Enter new autoplay handler details


Action name:

Program path:

☒ Infer program name from path

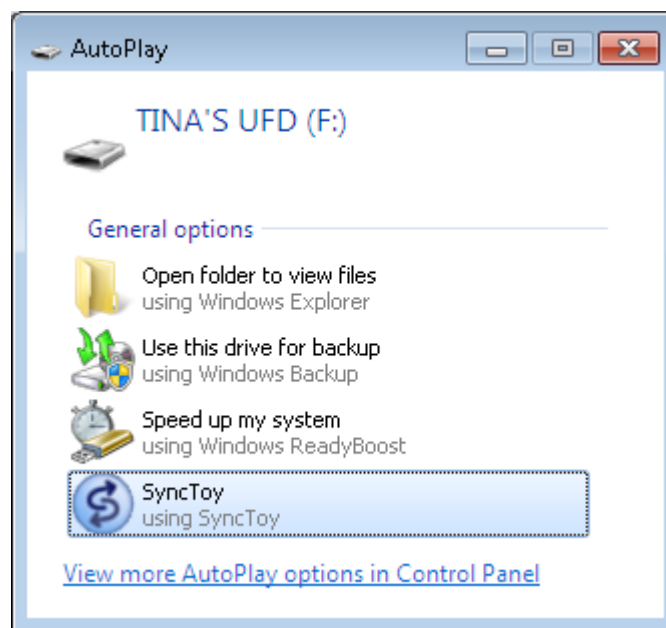
Program name:

☒ Infer icon from program

Icon: 

6. Click > Save Autoplay Settings.
7. Repeat steps 3 to 6 with other Media Types as required.

Now you have added the SyncToy option to the AutoPlay window.



To automatically run SyncToy, complete the following steps.

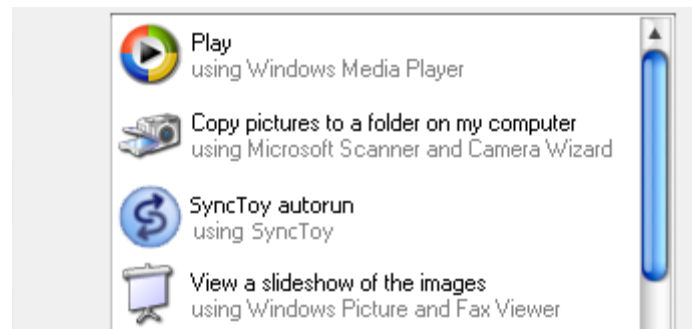
8. Go to > Start > Control Panel > AutoPlay.
9. Browse to the Media Type > Mixed content, select > SyncToy from the dropdown menu.
10. Repeat step 9 with any other Media Types.
11. Click > Save.

## ATTENTION!

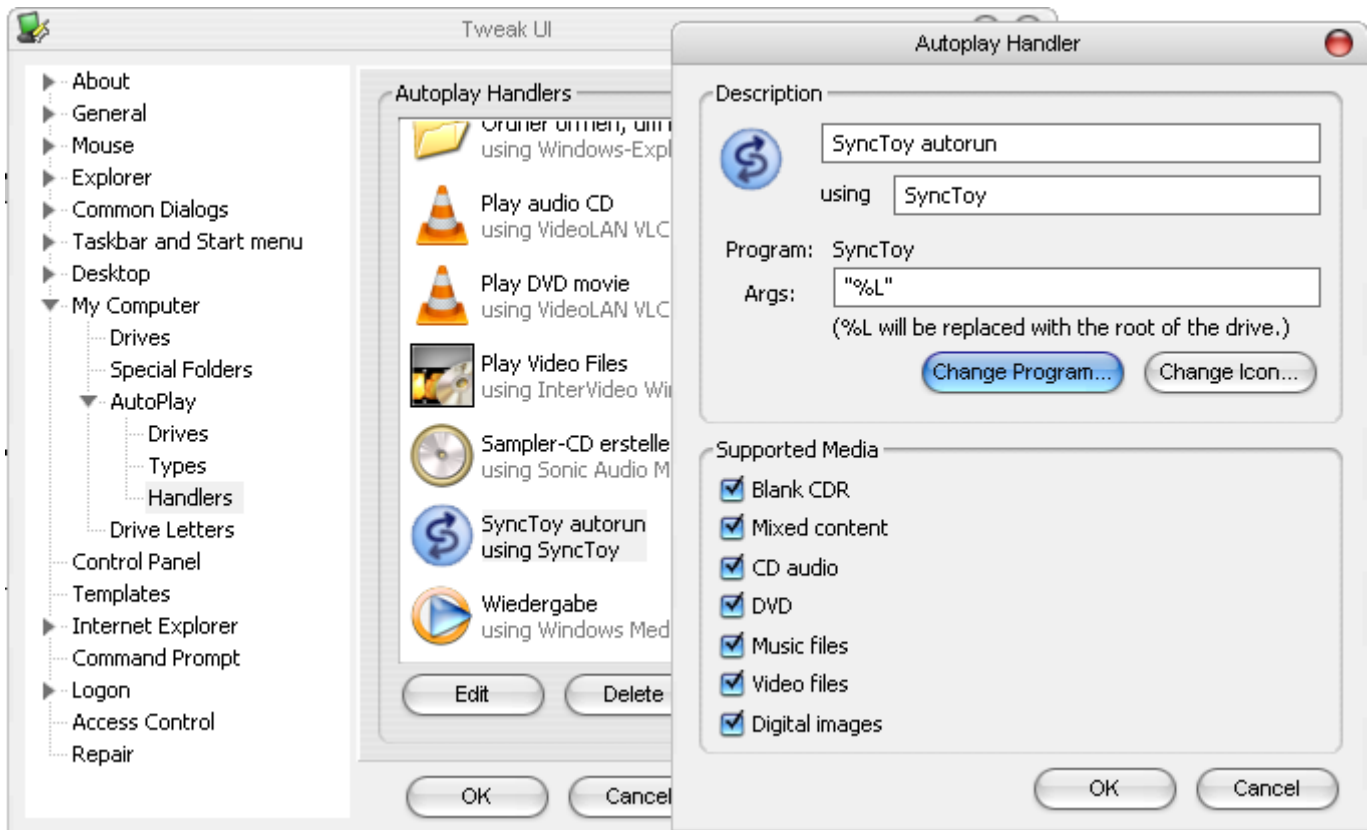
This will only work if you have some files on your memory stick. When you insert an empty memory stick, the AutoPlay window should come up.

### Setup SyncToy AutoPlay in Windows XP:

This will add SyncToy to the AutoPlay window that comes up, when you plug in your thumb drive. It will not sync your files automatically, but it will serve as a reminder.



1. Download [Tweak UI](#) from Microsoft and install the program.
2. Run Tweak UI from the Start Menu.
3. Go to > *My computer* > *AutoPlay* > *Handlers*.
4. Click > *Create* enter a description and SyncToy as the program name.
5. Then click > *Change Program...* and find the SyncToy.exe in the > *Program Files* folder.
6. Next, select all > *Supported Media* and click > *OK*.



7. In the Tweak UI main window click > OK again.
8. Plug in your flash drive.
9. In > My Computer right-click the drive and select > Properties from the menu.
10. Switch to the > AutoPlay tab.
11. Select > Music from the drop down menu.
12. Check > Action to perform, select > SyncToy from the list, and click > Apply.
13. Repeat steps 11 and 12 with all other options from the drop down menu.
14. Finally, click > OK.

As SyncToy is not a portable app, i.e. you install it on Windows, not on your flash drive, you cannot autorun the application. If you are looking for alternative software that can automatically run from your flash drive, have a look at [Toucan](#), which also integrates with the PortableApps.com Suite described below.



## Alternative Backup and Sync Tools

We have covered plenty of them on MakeUseOf. Below is a selection of the best tools and respective articles.

[How to Sync Files between PC and USB Thumb Drive?](#) by Shankar Ganesh

[Backup your Hard-Drive with SyncBack](#) by Mark O'Neill

[Sync Folders With Your USB Drive Using Allway Sync](#) by Paul Bozzay

[Pure Sync: Free Backup and File Synchronization Tool](#) by Stefan Neagu

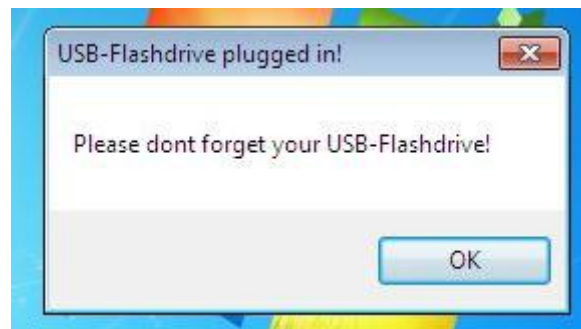
# How to Keep Your Data Safe

Thumb drives are small devices that are easily lost or forgotten.

## Never Forget Your Flash Drive

Whether you're working on a public computer, your laptop, or office PC, you will never want to forget your USB drive when you shut down the computer and head out. There is one little tool that will remind you.

[FlashRecall](#) runs in the system tray. When you try to log off or shut down the computer, it will play a sound and launch a visual reminder that your USB flash drive is still plugged in.



You can run it without administrator rights on Windows XP through Windows 7. However, you have to manually launch the tool when you didn't log into the user account or boot the system with your flash drive already plugged in.

A workaround for this is to use FlashRecall like a protable app and make it automatically insert itself into the Windows AutoPlay window. Just follow these steps:

1. Rename the FlashRecall .exe file to *FlashRecall.exe* and copy it into the root folder of your USB drive.
2. Open a text file and copy the following lines into it:

```
[autorun]
OPEN=FlashRecall.exe
ICON=FlashRecall.exe
ACTION=Flash Recall
```

3. Save the text file *autorun.inf* to the root folder of your flash drive.

When you now plug your USB drive into any computer, the AutoPlay window will show Flash Recall as the very first option. The downside is that you have to manually open the flash drive to access your files.

### ATTENTION!

This trick only works if AutoPlay is enabled (see above). It will not work if an antivirus program blocks autorun.inf. If it doesn't work, you have to manually launch Flash Recall. If it does work, you have to manually close FlashRecall before you can eject your flash drive.

A known issue is that it will only recognize one plugged in thumb drive. You can open the tool to see which drive letter is being monitored.



If AutoPlay is disabled, autorun.inf blocked by an antivirus program, or if you can't be bothered to remember launching the application, invest in a [retractable keychain](#).

## Encrypt and Password Protect Your Data

In the light of identity theft and stolen data, it is incredibly important to encrypt your flash drive. In case your flash drive is lost or stolen, it will prevent or at least make unauthorized access very difficult.

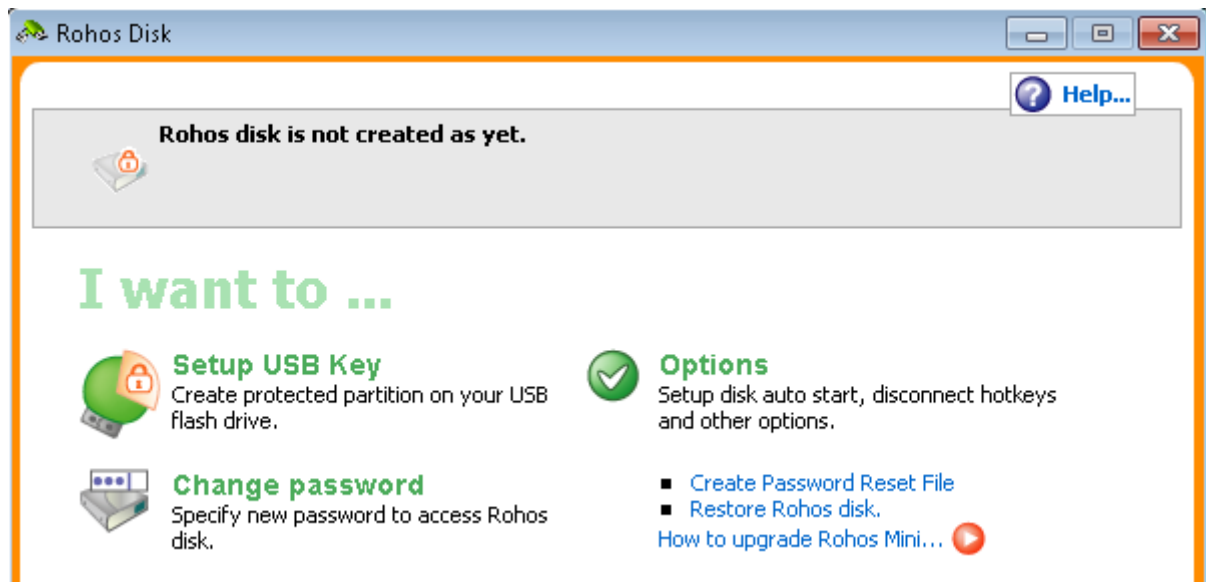
### ATTENTION!

Please read the instructions carefully before using tools to encrypt your data. We do not accept any liability for lost data or damaged hardware.

[TrueCrypt](#) is an easy to use, yet advanced tool that will help you secure your data. The TrueCrypt download comes with a User Guide that contains a Beginner's Tutorial with detailed instructions and screenshots. Unfortunately, TrueCrypt and many other encryption tools require administrator rights to work. Hence I will introduce another tool in more detail.

[Rohos Mini Drive](#) comes with a portable disk browser, which doesn't require administrator rights once the USB flash drive was set up. The only limit is that the encrypted container can't be larger than 2GB. Here is a brief guide through the setup process.

1. Download and install Rohos Mini Drive.
2. Run > Rohos Mini Drive from Start Menu.



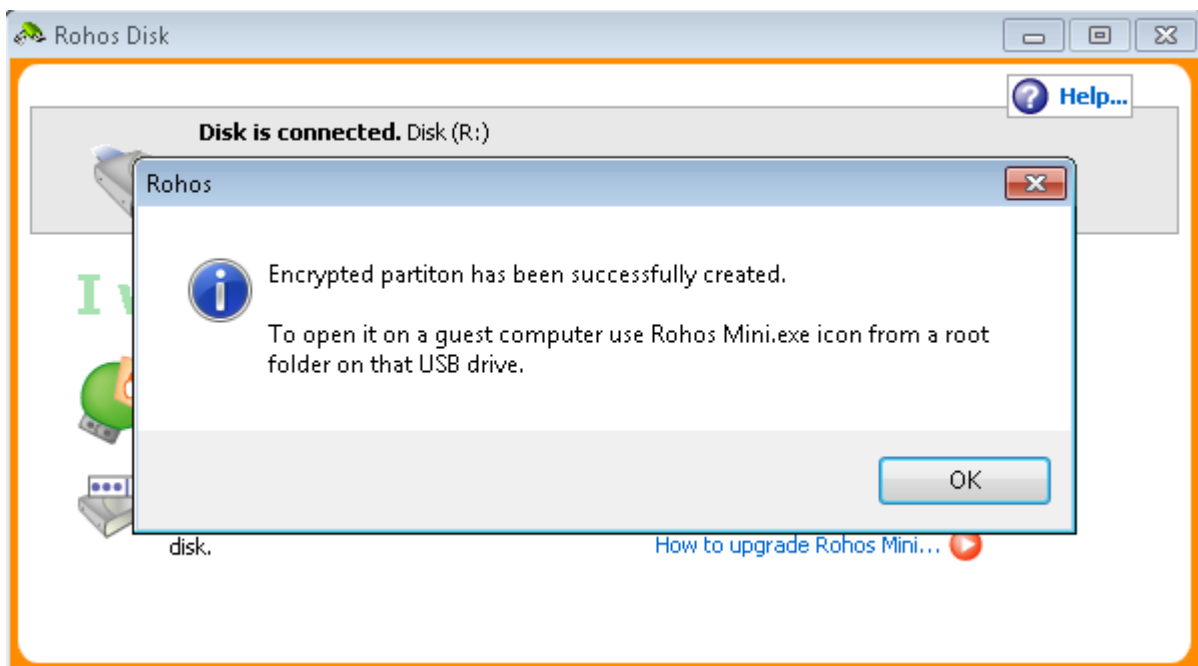
3. Click on > Setup USB Key.
4. Rohos will automatically detect a plugged in flash drive. Click on > Change in case it detected the wrong one. You can also > Change the disk size, partition letter and partition image file.



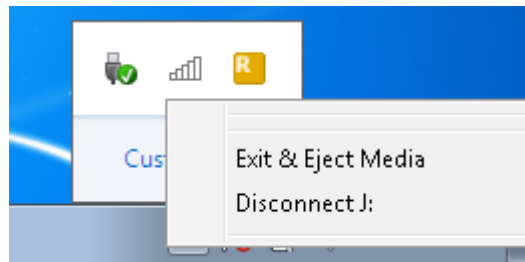
5. Specify a password and click > *Create disk*.

## WARNING

Never, ever forget your password! It is the one and only key to your encrypted data. Forgetting your password means you can forget about your encrypted documents as it will not be possible to retrieve them.



6. Click on > "Rohos mini.exe" in the root folder of your thumb drive.
7. A password prompt will come up. Enter your password, and click > OK.
8. Go to > Start > Computer to find the mounted Roho disk among your other partitions.
9. Now you can work with Rohos. Your files will be encrypted on the fly.
10. When you're done, right-click the Rohos icon in the start menu notification area and select > Disconnect the disks or > Exit & Eject Media.



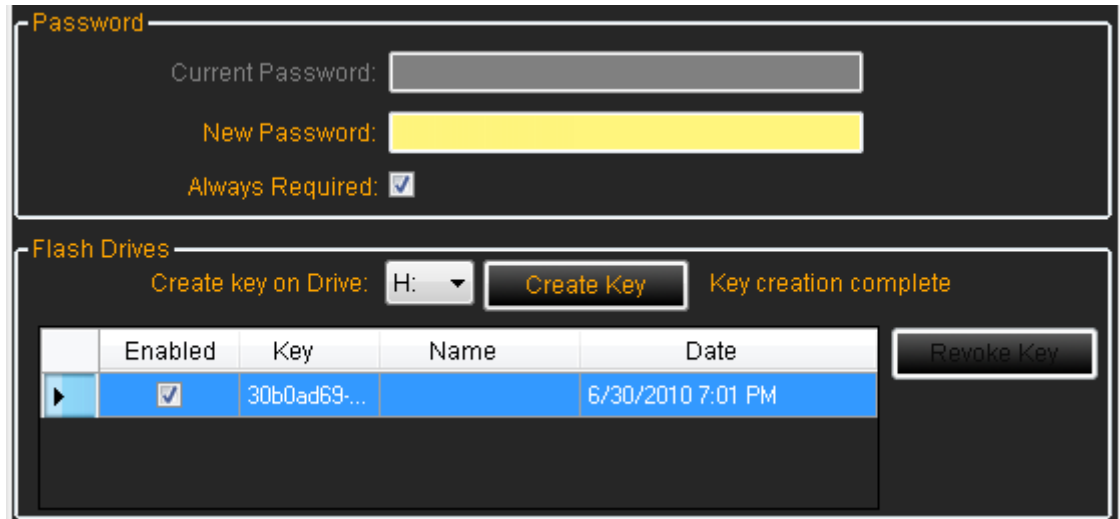
If you think password protection alone would suffice, try [USB Secure](#). It will not encrypt your files. Like Rohos Mini Drive it doesn't require administrator rights to be used. The website provides a [Flash Demo](#) that illustrates the entire setup process and shows how to use the tool.

## Use Your Thumb Drive to Lock Your PC

Imagine you wouldn't have to remember a password to efficiently lock your PC. Instead you had a physical key. Your USB drive can work as a key to lock your computer.

[Predator](#) is the tool that will earn you 007 credits.

1. Download and install Predator.
2. Towards the end of the installation process you need to create a password and key.



**Password**

Current Password:

New Password:

Always Required: ☒

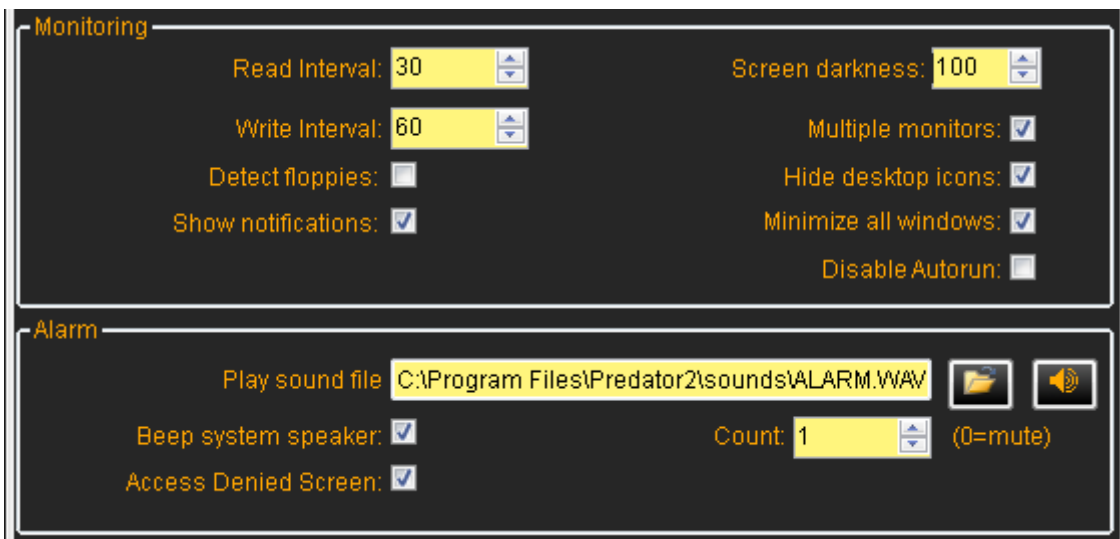
**Flash Drives**

Create key on Drive: H: Create Key Key creation complete

	Enabled	Key	Name	Date
	<input checked="" type="checkbox"/>	30b0ad69-...		6/30/2010 7:01 PM

Revoke Key

- In the > *Preferences* window you can also set up monitoring settings and the alarm.



**Monitoring**

Read Interval: 30

Write Interval: 60

Detect floppies: ☐

Show notifications: ☒

Screen darkness: 100

Multiple monitors: ☒

Hide desktop icons: ☒

Minimize all windows: ☒

Disable Autorun: ☐

**Alarm**

Play sound file C:\Program Files\Predator2\sounds\ALARM.WAV

Beep system speaker: ☒

Access Denied Screen: ☒

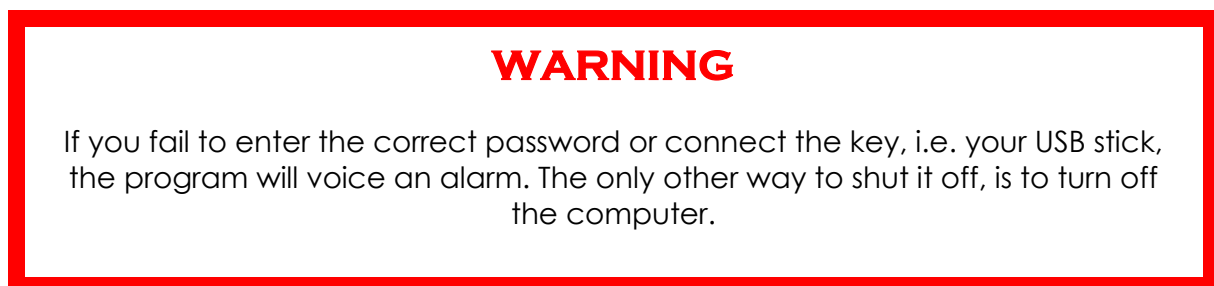
Count: 1 (0=mute)

- Click > *OK* to save your changes.
- Manually run Predator.
- When you now remove the USB drive, the screen will be locked.
- When you re-enter the flash drive the computer will unlock automatically.
- In case you selected > *Always Required* for the password, the window below will appear. Quickly > *Enter password* to regain access. However, this will defeat the purpose of saving time compared to simply hitting [Windows] + [L] to lock your computer.





Note that you can always unlock the screen with your password. While your screen is locked, simply hit any key, e.g. the spacebar several times and the above password screen will show up. It's good to know you won't get stuck in case you forget or lose your hardware key.



When you boot your computer and log into your account, Predator launches automatically. You can manually pause it through its taskbar icon before it locks up your computer.

### Securely Wipe Data From Your Flash Drive

Your USB flash drive may be a temporary tool provided by your employer. Before you return it, you should thoroughly wipe all data from it. You can of course format the drive several times. However, it's more secure to use a tool that will overwrite the deleted files several times. Besides, these tools will allow you to remove only specific files, while others are left untouched. This will raise less suspicion.

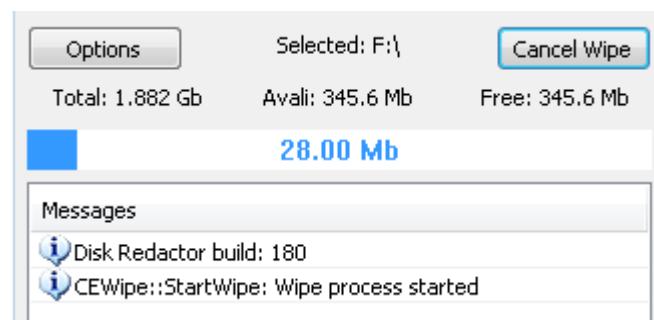
[Disk Redactor](#) is the perfect tool. First, you need to manually delete all files that you don't want to leave on the flash drive. That's what you would do anyways. Then let Disk Redactor overwrite all the free space to remove any traces of files that were

ones stored in its place. Disk Redactor will not delete any existing files stored on the drive. It will only clear the free space.

## WARNING

Backup your data before wiping your flash drive with Disk Redactor. Even though only free space should be cleared, you should play on the safe side in case something goes wrong.

1. Download and install Disk Redactor.
2. Launch it from the Start Menu.
3. Click on > *Wipe Disk* to select the drive you would like to wipe. It will start instantly.



# Recommended Portable Apps

---

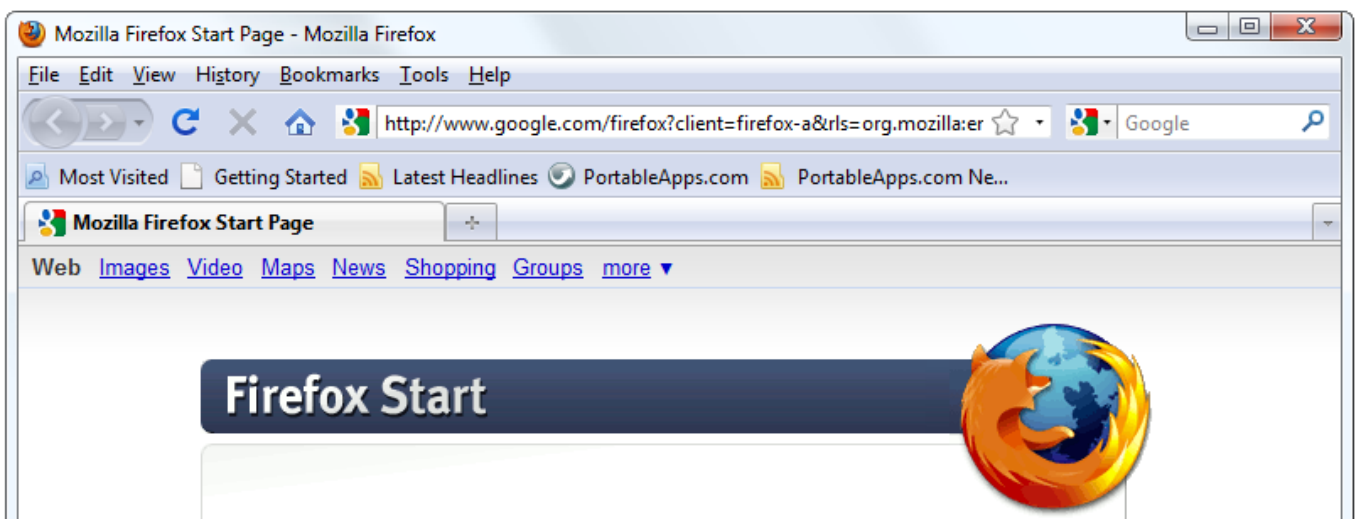
When you often have to work on public computers, you will know what it feels like to work without administration rights. You are stuck with whatever software was installed on these machines. Wouldn't you prefer to use your own eMail program or browser?

Portable apps are a life saver! They allow you to run applications from your thumb drive. Most of them will work just fine without admin rights. And not only can you run the application from an external flash drive; you can also store your personal information, such as eMails, bookmarks, and personal settings. Here are three highly recommended portable apps.

To get started with Portable App programs, you can visit [PortableApps.com](http://PortableApps.com)

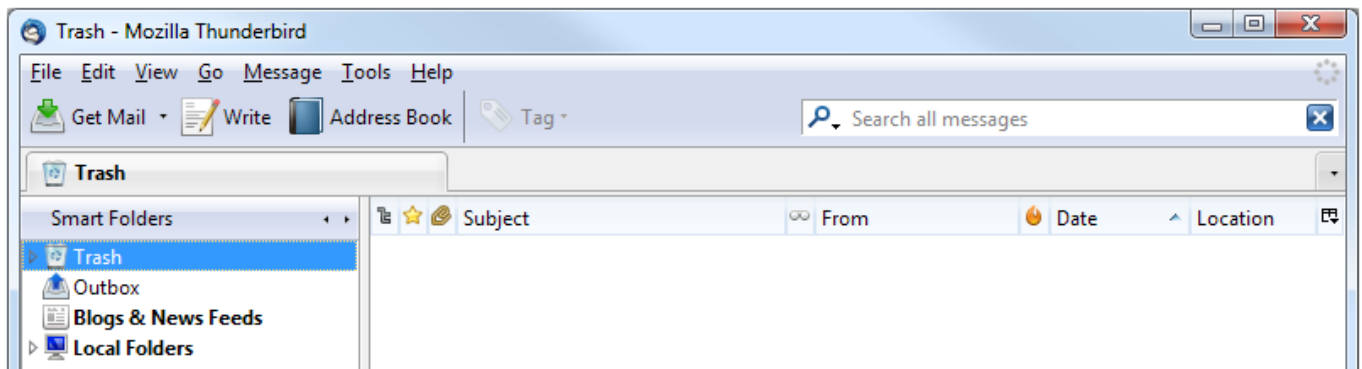
## Firefox Portable

[Firefox Portable](#) looks and works just like its desktop counterpart. The difference is that it does not store any information on the computer; everything is safely stored on the removable flash drive. Just like its big brother it can handle user profiles, extensions, themes, and of course the essentials like bookmarks or cookies.



## Thunderbird Portable

[Thunderbird Portable](#) is your favorite eMail client made portable. You can enjoy all important features of the full version, including eMail folders, address book, and account settings. Moreover, you can encrypt and sign your eMail.



## Open Office Portable

[Open Office Portable](#) is two great advantages in one bundle: a complete office that fits into your pocket and you can cut the Microsoft strings because it's free and compatible with your old office documents and several other office applications.



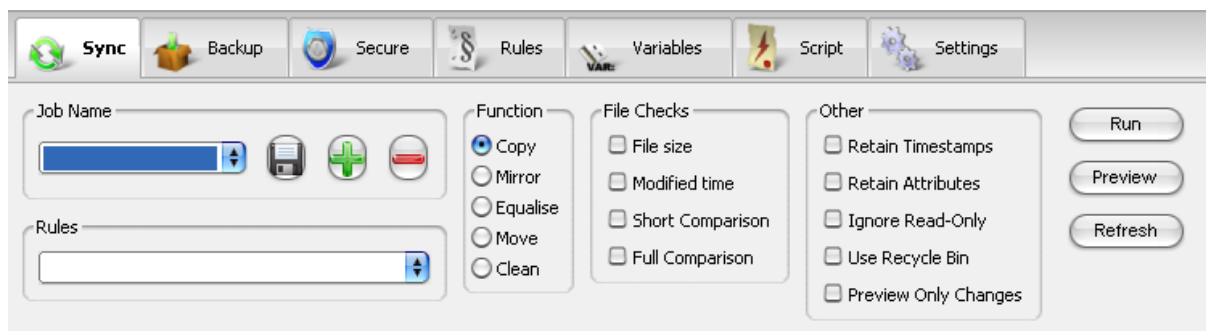
Not enough? There are hundreds more.

Check out the [PortableApps.com Suite](#), which provides a complete collection of tools, including a web browser, eMail client, office suite, calendar / scheduler, instant messaging client, antivirus, audio player, games, password manager, PDF reader, backup utility, an integrated menu, and all of that is preconfigured to work portably. What more could you ask for?

## Toucan

[Toucan](#) – One of the PortableApps.com tools I would like to highlight is Toucan. It is not a default component of the PortableApps.com Suite, but it integrates with it. PortableApps.com has detailed [installation instructions](#) on how to add Toucan to your PortableApps menu or how to install it as standalone app.

As mentioned previously, Toucan is a portable alternative to SyncToy. You can use it to sync, backup, and secure (encrypt) your data. The backup and sync principles are the same as with SyncToy.



You can make Toucan autorun with the same strategy described for FlashRecall. You need to rename the respective parameters in your .inf file and move the Toucan .exe file to the root folder of your flash drive.

Not so long ago Karl L. Gechlik introduced the [Top 10 Most Downloaded Portable Apps](#):

- winPenPack Flash 1GB Suite of over 100 useful shareware apps
- Little Registry Cleaner
- winPenPack Flash School collection of apps for students
- Uninstall Expert, PackageFactory for U3-enabled flash drives
- Skype Portable
- CodySafe and CodySafe Admin Pack
- winPenPack Flash Essential in multiple languages
- FCleaner.

Varun Kashyap introduced NirLauncher, a toolbox of [Awesome Portable Utilities To Have On Your Flash Drive](#). It contains password recovery utilities, network monitoring tools, system utilities, programmer tools, and much more. Some apps require administrator rights.

If you still cannot find exactly the application you are looking for, you can make it yourself.

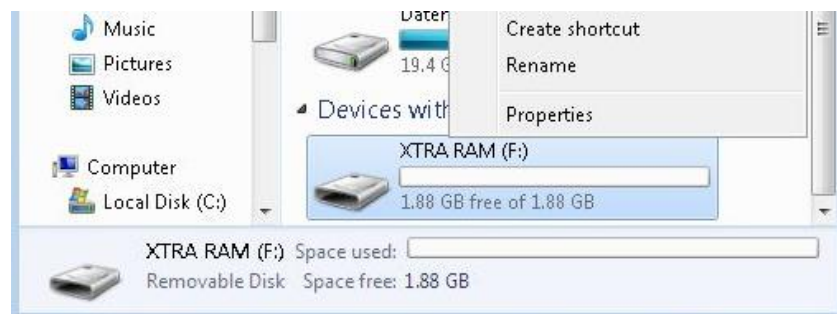
Paul Bozzay described [How To Create Your Own Portable App For A Flash Drive](#).

# How to Speed Up Your Computer with Virtual Memory

Did you know you could increase the system performance of your computer with the help of a USB thumb drive? You can allocate storage space from your flash drive to the system for times when your RAM (physical memory) is used to its capacity. Rather than stashing data on a slow hard drive, Windows can use the much faster flash memory to read / write data (virtual memory) and free up RAM. This will considerably enhance the responsiveness of your system.

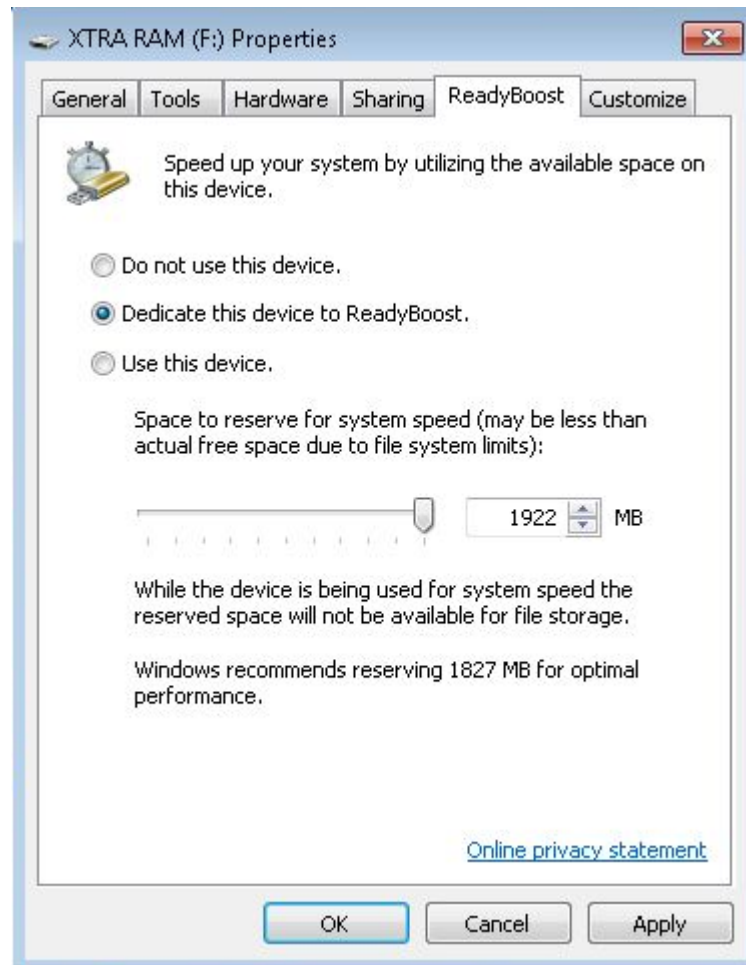
## Windows Vista and Windows 7

The feature is called ReadyBoost. You can access it through the properties menu of your thumb drive. Go to *Start > Computer* and scroll down to *Devices with Removable Storage*. Now right-click onto your thumb drive and select *Properties* from the menu.



In the properties window, switch to the *ReadyBoost* tab. Here you can either dedicate the entire device to ReadyBoost or just reserve some space for system speed. Click *Apply* to save the changes and wait as ReadyBoost configures your cache.





Under > Computer you will subsequently see the blocked out space.



In case you decide to reserve only part of the thumb drive's capacity, you can use the remaining space to store data.

Windows 7 can handle up to eight flash drives and a total of 256 GB of virtual memory.

## ATTENTION!

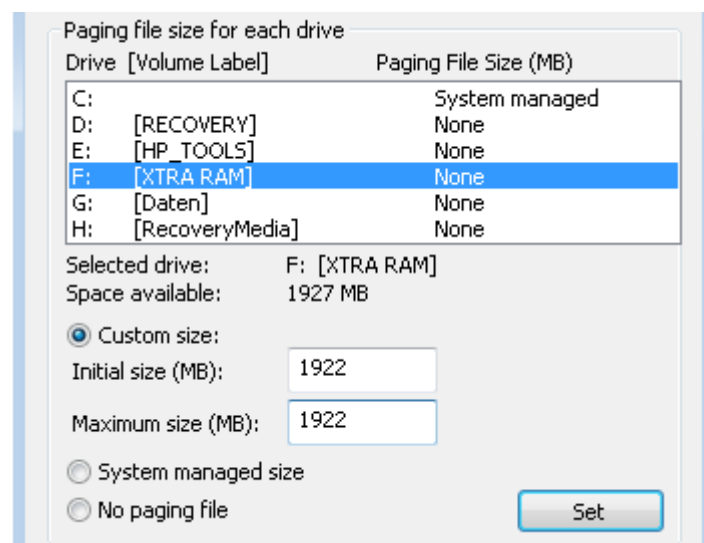
Not all flash drives have the 'required performance characteristics' to work with ReadyBoost. You will see a respective message if that is the case. To force these drives to work with ReadyBoost, try the steps described in this article at your own risk: [Force ReadyBoost on a USB Device](#)

## Windows XP

With a slightly different method, you can achieve the same system enhancement in Windows XP. Here is a brief walkthrough.

Go to > *Start* and right-click on > *My Computer*. Select > *Properties* and switch to the > *Advanced* tab. Under > *Performance* click > *Settings...* switch to the > *Advanced* tab and click > *Change...*

This last window lists your entire virtual memory. This is where you can allocate additional space. Select your thumb drive and click > *Custom size*. Take the number listed under > *Space available* and subtract 5 MB. Enter the resulting number under both > *Initial size (MB)*: and > *Maximum size (MB)*.



Click > *Set* and > *OK* to save your changes, close all other windows, and reboot your system. Avoid removing the thumb drive to prevent damage.

Windows XP supports a maximum of 4096 MB in additional virtual memory.

# Summary

---

In the present PDF manual I have outlined how you can use your flash drive and I thoroughly explained how to best set it up. Let me summarize...

A flash drive can be a simple vehicle to transfer data from one computer to another. With the right tools, however, it can transform into a powerful tool. It can help you synchronize your work between multiple computers, including your eMails and user profiles. You can store, encrypt, and always carry important documents on it, and you can use your memory stick to lock your computer. It's possible to install and run applications from a thumb drive. Finally, when your computer slows down because it needs more RAM, you can extend the virtual memory to your flash drive and speed up your system. In fact, there are many more things you can do with a memory stick, but these will be a subject of other guides.

Taken together, your flash drive is a digital Leatherman that you won't want to miss in your daily work life.



Did you like this PDF Guide? Then why not visit [MakeUseOf.com](http://www.makeuseof.com) for daily posts on cool websites, free software and internet tips.

If you want more great guides like this, why not **subscribe to MakeUseOf and receive instant access to 20+ PDF Guides** like this one covering wide range of topics.

Moreover, you will be able to download [free Cheat Sheets](#), [Free Giveaways](#) and other cool things.

**Subscribe to MakeUseOf :** <http://www.makeuseof.com/join>

## MakeUseOf Links:

Home:	<a href="http://www.makeuseof.com">http://www.makeuseof.com</a>
MakeUseOf Directory:	<a href="http://www.makeuseof.com/dir">http://www.makeuseof.com/dir</a>
MakeUseOf Answers:	<a href="http://www.makeuseof.com/answers">http://www.makeuseof.com/answers</a>
Geeky Fun:	<a href="http://www.makeuseof.com/tech-fun">http://www.makeuseof.com/tech-fun</a>
PDF Guides:	<a href="http://www.makeuseof.com/pages/">http://www.makeuseof.com/pages/</a>
Tech Deals:	<a href="http://www.makeuseof.com/pages/hot-tech-deals">http://www.makeuseof.com/pages/hot-tech-deals</a>

## Follow MakeUseOf:

RSS Feed:	<a href="http://feedproxy.google.com/Makeuseof">http://feedproxy.google.com/Makeuseof</a>
Newsletter:	<a href="http://www.makeuseof.com/join">http://www.makeuseof.com/join</a>
Facebook:	<a href="http://www.facebook.com/makeuseof">http://www.facebook.com/makeuseof</a>
Twitter:	<a href="http://www.twitter.com/Makeuseof">http://www.twitter.com/Makeuseof</a>

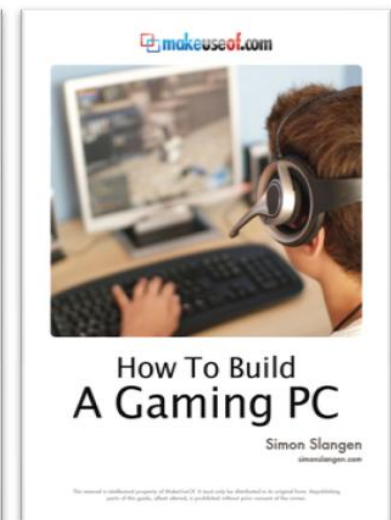
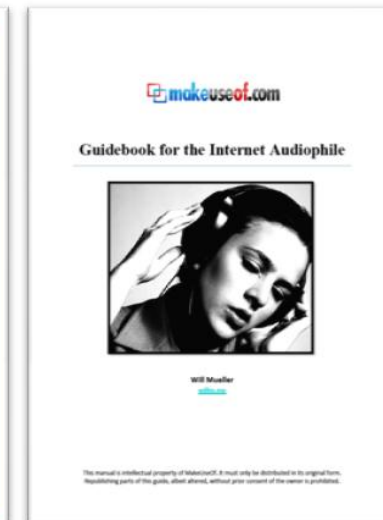
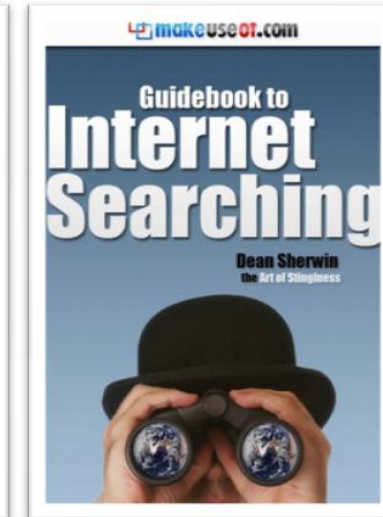
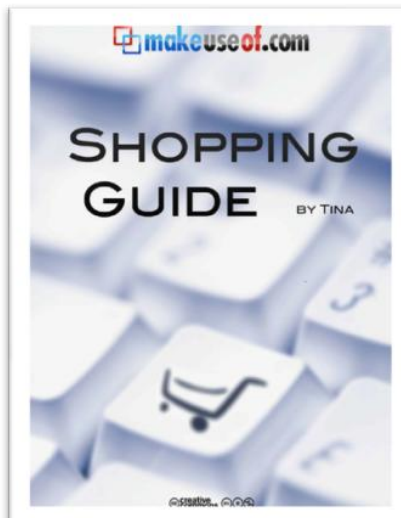
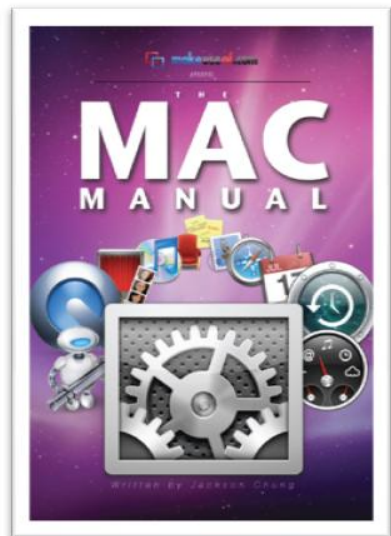
## Download Other MakeUseOf PDF Guides!

Subscribe to Download : <http://www.makeuseof.com/join>





Subscribe to Download : <http://www.makeuseof.com/join>



Subscribe to Download : <http://www.makeuseof.com/join>

