

FreeCommander ~ Synchronize

Many of us use multiple drives, usb thumb drives, memory cards, iThings, keeping digital data of all kinds on storage devices of all sorts.

So tell me quick, no hesitation, where's your last YouTube download?
Are you positive?

Have you spent an eight-hour workday editing an antique spreadsheet because the new one is on another drive 500 kilometers away?

Have you had a panic attack because you thought you deleted the only copies of your baby's first birthday pictures? Has your mother-in-law threatened homicide because you don't just *think* you did, you *really* did?

granny has a word of wisdom to whisper in your ear -----

Synchronize

FreeCommander provides a built-in function to protect you from those kinds of problems. You can synchronize folders and files between different drives, and easily keep them updated and mirrored. You can also use this function to make one-way simple backups and incremental backups.

This function doesn't identify files that have identical contents with different names. For that sort of job, use a duplicate finder, such as [Duplicate Cleaner](#) (four thumbs up!), [CloneSpy](#), or [Easy Duplicate Finder](#) (I use old free version 2.4 portably)

Don't be intimidated. Make up a few sample folders with some throw-away files, and run Synchronize a few times with different settings to get familiar with its behavior. You'll soon be using it on a regular basis to help keep your data safe and organized.

The procedures in this guide apply to FreeCommander version 2009-02a.

I hope it is useful to you.

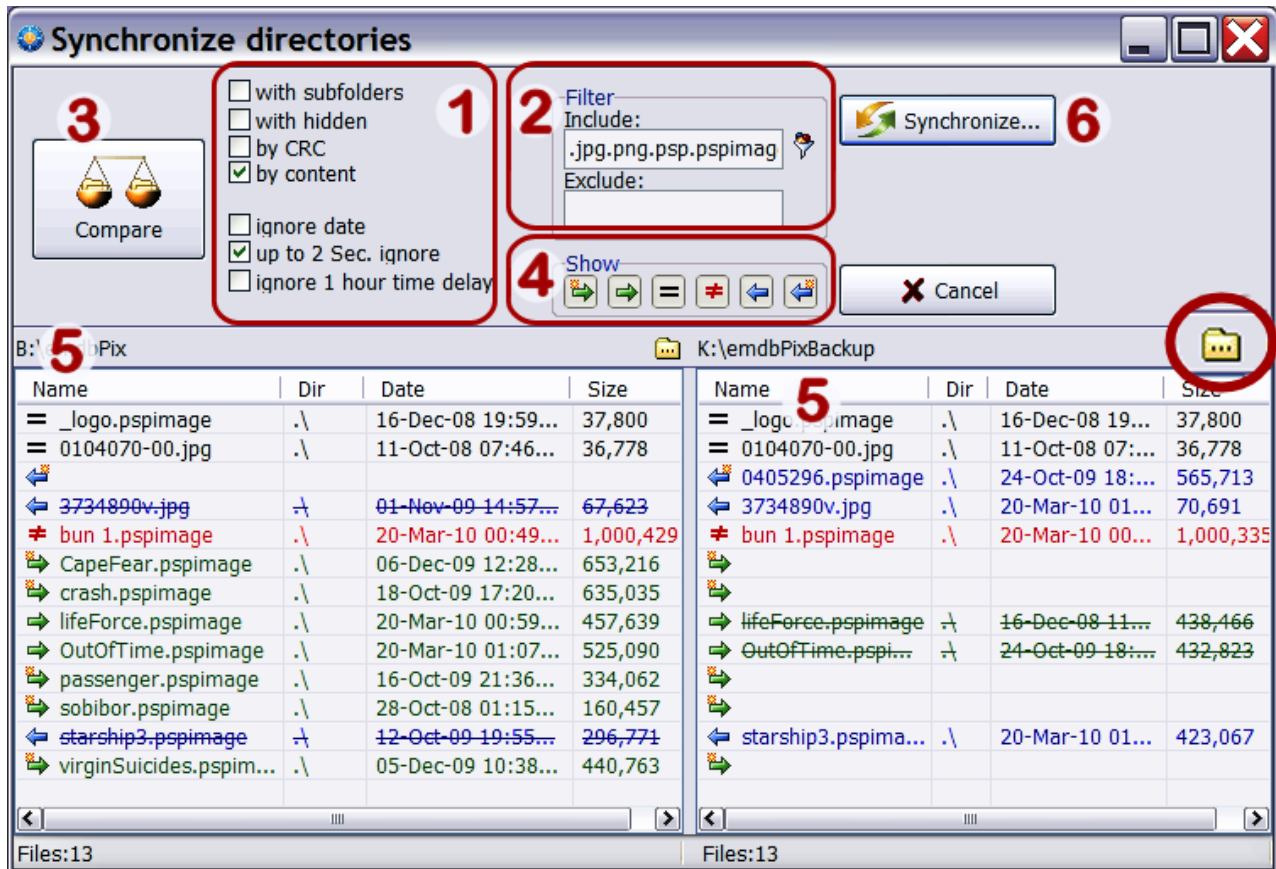
granny _____ oo

20 March, 2010
updated 30 April, 2010

■ SELECT FOLDERS TO SYNCHRONIZE ---

Select "source" folder in the left pane, and "target" folder in right pane.
It won't matter which pane is active, FC can tell its right hand from its left.

Go to menu **Folder > Synchronize**. Or use hotkey **ALT + S**



When the dialog opens, the file list window is empty.

You won't see filenames until you run *Compare* in Step 3.

List window has columns for Name, Directory, Date, Size, CRC (when used).

The dialog is resizable. Drag column headings to change width.

Columns cannot be sorted (on my wish list --- sortable directory column...)

To change selected folders, click the browse icons at end of address bars.

If a filter is in effect when you open Synchronize, only the filtered files will be processed unless you change filter settings in Step 2.

Note that Quick Filter and "View Selected Files Only" have no effect here.

1. CHOOSE COMPARISON CRITERIA ---

Criteria settings are saved, remaining in place until you change them.

■ **With Subfolders**

Select this to include all subfolder contents in synchronization.
If not checked, only files in the parent folders are used.

NOTE – Currently, FC can't include/exclude specific subfolders.

Your options are to

- open subfolders individually for synchronization
(you may find it helpful to use [custom Layouts with Locked Tabs](#))
- Or, de-select files from the unwanted folders in [Step 5](#).

NOTE 2 – Empty folders are ignored, and excluded from the process.

- If you want to preserve folder structure during copying, you must keep at least one file as a “placeholder” in subfolders.
- Folders emptied by file deletion are not automatically deleted; this prevents a perfect "mirror". You must [delete them manually](#).

■ **With Hidden**

This setting is off by default, turn it on at your own risk. My personal view is that hidden files are usually hidden so they won't be touched.

■ **By CRC** (checksum)

Files having the same **checksum** will be regarded as equal.
However, this method does not guarantee they are truly identical.

■ **By Content**

Files with the same name are compared byte by byte, and are considered as equal only if their **contents** are absolutely identical.

■ **Ignore Date**

If this option is selected, files with same name and same size will be regarded as identical. *See notes below for further discussion.*

■ **Up to 2 sec ignore**

This is useful when comparing FAT to NTFS folders.
It can also help if you work at multiple computers, whose time may be a little out of sync.

■ **Ignore 1 hour time delay**

You may find this useful if you're in an area using Daylight Savings Time.
Or if your computer times are *really* out of sync :-)

Now that you've met the settings and have an idea of what they do, take a look at the overview of the comparison process.

■ Some notes about the file comparison process

Files are examined in the following sequence:

1. Compare file names
 2. If names are equal, then compare sizes.
 3. If sizes are equal, then compare dates.
 4. If dates are equal, or if *Ignore Date* setting is active, then:
 - A. If *CRC/Contents* setting is NOT selected, files are tagged as Equal.
- OR,**
- B. If *CRC/Contents* setting IS selected, then compare CRC/Contents.

↳ If Checksum / Contents are equal, then files are Equal.

↳ If Checksum / Contents are **different**, then files are Unequal

But because dates are equal or Ignored, *FC cannot identify the newer file*, so it can't define copy direction. You must manually select copy directions for Unequal files in [Step 5](#).

You may have a specific reason to ignore the contents of files, and choose not to select *By Content* or *By CRC*. For example, you may be doing a simple one-way backup to a new empty folder, and all files will be copied regardless of the settings.

But when synchronizing or backing up to existing folders, do consider carefully before setting criteria in this manner.

— If neither *CRC* nor *Contents* is selected, the function can only examine Name, Size, and Date. As noted in 4-a above, files with same name, size, and date will be considered equal, regardless of their content.

— If neither *CRC* nor *Contents* is selected, and *Ignore Date* is active, the function can only compare Name and Size.

In this case, files with same name and size will be considered Equal.

Even if they have different dates and/or contents, those elements won't be examined.

In either of these cases, the file's innards are not examined. In an extreme example, you could actually have a 200-kb Excel spreadsheet renamed to sales.txt, which would be considered equal to a 200-kb file named sales.txt that was written in Notepad.

2. SPECIFY FILES TO COMPARE ---

In the **FILTER** section, you can specify file types and/or file names.
(but not folder names.)

Filter settings are not saved when Synchronize dialog closes.

- By default the fields are empty.

Include blank field = no filter = all files included, or *.*

Exclude blank field = no filter = no files excluded.

However, if a filter was in effect when you opened Synchronize, the fields inherit those settings. Change or clear them if you like.

- To use Defined Filters; click the Filter "funnel" icon to select from list.

to define filters, **CTRL + F** or menu **Folder > Filter > Set Filter**

- You can manually enter file extensions, separated by leading dot, e.g.
.txt.doc.odt.pdf.xls

TIP... you can enter file names separated by semi-colon, with or without wildcards e.g.

Good.doc;Stuff.odt;Bad?Stuf*.txt

You can use asterisk instead of extension **good*;bad*;ugly***

You can't list "dot-separated" file extensions in the same filter field with filenames, but you can include extensions in wildcard format :

***.doc;*.pdf;YourPicture.jpg**

- If the *Include* field is used, only those files are examined.

Use *Exclude* to refine the selections. e.g

Include **.doc** *Exclude* **Good.doc;*stuff*.doc**

- If Include field is left blank or *.* , then **dot-separated** file extensions in Exclude field are ignored, "Include All" over-rides those exclusions.

In this case, use wildcard format to list file-type exclusions ***.pdf**

3. COMPARE THE FILES ---

Click the **COMPARE** button.

With large folders, the process may take some time.

Results will display in the two lists. Status bars display file counts.

If lists appear empty, you must *Show Categories*, see Step 4.

NOTE – You must run Compare again If you change comparison criteria or filters, or if you go to the FC window and move, copy, or edit files.

4. SPECIFY FILE CATEGORIES TO SYNCHRONIZE ---

Each file in comparison results list is assigned to one of six categories. In the **SHOW** section, Show or Hide a category by toggling its icon. (Selected “active” icons are indicated by a simple outline.)

- Start by activating **all** the icons to see all the Comparison Results.
- Hide one or more categories to exclude those files from the process. If you were to de-select all the category buttons, Synchronize would have no files to work with.
- Toggle category displays on and off temporarily to simplify file review and manual configuration in Step 5.



(New) Files existing only on the left side, will be copied to the right. Filenames display in green.



(Modified) Files existing on both sides, copy newer file left to right. Filenames display in green. Files to be over-written show strike-out.



Equal Files. Identical files will not be copied. Filenames display in black.

You'll probably want to hide this group, to unclutter the results list.



Unequal files will not be copied *automatically*. Filenames display in red.

You should display this group and review any unequal files, otherwise some modified files might not be synchronized.

Unequal files are recognized as different, but no copy direction is defined. FC cannot identify the newer file, because they have same date/time, or because *Ignore Date* setting was selected,

You must manually select the direction of the copy (see step 5). If you make no selection, no action will be taken for unequal files.



(Modified) Files existing on both sides, copy newer file right to left. Filenames display in blue. Files to be over-written show strike-out.



(New) Files existing only on the right side, will be copied to the left. Filenames display in blue.

5. MODIFY COPY ACTIONS FOR INDIVIDUAL FILES ---

In the **RESULTS LISTS**, you can change the default action for individual files by clicking the “action icon” next to filename, or by selecting an action from the Context Menu.

For example, you might need to assign copy directions for Unequal files, reverse copy direction to preserve an older file, or de-select files in a subfolder to prevent them from being copied.

When you change a copy direction, the icon image changes, but filename “category colors” remain, and files stay assigned to their original category.

See the sample filename shown below---

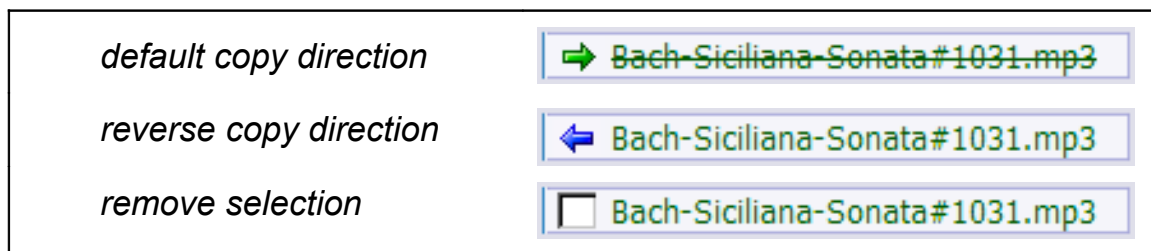
it is assigned to the “Modified Left to Right” category.

When copy direction is changed Right to Left, filename is still assigned to original category. If you hide that original category, the filename will be excluded from synchronize.

“Remove selection” doesn’t take the name off the list, it only excludes that file from the synchronization process.

— **“Action” icons** can toggle through available copy options for the file.

- “New” files _____ default copy direction, or remove selection
- “Modified” files _____ default copy, reverse copy, remove selection
- “Unequal” files _____ left to right copy, right to left copy
or default (“unequal” / no action) status



— The right-click Context Menu

provides copy actions, plus some additional options.

Click to select an option, or use its hotkey.

Note that options which don't apply to currently selected file(s) are NOT disabled. If you select an action that isn't usable for that file, nothing will happen.

S <u>elect</u> - default direction	
R <u>emove</u> selection	
S <u>elect</u> - left to right	
S <u>elect</u> - right to left	
R <u>everse</u> copy direction	
<hr/>	
S <u>h</u> ow file	F3
S <u>h</u> ow file (ext.)	Shift+F3
C <u>ompare</u> left and right	
D <u>elete</u> file	F6
<hr/>	
P <u>ro</u> perties	Alt+Enter

- Show File_____ view supported format with Integrated Viewer
- Show File (ext)_____ view supported format with External Viewer
- Compare left & right___ use *Compare Files** to examine two files
- Delete file_____ delete file to the Recycle Bin
- Properties_____ display Windows File Properties dialog

— To select all files in a category

right-click the category icon for popup menu.

- ≠ Select all files with this type: left
- ≠ Select all files with this type: right

Also use SHIFT + Left-Click or CTRL + Left-Click to select multiple files. With multiple files selected, you can use the context menu to apply action settings to the entire selection.

You can also delete the entire selection to the Recycle Bin. (careful . . .)

- ** Compare Files* is another FC function, which uses a specified External Program to examine and compare text files in the File List. This function is only available if you configure a program for it.

SHIFT + CTRL + S or menu **Extras > Settings**. Select **Programs**.

See [here](#) for some recommendations. (check this out-- [WinMerge plugin](#) to work with MS Office, Open Office, rtf, pdf, mht, more)

- If you need to go to the FC window to view, edit, copy, move files --- Click on the FC window to bring it to top. When finished, press **ALT + S** to bring Synchronize back to the top, or click on any visible part of Synchronize Directories dialog.

6. OPEN SYNCHRONIZE DIALOG ---

Click the **SYNCHRONIZE** button.

This new dialog presents a summary of the files that will be processed.

Here you can make some additional configurations if you like.

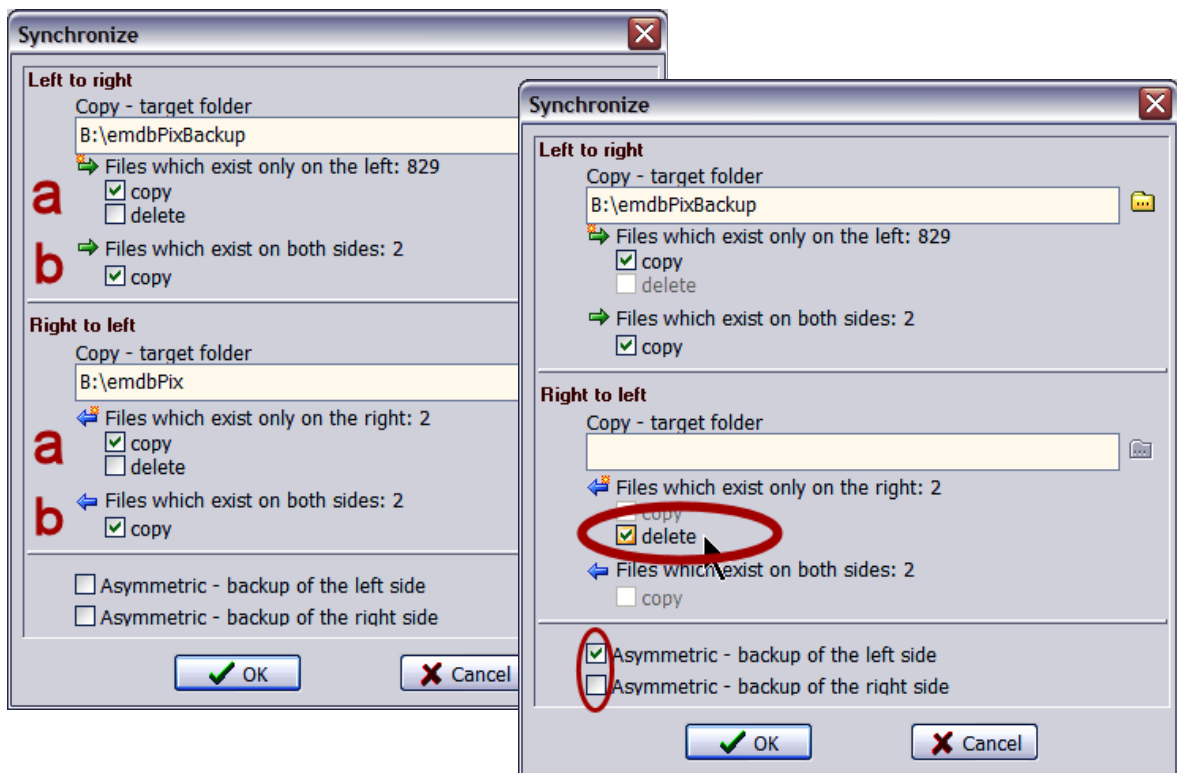
You might, for example, want only to copy new files to target, and not overwrite older files with newer modified copies.

Copy/delete settings selected here will apply to the entire category.

Be cautious with these Delete settings, files cannot be recovered.

NOTE – emptied folders aren't deleted, you must [remove them manually](#)

- You can change target folders ---click browse icon, select a folder.
- **A** --- For files existing only on one side, select to **copy** (default), **delete**, or uncheck both to **exclude** from process.
- **B** --- For files existing on both sides, select to **copy** (default) or uncheck to **exclude**.



- If you want to make a one-way backup of only one folder, select **Asymmetric** for the applicable side.
 - This automatically disables the sync/mirror action. Files will not be copied from target folder back to the source folder.
 - If unique files exist in the target folder, by default they will be deleted. If you want to keep those files, uncheck the **delete** option.

■ RUN SYNCHRONIZE ---

Ready? Configurations all complete? Deep breath Click **OK**.
When copying finishes, close the main dialog. Your work here is done.

■ *Odd Bits* –

Synchronizing folders with 2 mouse-clicks and 6 key-presses

I have a number of folders I synchronize or back up, so I made a set of color-coded locked tabs for source folders in left pane, and matching color-coded locked tabs for the target folders in right pane. I saved these in a Layout.

I use the same settings for most backups, with no filter settings, so usually:

- **ALT + O** loads my layout
- I click the two red tabs
- **ALT + S** opens main Synchronize Directories dialog
- *two extra mouse-clicks here if I ever need a Defined Filter*
- **ENTER** to run Compare
- **ENTER** to open Synchronize dialog
- *extra mouse-click here when I want Asymmetric "one-way" Backup*
- **ENTER** to run Synchronize
- **ESCAPE** to close main dialog

I click the two blue tabs, press **ALT + S** etc, etc.

Simple-ish method to delete empty folders

Try this to delete multiple empty subfolders, scattered in the folder structure:

- Select the parent folder
- **SHIFT + CTRL + B** or menu **View > Flat View > Folders**
- **ALT + F9** or menu **Folder > Size of Folders** to calculate folder sizes
- Choose "Details" view with a column for file size
- Click heading of Size column to sort by size
- Select and delete 0-byte folders
- **SHIFT + CTRL + B** again to toggle off Flat View, or select another tab
- **ALT + F9** again to toggle off "Size of Folders" (this calculation is quite CPU-intensive, it's recommended to only run it when needed.)