# "FileList+" Version 1.0b16 30 August 1991 Macintosh File System Database Management Utility

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# **Distribution and Response Information**

First of all, this program is free (but NOT public domain). So don't pay anybody for it. Make sure to include this documentation when you give the program away.

While the program is free, I would really like your inputs. If you have any comments, ideas, questions, or bug reports on **FileList+**, I would love to hear from you. If reporting bugs, <u>please</u> tell me your basic configuration, software (**FileList+** version, System version, INITs with versions, etc.) and hardware (Mac model, disk types etc.). Here are the suggested means to reach me:

- leave a message for me on one of the following boards:
  - BillPatt on America Online (preferred)
  - Bill Patterson on MacShack BBS (214-644-4781) of Dallas
  - Bill Patterson on MacCircles BBS (415-484-3281)
- or, send a letter to:

Bill Patterson 805 Division St. Greenville, TX 75401

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### **ABOUT FileList+**

**FileList**+ is an enhanced version of FileList (version 1.4). The original *FileList* is from Erny Tontlinger, to whom much credit is due for much of what **FileList**+ is. The standard features of the original FileList are completely intact and documented in the second section of this documentation.

Users unfamiliar with the original *FileList* may want to read the original documentation first, before reading this preface, as mostly only new or changed features are documented in this preface. In short, *FileList* is a blazing fast disk cataloger, with powerful offline file search and sort capabilities.

If you are a previous user of *FileList*, you will be happy to know that **FileList**+ reads and can write files compatible with the original *FileList*. If you haven't seen version 1.4, check the next section of this documentation for the features new to that version. The neatest new feature of *FileList* 1.4 is that it (and **FileList**+ of course) now can read file directories out of Stufflt and Compactor archive files (all versions!).

### WHY "FileList+"?

I started working on **FileList+** because of a need to manage LARGE numbers of files and volumes. "Manage" in this case means to insure backups of critical files as well as elimination of unnecessary file duplication, in an environment that did not allow conventional backup methods. In order to do this, **FileList+** added the function of MATCHing files against each other according to user specified criteria, or in other words, a flexible duplicate file search and mark. Some possible uses of this function are:

- identifying duplication of files to save disk space
- resolving multiple copies of a master disk that were modified simultaneously
- · comparing a corrupted disk (with directories intact) with backups to detect changed files
- performing an audit of files of certain types, such as applications, INITs, etc.

This is why the **FileList+** project was started, but MANY other enhancements have been made in the process to make the program more usable. I hope they will be useful to you.

**FileList+** was developed with Think<sup>™</sup> C Version 5.0 and every attempt has been made to adhere strictly to Inside Macintosh guidelines. It has been tested under Systems 6.0.5, 6.07 and 7.0, but should work under any version after 6.0.0, on any Macintosh model.

### **ENHANCEMENTS**

**FileList+** adds the following major enhancements to FileList 1.4:

- Display options including field selections in File Window (especially helpful with compact Macs), and status/info bar, as well as field sequence, Find Controls
- **File compare** and mark function finds duplicates or near duplicates, using one of two methods: 1) "smart" algorithm; or 2) user selectable fields
- File Filter for scan, compare, delete, selection, and print functions
- **Printing** capability including Print All, Print Special..., and Print Selected
- Find function integrated into header of window, finds Files by name, parent, or volume
- Key commands for many dialog and window functions
- Delete file records function with un-delete
- Merge lists function including Automatic merge when multiple files opened together
- Informative Title bar (includes current file name, whether the list has been changed since saved, whether the match information is up to date, Selected record count and total size)
- Made error messages more explicit more text, no psuedo-error numbers
- Improved user interface, more key-commands, graphics, and status indicators
- Manually scan up to 16 volumes simultaneously (up from 8)
- Scan Options to collect file version numbers, filter on scan, scan archives only
- Find controls in header of window
- Sort by a field by clicking in header-bar for that field
  Performs descending sort when sort invoked with the shift key down.
  Performs dual sorts when files sorted by Selected, Match, Type, Creator, Volume, or Path parameters.
- Remove field by clicking in header-bar for that field with command key down
- **Text Export options** to export text-as-displayed or fixed format, with and without tabs, with or without Select field.
- Selected field that flags a record for printing, copy, delete, or save text operations.

This is just a partial list of **FileList+** changes. The changes made in this version of **FileList+** may be found under Version History section below. A more complete list may be found in the separate FileList+ Change History file.

### **NEW FUNCTION DESCRIPTIONS**

Note that all options shown in example figures are the default options, unless otherwise indicated.

One of the goals in **FileList+** is to perform common database management functions internal to the program, much faster and more conveniently then could be performed through exporting the data to a database application. These following functions comprise the primary "Database Management" operations of **FileList+**:

- Matching (Compare) Functions
- Sort Functions
- Filter Functions (for scan, delete, print, select, match, etc.)
- Delete File Records Function
- Record Selection Functions with Boolean operators

# **File Compare and Mark Function**

FileList+ has two "Match" match functions that compare files in the list against each other. These two types of matching are File Version matching and Custom Matching. File Version matching performs a "smart" matching, described in detail under the menu item "Compare File Versions" in the Files menu description below. Custom Matching is described below, but many details apply to both.

Normally, each file to be compared must pass the File Filter first. However, each of the match functions may be constrained to operate only on files that are currently selected by holding down the shift key when selecting the menu item. If this is done, files are no longer checked for the File Filter, only requiring that at least one of each comparison pair is selected.

The Custom Match compares the files user selected criteria and marks those files that have matches with a bullet ("•") in the "MTCH" field. File matches after the first match pair are marked with an "m" as well ("•m"). The definition of a "match" is user selectable. The older and newer flags are not set by the Custom Match function.

For example, the "Custom File Matching" menu item is selected and **FileList+** takes the first file in the list that passes as matchable, compares it with each subsequent file that passes as matchable, checking those parameters selected in the Match Preferences dialog. If a matching file is found, **FileList+** marks both files with a single bullet and continues its search. If subsequent matches are found, the matched file is marked with a bullet <u>and</u> an "m". After comparing all files with the first, the second file in the list is selected and compared with all following files starting with the third, etc.. If a match is found for a file that has already been matched with a previous file, it will be marked as a multiple match, unless the first one has not been matched, in which case the first one will be marked as the multiple match.

If the Only One Match option is selected, then multiple matches will never be indicated, and once a file has been matched once, it will not be compared for further matches.

The match criteria are selectable via the Match Preferences... menu item in the Files Menu. These criteria include each file field such as Name, Size, etc. Two additional items are "Different" and "Same" Volume. "Different" will ensure that a match will not be made unless the files are on different volumes, to distinguish files that have backups. "Same" is the reverse, matches may only occur only when the two files are on the same volume. Selecting "Don't Care" allows matches for either case.

The File Filter may be selected via the "File Filter Options..." menu item described below.

# **File Filter Function**

This function allows the user to select from several groups of files for the purpose of selectively scanning, printing, deleting, selecting, and matching files. The filter offers the user a number of commonly used file types, two custom file types, a minimum size, and create and modify date ranges. When performing the print, delete, and select special operations user has the option of selecting all files that pass the filter, or those that don't, together with various combinations of matched files via the standard file group dialog.

### **User Interface Functions**

The windows and dialogs of **FileList+** have numerous control features. Many of these make use of modifier keys held down while the mouse is clicked on an item to perform special operations. These modifier keys are user selectable via the General Options... menu item, the defaults are described below.

The windows each have a functional header bar. To sort on a list by a particular field, click in the header bar for that field. To sort in reverse order, hold down the shift key (Reverse Sort modifier) when clicking (or when selecting the menu item correspondingly).

The header of each window will indicate the field(s) (if any) that the list shown is sorted by with an inverting of the text. If it is sorted by two fields, one as primary and the other as secondary, the primary field will be marked with a small "tab" in the bottom left corder of that field.

To rearrange the sequence that fields are displayed, click (and hold down the mouse button) on the header of the field you wish to move and drag its outline where you want to move it. The sequences of fields in each window will be saved for the next launch of **FileList+** if you do a Save from any option menu item.

The files window is user configurable as to *which* fields are displayed. Display options are available via a menu item. In addition, the user may remove a field from display by clicking on the header for that field with the command key (only) down (the Hide Field modifier).

The sequence and enabling of fields may be restored to the defaults by clicking in the header bar of the window (where the field names are) and clicking with any combination of modifier keys that includes both command and options keys (the Restore Fields modifiers).

To summarize the actions that may be performed when the cursor is in the (field) header of a window:

Modifier Keys	Default Keys	Action
none	click	sort by that field (ascending order)
none	click-drag	move field
Hide Field	command-click	hide this field
Reverse Sort	shift-click	reverse order sort by that field
Restore Fields	command-option-click	restore defaults to fields

Records may be selected by clicking on them, and deselected by clicking again. Selections are indicated with a diamond symbol in the left-most column. All previous selections are cleared first unless the shift key is held down while clicking, in which case the selection will be extended to include those items clicked. Hold down the shift key (Extend Selection modifier) while dragging over several records will result in each of those records being set to the opposite selection state of the first record clicked. Dragging past the top or bottom of the window will cause an automatic scroll to be performed.

The next selected record may be jumped to by hitting the Enter key. A couple of example uses are jumping back to a certain record after performing a sort, or for viewing each search match in the list after performing a Find All or Select Special operation.

Clicking on a Volume record with the Command, a.k.a. Apple key (Select Files in Parent modifier) down will select all the file records for that volume, in addition to previously selected files.

Clicking on a File record with the Command key (Select Files in Parent modifier) down will select all the file records that are in the same folder as the record being clicked, including sub-folders. For example, holding down the command key and clicking on the System files record in the Files window will select all files that are in the System folder and it's subfolders.

Clicking on a File record with the Command key (Select Files in Parent modifier) and Option key (Select Files in 2cd Parent modifier) down will select all the file records that are in the same folder as the record being clicked, including sub-folders. For example, holding down the command key and clicking on the System files record in the Files window will select all files that are in the System folder and it's subfolders.

Clicking on a File record with the Option key (Copy field to Search modifier) down will place the contents of the field of the record that was clicked in the appropriate search parameter. This works for the Name field in both windows, and also the Type and Creator fields in the Files window.

The Return key will move the scroll position to the last record clicked or selected.

To summarize the actions that may be performed when clicking in the list section of a window:

Modifier Keys	Default Keys	Action
none	click	select or deselect a record (selection indicated with diamond symbol)
Extend Selection	shift-click	select or deselect a record without effecting selection of other records
Extend Selection	shift-click-drag	select multiple contiguous records
none	option-click	copy field data to search parameter
Select Files in Parent Folder	command-click	select all files in the same folder as the record clicked OR select all files in the volume record clicked
Select Files in 2cd Parent Folder	command-option-click	select all files in the same folder as the parent folder of the record clicked
none	enter	move scroll position to next selected record
none	return	move scroll position to most recently selected record
Copy field to Search	option-click	copy field data to search parameter

For menu items, the shift key is used to constrain many operations to operate on selected records only. The menu item title will change, indicating that the constraint is activated.

All options are saved in the FileList+ Options file, whenever a Save is executed from any of the options menu items (see Options Saving section below).

Most **FileList+** dialogs can use keyboard characters to select items, as well as command-a to toggle or select a group of items. Usually the first character of the item is the character to use to select that item. In cases of duplication, an alternate character is shown in brackets in the items description. Command keys can be used the same as un-modified keys in most dialogs without editable fields. Dialogs with editable fields will only respond to command-key commands. When editing text fields the user may make use of edit commands such as Copy and Paste.

# **Selection Groups**

Each record of each list has a set of flags that indicate if this record belongs to a Selection Group. These flags may be set, cleared, combined, rotated, and otherwise manipulated with commands in the Select Menu. The "present" Selection Group is always the one being displayed under the diamond header item with a diamond symbol indicating a record is selected. Selection Groups may be formed to perform the following operations upon the selected records: Print, Save Text, Delete (Files or Volumes), Rename, and Copy (to clipboard), as well as Custom File Match and Compare File Versions. The Copy, Delete, and Rename operations are always performed on the present Selection Group. The other operations are constrained to operation on selected records by holding down the shift key when selecting those menu items.

There are up to five sets of selection groups for each list. These groups may be manipulated using the commands in the Select menu. The groups operate as a selection "Stack".

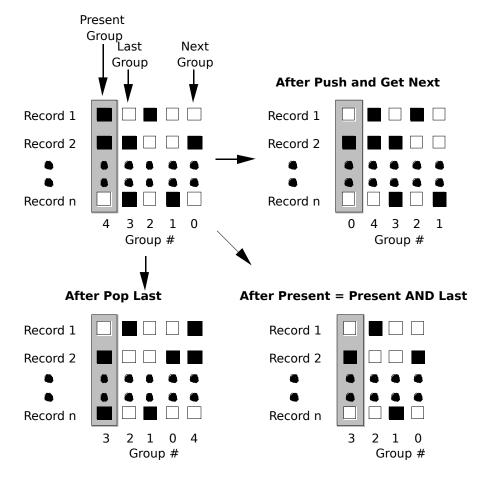
The status of the present Selection Group, as well as the orientation of any other selection groups, may be found in the second line of the Statistics at the top of each window (if enabled, see Display Options), as well as the second line of the header of a print out. Information that is displayed there includes:

- a count of records in the present Selection Group
- a byte count of the combined sizes of the selected record items
- in the Volumes window, a byte count of the combined free sizes of the selected volumes
- the number of the present Selection Group
- the positions of the other Selection Groups in the Selection Stack

There are several methods that may be used to select records. The first is manually, via clicking on the record. Holding down the shift key while clicking will add to the previous selection(s), and dragging will select all files drug over. The Find All function will shift the present Selection Group onto the stack and clear all selections before setting the select flag for all records that match the search parameters. The Select All function will set the select flag for all records in the active window. The Select Special function will select file records from user specified groups such as those that pass the File Filter, have match flags set, etc.

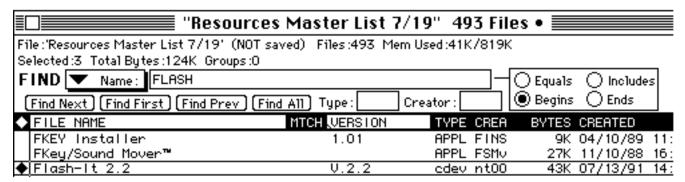
In addition to the five selection groups in the selection stack, there are two groups, Group A and Group B that are used for semi-permanent storage. The user can swap the contents of each with the present selection group. No other operation except Save As Old Format changes these groups.

Below is a diagram illustrating the concept of selection groups, the selection stack, and the results of several Selection Group operations.



### **Find Function**

Also in the header of each window is an optional Find section. The user may enable or disable the display of this section of the header with the Display Options menu item. If it is disabled, it may be enabled by executing the menu item Find... or the command key equivalent. Clicking in the Find controls area with the command key (Hide Field modifier) down will cause the controls do be hidden. When enabled, the Find controls appear as show below.



In the Files window (example shown above), there are three editable fields to search by. The first is a triple purpose field that can be Name, Parent (folder), or Volume, selectable via the pop-up menu item shown with the arrow. The other two fields are Type and Creator. When an auto-field select is performed, the program will select a field based on whether the list has been sorted by Name, Type or Creator. If it is sorted by one of these, this item will be selected. Otherwise, the default item is Name.

The radio buttons apply to the Name/Parent/Volume field and specify the location of the string to be found within the selected parameter as being at the Beginning, End, anywhere (Include), or the for the entire strings to match exactly (Equals).

There are several methods available for entering a find string. Just entering printable characters will automatically begin entering text in the auto-field. If the auto-field is the Name/Parent/Volume field, after no characters have been entered for the Delay until Repeat time (from the Keyboard Control Panel), the find will be performed automatically, searching down from the top of the list.

For example, if the list is sorted by Name, and the "Begin" option is selected, entering "fir" would cause the first file whose name begins with "fir" to be selected and displayed. Subsequent keystrokes must occur within the time setting for Delay until Repeat in the Keyboard Control Panel, or they will be interpreted as a new string.

Another means for entering a find string is by clicking on the field you wish to edit. Also, entering Tab will select the auto-field if no field is selected, and rotate through the fields on subsequent Tabs. Using this method, **FileList+** will wait for you to enter a command before doing anything with the entered text.

Search is case sensitive for Type and Creator only, which also are restricted to 4-character strings, no more, no less. Find First will find the first occurrence of the search strings in the list. Find Next finds the next occurrence, beeping if the end of the list is found before the next occurrence. Find Prev finds the previous occurrence, beeping if the beginning of the list is found before the next occurrence. Both Find Next and Find Prev will wrap around if the ends of the list are found the previous time they are executed. Find All marks all records that match the search parameters. Use the Enter key to step down through the results of a Find All.

Each time a record matching the search parameters is found, that records Selected field will be enabled, indicated with a diamond shaped symbol. When a Find All command is executed, the current Selection Group is pushed onto the Selections Stack and all selections cleared, before the searches are performed.

# **Options Saving**

There are two locations that user selected options may be saved. The first is the "FileList+ Options" file and the second is the List file. Most options are saved in the Options file, but some are saved in the list file so that its information can be correlated with the conditions that created it. For example, the Match options and the file filter options are saved in the list file, so that any file match information may be understood as to how it was created.

Options are only saved in the Options file when a Save button is selected from one of the Options dialogs (Options, Scan Options, Match Preferences, File Filter, or Display Options). Otherwise, the last saved options are reloaded the next time the program is launched. When a List file is opened, its Match and File Filter options override the Options file options.

The Options file is searched for at program launch. The search is performed in the sequence shown below:

- 1. Look in the folder that **FileList+** is in, if not found then,
- 2. Look in the "Preferences" folder in the active system folder, if folder or file not found then,
- 3. Look in the active system folder, if still not found, reset options to defaults.

Looking first in the application's folder is useful for setting up a portable copy of the program to go around to different machines scanning files, using a fixed configuration. To do this, set up all options as desired, save the options, then copy the "FileList+ Options" from the active system folder or "Preferences" folder to the application folder. This Options file will then be used whenever this **FileList+** is launched. Note that the Options file must be re-copied if any changes are required.

When the Options file is saved, it will default to the "Preferences" folder in the active system folder if that folder exists, alternatively reverting to the active system folder itself. If an Options file previously existed in the active system folder, it will be deleted first.

In general, all user settings are saved when an Options save is performed. The only exceptions are group selections (in "special" menu items), and Find selections.

### **MENU ITEM DESCRIPTIONS**

### **FILE MENU**

File	
New	ЖN
Open	<b>₩0</b>
Merge File	
Close	жш
Save	ЖS
Save As	
Save As Old Fori	nat
Save Text	₩E
Page Setup	
Print All	ЖР
Print Special	жπ
Quit	жQ

### New (cmd-N)

This command is used to clear the present list. If the current list has been changed since it was last saved, the user will be asked if they wish to discard the changes or save them first.

#### Open... (cmd-O)

This command is used to replace the current list with a list found in a file specified by the user. If the current list has been changed since it was last saved, the user will be asked if they wish to discard the changes or save them first. When a list is opened, if it is not of the latest list format, it will be converted when after it has been read in. If the list must be converted, it does not contain all scan information found in later versions of **FileList+**, and rescanning of the volumes is recommended. A progress indicator with cancel button will be displayed during the conversion. NOTE: If the conversion is canceled, or aborted due to an error, the old list data will be lost.

#### Merge File...

This function allows the user to select a FileList type file to be merged with the current list. If the current list contains volumes with the same name(s) as the list to be merged, the user will be prompted to rename (the new volume) or replace (the old volume). If the list to be merged is an older format, it will converted to the newer format automatically, just as in the Open command above.

#### Save (cmd-S)

Saves all data to a file. If the list is untitled, user will be prompted for a file name. If the list contains only one volume, the default name will be the volume name with "List" appended.

Save As Old Format

Standard Save As... but save in old format, stripping off match and version information.

Save [Selected] Text (cmd-[shift]-E)

Saves contents of active window to a user specified text file. Format is selected by the Text Export options in Options menu item. Holding down the shift key when selecting this item will save only selected records.

Page Setup...

Standard page setup.

Print All.../Print Selected... (cmd-P/cmd-shift-P)

This command will print the contents of the active list window. If the shift key is help down when this item is selected, only selected records will be printed (the menu item changes to Print Selected...)

Printouts are marked at the top of each page with the list name and page number.

Print Special... (cmd-opt-P)

Enabled only when File window is active, this menu item will print certain groups of file records in the list. The options are in three groups. If more than one group has items selected, records must match all selected groups. Within each group, the items are additive, that is, selecting more than one includes more possible files. For example, if Single Match Files, Multiple Match Files and Files that PASS Filter are selected, only files that are either single OR multiple matched and pass the File Filter will be printed.

# III		t Files records that fit each of these groups Print: Files that are  Only User Selected Files [u] with Match/Compare Results None (no relationships) [e] Matched ("•") [s] Newer ("n") Multiple ("m") Older ("o") (Match flags not current)	
/ a ii ii	8	Files that PASS Filter [p] Files that DON'T PASS Filter [d]  Select  Cancel	)

where:

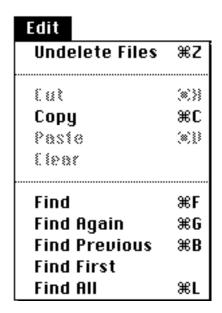
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None (those files that have no match flags at all)
Matched (those files that have only one matching file)
Multiple (those files that have more than one match)

Newer (those files that are newer than another version of this file)
Older (those files that are older than another version of this file)

If the match function has not been performed or is not up-to-date, a message will indicate this below the controls (as shown in example above).

# **EDIT MENU**



### Undo (cmd-Z)

When editing a text field, this will undo the last operation performed. When file records have been deleted from the list but the list has not yet been saved or merged, this command will un-delete the files that have been deleted.

### Copy (cmd-C)

Copy all selected records to the clipboard. Format will be determined by Text Export settings in Options.

#### Find (cmd-F)

This will enable the Find section of the window headers, or selected the auto-field if it is already enabled. See User Interface section above for more information about Find function.

# Find Again (cmd-G)

This will perform the Find function using the current find parameters, starting with the next record in the list, or the first record in the list if no record is currently selected, and continuing sequentially down the list. If no matching item is found, a beep will sound. Subsequent executions will wrap around to the beginning of the list.

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### Find Previous (cmd-B)

This will perform the Find function using the current find parameters, starting with the previous record in the list, or the last record in the list if no record is currently selected, and continuing sequentially up the list. If no matching item is found, a beep will sound. Subsequent executions will wrap around to the end of the list.

#### Find First

This will perform the Find function using the current find parameters, starting with the first record in the list, and continuing sequentially down the list until a match is found. If no matching item is found, a beep will sound.

### Find All (cmd-L)

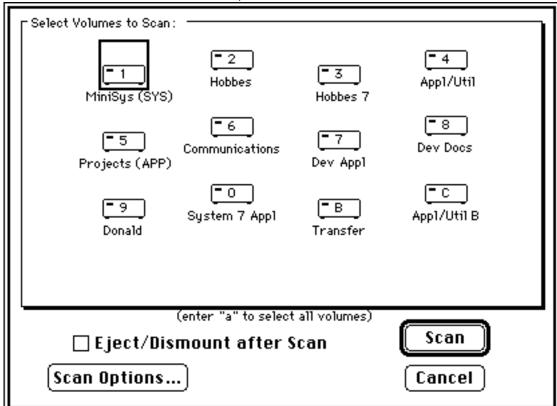
The Find All function will shift the present Selection Group onto the stack and clear all selections before setting the select flag for all records that match the search parameters.

# **VOLUMES MENU**

Volumes			
Scan	[` k	ey]	
√Automati √Replace l Don't Aut Filter File	Jolume: o-Eject	s w∕sam t	e Name
Scan Opti	ons		
Delete Vo	lume(s	) (del ke	y]
Rename I	Jolume	(s)	₩R

Scan... (`)

As can be seen in the example below, the Scan... dialog is icon based. Floppy icons indicate volumes of 1.4 Mbytes or less total size. Each icon contains a key character that may be used to select that volume (1,2,3 etc.), as well as the volumes name and an indication if the volume is the current system (SYS) and/or application (APP) volume. Typing "a" or "cmd-a" will toggle the selection of all volumes. Of course, a volume may also be selected or deselected by clicking on the icon. Volumes selected to be scanned will be indicated with a box around the icon, as shown for the first icon below.



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A short cut to bring up the Scan... dialog is by entering "`" (same key as tilde "~").

The Eject/Dismount after Scan checkbox will cause the volumes scanned to be ejected or dismounted after scan is complete. This is in addition to the Don't Eject after Scan option which only applies to Automatic scans.

Clicking the Scan Options button will present the Scan Options dialog discussed under the Volumes section below.

If Filter Files on Scan scan option is selected, the Set Filter... button will appear. Clicking the Set Filter button will present the Filter Options dialog discussed under the Files menu section below.

During a scan, the current options are displayed and a cancel button is shown. Options may not be changed during the scan however. If a scan is cancelled, all data for the volume currently being scanned is removed, and the volume is not ejected/dismounted.

### Automatic Scan/Eject

When this item has been selected and a volume is mounted (disk inserted, etc.) while **FileList+** is active, the volume will be scanned and then dismounted/ejected. This is useful for scanning numerous removable disks.

### Replace Volumes w/same Name

This item may be selected to enable the automatic replacement of an existing volume with a newly scanned volume of the same name. This avoids the dialog asking if you want to rename or replace the volume. This item reflects the same information found in the Scan Options dialog.

A word of warning here: if two or more volumes with the same name are selected to be scanned, all volumes scanned after the first (with the same name) will request renaming. What's more, when the volumes are scanned again, (old) renamed volumes may not be replaced with newly renamed volumes. To do this, simply pick a new name, and go back and purge the old renamed volume(s). Of course, if all volume names are unique, this won't be an issue.

### Don't auto-eject

This item may be selected to disable the automatic ejection or dismounting of any volume mounted or disk inserted while **FileList+** is running. This is useful if you wish the volume to remain around for later use. This item reflects the same information found in the Scan Options dialog.

#### Filter Files on Scan...

When this item is selected, files will be filtered according to the current Filter options as they are scanned. This item reflects the same information found in the Scan Options dialog.

Scan Options... (cmd-opt-M)

The volume scan options are selectable via this menu with the dialog shown below. The Automatic Scan, Replace Volume(s) and Don't Eject items select the same options as the menu items of the same names under "Volume". The Get Version Information checkbox determines if applications, system files, and other executable type files will be scanned for version number information during a volume scan. The Filter Files on Scan option will check a file against the current filter options before adding it to the list during a scan. The Disregard Desktop files option will skip over the invisible Desktop files instead of adding them to the list during a scan.

The Stuffit Archive and Compactor Archive items determine if **FileList+** will search inside these types of archive files. The Archives ONLY item will make **FileList+** only get files from archives, providing one or more archive type has been selected.

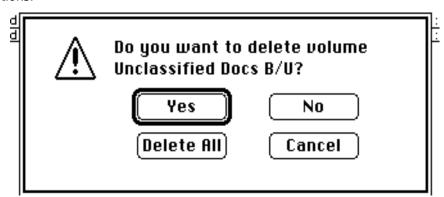
**Note:** scanning for version information will slow down scanning substantially. Version information for files that are open, including active applications, INITs and System files cannot be obtained and will be indicated with the string "n/aERR#" where ERR# is the error resulting when the search was performed, "-193" for open files.

**Notes for Power Users:** the version information is searched for in one of two locations. First the "vers" resource is searched for and if it is found, the short version number string is used. If this resource is not found and the files Bundle bit is set, the signature resource is opened and used as the version information. If the version information is too long (longer than 12 bytes), then the string is searched for the first occurrence of a number character and the next 12 bytes are used for the version number. This process mimics the process the Finder's Get Info uses.

	Volume Scan Options:
	⊠ Automatic disk insert/eject [a]
	☐ Don't Eject Volume after Scan [n]
	⊠ Replace Volume(s) w/Duplicate names [r]
	☐ Get Version Information [v]
	☐ Filter Files on Scan [f]
	☑ Disregard Desktop files [d]
	— Archives ⊠ Recognize Stuffit archives [s]
	⊠ Recognize Compactor archives [c]
$\blacksquare$	☐ Recognize Archives ONLY [o]
	OK Save Cancel

Delete Volume(s) (delete key)

This menu item will remove all records associated with each selected volume from the list. A caution will be presented giving the user the option of verifying each selected volume or just deleting them all without further cautions.



Rename Volume(s) (cmd-R)

This menu item will present the user with a dialog to rename each selected volume from the list.

### **FILES MENU**

Files	
Compare File Versions	жм
Custom File Matching	
Match Prefs	₩µ
File Filter Options	
Reset Match Flags	
Delete Selected Files [de	el key]
Delete Files Special	

Compare [Selected] File Versions (cmd-[shift]-M)

This will cause a "smart" comparison to be performed of all files in the list, indicating files that are exact matches, as well as those that are older or newer versions of the same document or executable file. Some ideas for the use of this function include: comparing multiple copies of a "Master" volume and determining which files need to be moved where in order to bring all copies up to date; to aid in manual backups; check a set of applications and system files against a "Master" set for proper versions; and many other uses. **Executable** files are discriminated from **documents** and the comparisons are tailored to reflect this.

If the Match Preferences "Create Log" item has been selected, a Log file will be created detailing which files need to be moved from where to where to bring all volumes "up to date". If the user cancels the Log file Save dialog, the match will be still be performed, but no Log file will be created. On the other hand, if a Log file is specified, the list will be sorted first by the Path field to organize the files by directory. The Log file will list each file that needs to be moved, with the directory information for the newer and older of the two files. The Log will also list files that have no known matches, and those with more than two versions. It will flag "questionable" files with an asterisk ("\*" - See note below).

User selectable criteria for the comparison include the File Filter settings and the Volume settings. The File Filter limits the comparisons to the file types specified (see File Filter Options...). The Volume settings determine whether the comparison should check a file for matches only on the same volume, only on different volumes, or both. This is selectable via the Match Prefs... dialog (see menu item description below). The the Match Prefs... dialog will be presented when this menu item is selected if Match Prefs... has not been selected since program start-up or the last list file loaded.

In performing the compare, first the program determines if the file if a file is an executable-type file or a document-type file. Executable type files include applications, INITs, control panel devices, system files and the like. Document type files are those that do not appear to be executable files.

Normally, each file to be compared must pass the File Filter. However, each of the match functions may be constrained to operate only on files that are currently selected by holding down the shift key when selecting the menu item. If this is done, files are no longer checked for the File Filter, only requiring that one of the two files being compared be selected.

If a file is a **document** type file, the program compares it with the other files in the list, looking for exact matches on the file Names, Types, Creators (making sure the files belong to the same application), and create date. If an match is found for each of these fields, the modify dates and times of the two documents are compared. If they are identical, a match is indicated with a "•". If not, the older of the two files is marked with an "o" and the newer is marked with an "n". If a match is detected and this is not the first match of that file that is detected, a multiple match will be indicated with an "m". If Names, Types, Creators <u>and</u> dates match, but file Sizes don't, the "•", "n" and "o" flags will all be set for both files to highlight this incongruity.

If a file is found to be an **executable** type file, the program compares it with the other files in the list, looking for exact matches on the file Type and Creator, and a partial match on the files name. The name matching performed is the same as that done for the Custom Match option "up to numeric". Each name is truncated beginning at the first non-space character preceding the first numeric character (if found) before comparing. For example, "MacDraw II 1.1" and "MacDraw II 1.0v2" would be compared as "MacDraw II" and would match. If a match is found in all three fields, each file is then checked for a version number. If both files have a version number, this is used to compare the files. If one or both of the files has no version number information, the <u>create</u> dates and times of the two files are compared. If the version numbers (or create dates if version data not found) are identical, a match is indicated with a "•". If not, the older (earlier date or smaller number) of the two files is marked with an "o" and the newer is marked with an "n". If a match is detected and this is not the first match of that file that is detected, a multiple match will be indicated with an "m".

NOTE: Because version number information is more reliable then the date information for determining the version of a file, it is strongly recommended that the "Get Version Information" option be selected in the "Scan Options..." menu item. This item is by default deselected to enhance speed of disk scans. The version information is obtained from the resource "VERS" in the executable file. In older, and some newer applications, this resource is not present or is not of the Apple specified format. See Disclaimer below for more information.

All files listed in the Log whose comparison was based on dates (as opposed to version numbers) will be marked with an asterisk ("\*") to warn the user about the information in the disclaimer below.

All flags are displayed in the Files window under "MTCH".

### DISCLAIMER:

Note that all file date/time information is only as accurate as the clock on the system. If the clock is improperly set, the date/time stamp for files will be also, and comparisons of files from two different systems must take this into account. Also, just because a file has a newer date/time does not mean the data contained therein is necessarily newer. For example, if one opens up a copy of a file to look at it and saves it just to be cautious, even though the copy originally had been older, it would now indicate itself to be newer. The solution to this is to not save files unnecessarily.

Another problem case is executable files that retain their create date and time through several versions. Examples of this are the SuperClock! and Boomerang INITs. Since executable files are often self-modifying also, there is no way to infallibly discern the truly older/newer of two files of this type, except possibly through the version number. If one or more of the two files has no version number information, for whatever reason, the comparison is not infallible. Therefore, please bear these items in mind before following the recommendations of the Log file!

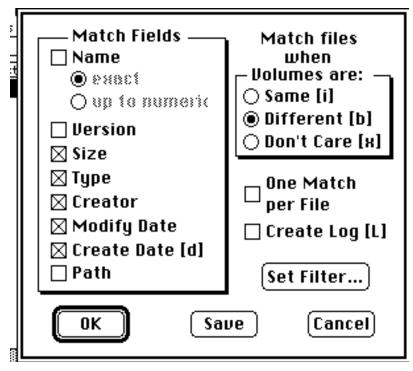
Custom [Selected] File Matches

This is the menu item to perform a custom compare of all files in the list (as described above in the New Functions section).

Note: Match Prefs... will be selected first if it has not been selected since the program was run or the list file loaded.

Match Prefs... (cmd-opt-M)

The match criteria are selectable via this menu with the following dialog:



These criteria include each file item such as Name, Size, etc.. These items are used for Custom File Match only. The Name field has two options, "exact" and "up to numeric". The "exact" requires file names to match to the last character. The "up to numeric" first strips each file name of all characters after the first numeric character occurring in the name, plus any trailing spaces that are left after that. It then compares these truncated name. The purpose of this is to allow a file name to contain version information, but still be matchable via this option.

An additional group selects the required volume relationship between two files being compared. These items are "Same Volume" and "Different Volume". Selecting "Different Volume" will ensure that no match will occur unless the files are on different volumes, to distinguish files that have backups, for instance. Selecting "Same Volume" will ensure that no match will occur unless the files are on the same volume, to distinguish files that are duplicates. "Don't care" will disable both. If "Don't care" is selected, the volume will not be considered during matching.

If the Only One Match option is selected, then multiple matches will never be indicated, and once a file has been matched once, it will not be compared for further matches.

If the Create Log option is selected, then the user will be given the option to specify a Log file whenever the Compare File Versions operation is performed.

All match and filter options are saved in the file list file when it is saved. Default options for new list files are saved in the Options file when the user elects to save them with the Save button.

Careful consideration should be made selecting these items, as this will greatly effect the results. For example, deselecting the Name is useful in finding multiple copies of a file that have been renamed. Deselecting the modify date and size is useful in finding various versions of the same file, and so on.

File Filter Options...

(Also selectable via the Match Prefs, Delete Files..., and Print Special... dialogs via the Set Filter button)

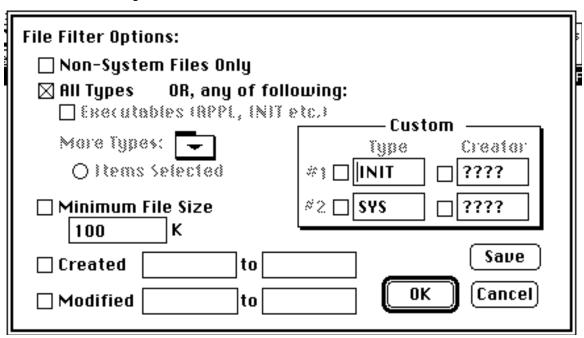
The File Filter may be used as follows:

- to filter files during a volume scan to allow only files of interest to be added to the list.
- to restrict the match searches to certain files that pass the File Filter requirements.
- to cull the file list via the Delete Files... menu item (described below).
- to print selected file types via Print Special... menu item
- to select file records via Select Files Special... menu item

All match and filter options are saved in the file list file when it is saved. Default options for new list files are saved in the Options file when the user elects to save them with the Save button.

The File Filter options allow you to select certain common file types via a pop-up menu, and/or select up to 2 sets of custom file TYPEs or CREATORs, and/or set a minimum size for files of interest.

Below is the File Filter dialog:



If the Non-System files option is enabled, then the filter will pass only files that have the System (aka Locked Name) flag in the Finder flags word set to a 0. This flag is set for all file that have locked names, such as the System and the Finder. Finder flags information is available only in scans performed with the later versions of FileList+, and therefore this option is not usable on lists scanned with the original FileList or versions of FileList+ previous to 1.0b13.

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NOTE: Finder flags are sometime incorrectly set or cleared, particularly by file archiving software.

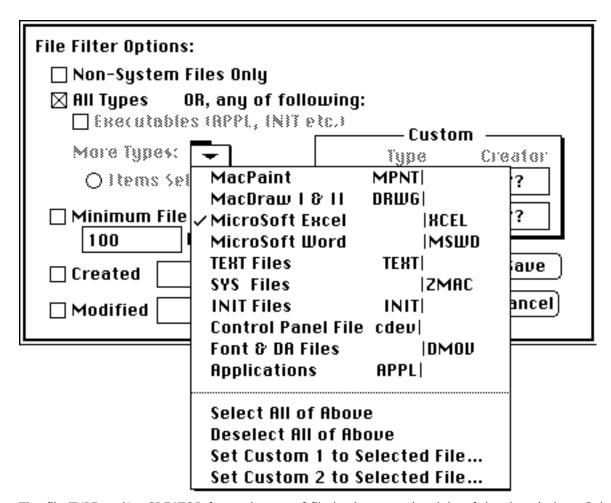
If the Minimum File Size option is enabled and a value (in Kbytes) is entered, then the filter will pass only files this size or larger, in addition to the type checking, if any.

Several popular file types are available, as well the catch-all button "All Types". When "All Types" is selected (checked), the Executable Files item, types menu, and Custom items are ignored, and the Executable Files item and Custom selections are disabled.

Executable Files will pass all files of the types "APPL", "INIT", "xNIT", "cdev", "xdev", "RDEV", and "mdvr", as well as all files with version information (such as system files, etc).

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Deselecting "All Types" and clicking selection menu as shown below:	on th	ne pop-up	menu	icon	next	to	the	"Types:"	label	results	in	а



The file TYPE and/or CREATOR for each type of file is shown to the right of the description. Selected files types will have a check-mark. In the example, only files for the application Excel<sup> $\mathbb{M}$ </sup> have been selected.

Custom 1 and Custom 2 are editable file type and creator fields with enable boxes. If one is enabled and the other isn't for a given Custom set, the disabled field will match on anything. For example, selecting Custom 1 Type field with a value of "INIT" and disabling Custom 1 Creator will allow any INIT type file to pass the filter.

### **NOTES FOR THE POWER USER:**

The pop-up menu is ID 141 in the MENU resource. STR# resource ID 150 corresponds to item 1 in the pop-up menu, STR # ID 151 to item 2, etc.. The first string in each STR# resource is the TYPE field and the second is the CREATOR. Leaving an entry blank indicates don't care/wildcard. Of course, use ResEdit at your own risk and work on a copy...blah blah blah.

Reset Match Flags

Name says it all. Clears all match related flags.

Delete Selected Files... (delete key)

Newer

Older

This menu item allows the user to delete the selected file records from the list. It will warn first before deleting the records.

Delete Files Special...

This menu item allows the user to delete certain groups of file records from the list. The options are in three groups. If more than one group has items selected, records must match all selected groups. Within each group, the items are additive, that is, selecting more than one includes more possible files. For example, if Only User Selected Files, Single Match Files, Multiple Match Files and Files that PASS Filter are selected, only files that are selected, are either single OR multiple matched and pass the file filter will be deleted.

	t Files records that fit each of these groups  Delete: Files that are  Only User Selected Files [u]  with Match/Compare Results  None (no relationships) [e]  Matched ("•") [s] Newer ("n")  Multiple ("m") Older ("o")  (Match flags not current)
₿	Files that PASS Filter [p]   Set Filter    Files that DON'T PASS Filter [d]   Set Filter    Cancel
V	where:  None (those files that have no match flags at all)  Matched (those files that have only one matching file)  Multiple (those files that have more than one match)

(those files that are newer than another version of this file) (those files that are older than another version of this file)

If the match function has not been performed or is not up-to-date, a message will indicate this below the controls (as shown in example above).

Note: This does NOT delete your files from your disks, only the record data from the list! The volumes list is left unchanged, even though it no longer correlates with the files list. After a deletion is performed, the user needs to keep track that this is not a complete list anymore.

Clicking the Select button will execute the delete. Cancel will abort the delete and Set Filter will bring up the Filter Options dialog described above.

**NOTE:** File records deleted by the Delete Files menu items are not actually removed from the database until a Compact is performed. A Compact is performed whenever the list is Saved (except Save Text), or whenever the Merge operation is performed. The Undo command in the Edit menu can be used (before Compacting) to un-delete file records. File records that have been deleted but not Compacted are hidden from view and are ignored in all operations.

# **SORT MENU**

# Sort Files by selected (& last) Files by name **%1 #3** Files by match (& last) √Files by version & name Files by type (& last) **#4** Files by creator (& last) Files by size **#2** Files by created Files by modified **#5** Files by volume (& last) Files by path (& last) Volumes by selected Volumes by name Volumes by free Volumes by total Volumes by files Volumes by created Volumes by modified

NOTE: Clicking the field header in the window will sort by that field. Holding down the shift key (Reverse Sort modifier) while selecting sort item will perform reverse sort. The primary sort item for each list is indicated in the Sort menu with a check mark, the secondary is indicated with a diamond mark. The primary sort item for each list is indicated in the header as an inverse video field header with a corner tab, the secondary is indicated with just inverse video .

Files by selected (& last)

The files list will be sorted according to whether a record has been selected or not, then by the previous sort item.

Files by name (cmd-1)

The files list will be sorted by name in alphabetical order, ignoring case of characters.

Files by match (& last) (cmd-3)

This menu item will perform a sort placing all matched files at the top of the list, followed by files with no matches. If Version match information is present, the files with newer, older, and both older and newer flags will be sorted in that order. The previous sort sequence is maintained within each section so, for example, if a sort-by-name is performed followed by a sort-by-match, the matched files will be listed in name sequence, followed by the non-matched files sorted in name sequence. This includes the direction of the sort. Both the match field header and the header for the last sort item will be highlighted. See Compare File Versions item for more information.

Files by version and name

This menu item will perform a sort by two fields, first the file names, then the file versions.

Files by type (& last) (cmd-4)

The previous sort sequence is maintained within each section so, for example, if a sort by size is performed followed by a sort by type, the files of each type will be listed in size sequence. This includes the direction of the sort. Both the type field header and the header for the last sort item will be highlighted. Also, type field header will be marked with a small "tab" in its bottom left corner.

Files by creator (& last)

The previous sort sequence is maintained within each section so, for example, if a sort by size is performed followed by a sort by creator, the files of each creator will be listed in size sequence. This includes the direction of the sort. Both the creator field header and the header for the last sort item will be highlighted. Also, creator field header will be marked with a small "tab" in its bottom left corner.

Files by size (cmd-2)

The list is sorted file sizes.

Files by created

The files list is sorted by the files create date and time.

Files by modified

The files list is sorted by the files modify date and time.

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Files by volume (& last)

The previous sort sequence is maintained within each section so, for example, if a sort by size is performed followed by a sort by volume, the files of each volume will be listed in size sequence. This includes the direction of the sort. Both the volume field header and the header for the last sort item will be highlighted. Also, volume field header will be marked with a small "tab" in its bottom left corner.

Files by path (& last)

The previous sort sequence is maintained within each section so, for example, if a sort by size is performed followed by a sort by path, the files of each path will be listed in size sequence. This includes the direction of the sort. Both the path field header and the header for the last sort item will be highlighted. Also, path field header will be marked with a small "tab" in its bottom left corner.

Volumes by selected

The volumes list will be sorted according to whether a record has been selected or not.

Volumes by name/free/files/created/modified

The volumes list will be sorted according by the selected field.

# **SELECT MENU**

# Select Move to Pointer [ret key] Select All Records ₩A Select Files Special... Swap Present Group & Group A ж: ₩' Swap Present Group & Group B Pop Last Selection Group ж, Push & Get Next Selection Group ж. Push Present Group & Clear ₩/ Toggle Present Selections **#**] Present = Pres OR Last, Shift ₩= Present = Pres AND Last, Shift **ж**-Reset Stack Selection Groups

Move to Pointer (return key)

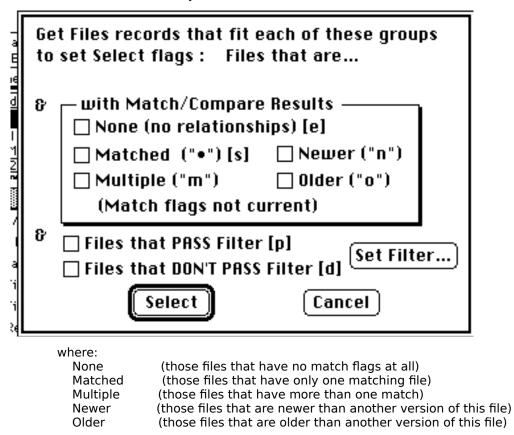
This will position the vertical scroll so that the record last selected will be visible.

### Select All Records (cmd-A)

This will set the select flags for all records in the active windows list. Before performing this, it will push the current selections onto the stack if any selections have been made.

Select Files Special...

This menu item will set the select flags of certain groups of file records in the list. The options are in three groups. If more than one group has items selected, records must match all selected groups. Within each group, the items are additive, that is, selecting more than one includes more possible files. For example, if Single Match Files, Multiple Match Files and Files that PASS Filter are selected, only files that are either single OR multiple matched and pass the File Filter will be selected. Before performing this, it will push the current selections onto the stack if any selections have been made.



If the match function has not been performed or is not up-to-date, a message will indicate this below the controls (as shown in example above).

Swap Present Group & Group A (cmd-;)

This will exchange the current selection group and the contents of Selection Group A.

Swap Present Group & Group B (cmd-shift-')

This will exchange the current selection group and the contents of Selection Group B.

Pop Last Selection Group (cmd-,)

This will rotate the selection group stack for the active window, placing the last selection group to be "pushed" onto the stack into the present selection group. See the example in the Selection function description.

Push & Get Next Selection Group (cmd-.)

This will rotate the selection group stack for the active window, placing the selection group at the top of the stack into the present selection group. See the example in the Selection function description.

Push Present Group & Clear (cmd-/)

This will push the present selection group onto the stack for the active window, and clear the present selection group. If the stack was full before this command was executed, the selection group at the top of the stack will be discarded. This command is executed automatically for several operations, if the present selection group has any selection. Those operations include Select All, Select Special, and Find All.

Toggle Present Selection (cmd-])

This will de-select all selected records in the active window, and select all records not previously selected.

Present = Pres OR Last, Shift (cmd-=)

The present selection group in the active window will be replaced with the results of a logical OR operation of the present selection group, and the last selection group pushed onto the stack. The stack will then be shifted down, resulting in one less group on the stack. For example, if the first selection group consisted of records 1, 3 and 10, and the last selection group consisted record 2, the result of this operation is that the present selection group would be 1, 2, 3 and 10, and the stack would be rotated over the last selection group.

Present = Pres AND Last, Shift (cmd-=)

The present selection group in the active window will be replaced with the results of a logical AND operation of the present selection group, and the last selection group pushed onto the stack. The stack will then be shifted down, resulting in one less group on the stack. For example, if the first selection group consisted of records 1, 3 and 10, and the last selection group consisted of records 2, 3, 4 and 10, the result of this operation is that the present selection group would be records 3 and 10, and the stack would be rotated over the last selection group.

Reset Stack Selection Groups

This will clear all selection groups in the stack, but leave Group A and Group B alone.

### **OPTIONS MENU**

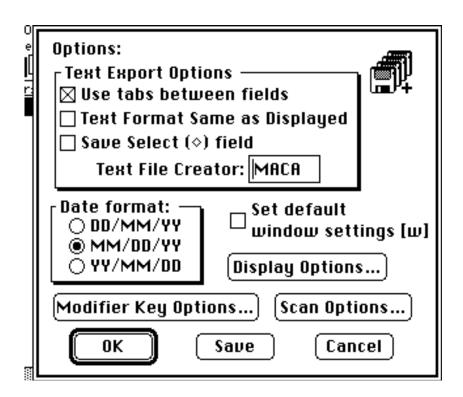
Options	
General Options	₩U
Display Options	₩D
Display Font Size	•
Status Font Size	•
Print Font	•
Print Font Size	•
Default Windows	
Stack Windows	
Tile Windows	
Reset Options to Def	aults

General Options... (cmd-U)

Select options from dialog shown below. The first three options effect how text is exported from **FileList+**, either via a Save Text operation or a Copy (to clipboard) operation. "Use Tabs" selects tabs or spaces as delimiters between fields. If tabs is not selected, fields are space delimited and fixed column width. The "Text Format Same as Displayed" option specifies if text should be exported as it is shown in the current display, including which fields are displayed and the order they appear. If this option is not selected, the text format will be fixed, in the default sequence (shown in the View-By menu), and all fields will be present. "Save Select field", when enabled, will place a bullet character in the first field for each selected record. The Text File Creator item allows the user to specify the file creator to be used when saving text files. This allows the file to be opened by double clicking instead of importing. Common creators are shown in the File Filter Options more types pop-up menu.

The Scan Options... and Display Options... buttons allow the user to access the dialogs associated with the menu items of the same names.

NOTE: All options are saved in a file called "FileList+ Options" whenever a Save is performed from any options dialog. See Options Saving discussion above.

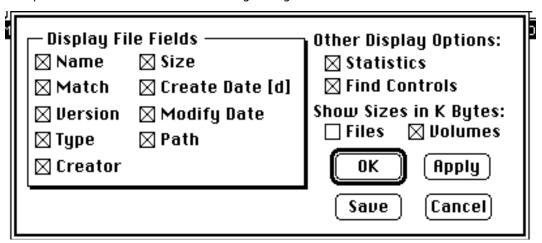


Selecting the Modifier Key Options... button will present you with the dialog shown below to select the keys that must be held down to perform the selected operations, most of which are described in the User Interface Functions section earlier in this documentation.

	Modifier Key Selections:
1	Hold down these keys when clicking in header to:
	Hide Field: ⊠ ೫ □ Shift □ Option □ Control
	Restore Fields: ⊠ ೫ 🗌 Shift ⊠ Option 🔲 Control
	Reverse Sort: 🗌 🕱 🖂 Shift 🖂 Option 🔲 Control
	Hold down these keys when clicking on record to:
	Extend Selection: 🗌 🕱 🖂 Shift 🔲 Option 🔲 Control
	Select Files in Parent: 🛛 🗯 🗌 <b>Shift</b> 🔲 <b>Option</b> 🔲 <b>Control</b>
	Select Files in 2cd Parent: 🔲 🗯 🔲 <b>Shift</b> 🖂 <b>Option</b> 🔲 <b>Control</b>
	Copy field to search: 🗌 🕱 🔲 Shift 🖂 Option 🔲 Control
	OK Save Cancel

Display Options... (cmd-D)

This gives the you the option to display only those items of interest in the Files window. If you want to be able to see the path at the same time as the file name and your screen is not wide enough, for example, you can elect to turn off the display of the modify and create dates (and times), thus shifting the volume/path item to the left. This is particularly important for those with smaller screens on their Macs. These options are selected via the following dialog box:



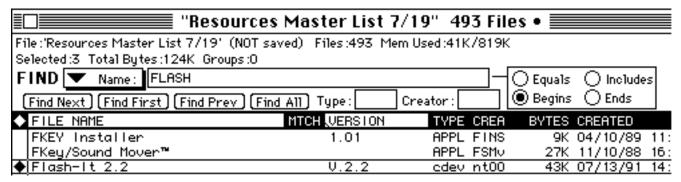
The default display options are as shown above, everything selected. Entering the first character of an item (or the character shown in brackets, ex. "[d]", when shown) will toggle that item. Entering "a" will select all File fields.

The Save button will exit the dialog, saving <u>all</u> options to the Options file. The Apply button will update the displays to reflect the selections made. A Cancel performed after an Apply will not revert to the previous settings.

The format of text placed in the Clipboard for a Copy or placed in a text file for a Save Text will be the same as the format it is displayed if the "Text Format Same as Displayed" item is selected in the General Options menu item.

For each window, the option to display sizes in Kbytes or just bytes is offered.

Another display option is whether to display the Statistics bar in each window, above the header bar. For example:



This indicates several useful items including:

### First Line:

- The current files name:
- If the current list has been changed since last saved (indicates "(NOT saved)" and "•" in title);
- The count of files/volumes in the current window;
- The amount of application memory used/available in Kbytes.
- If the version field (in the Files window) is hidden because there is no file version information in the current list, this will be indicated with "(no version data)".

# Second Line:

- The number of records currently selected.
- The total size (and Free Size in Volumes window) of all selected records.
- Which group number is the present group, and what other groups are in the selection stack.
- In the Files window, if the match info is current, this will be indicated, including also;
  - a count of matching files, and;
  - a total byte count of matching files (not counting originals)

If the match info is not current, the second line of Statistics for the Files window will not include the "Match Info".

Also note that the field(s) each list is sorted by (if any) will be highlighted in the header bar. The primary sort field will also have a little tab in the bottom left corner, as the Version field does in the first example above.

When not otherwise indicated, the defaults for the Statistics are: File saved, match not current.

Another Display Option is the Find Controls. These are the controls for the Find function. They are described in detail in the User Interface Functions section of this document.

### Display Font Size

The user may select the font size to be used for list text on the screen. This option may be saved in any options dialog.

### Status Font Size

The user may select the font size to be used for the statistics at the top on the screen. This option may be saved in any options dialog.

#### Printer Font

The user may select the font to be used for printing. This option may be saved in any options dialog.

### Printer Font Size

The user may select the font size to be used for printing. This option may be saved in any options dialog.

### **Default Windows**

This will reset the size and position of each window to the defaults.

### Stack Windows

This will resize each window and position them to overlap, setting this as the new window defaults.

### Tile Windows

This will resize each window and position the volumes window immediately below the files window, using about 5/8 of the height of the screen for the files window and the rest for the volumes window. It will then set this as the new window defaults.

## Reset Options to Defaults

This will reset all of the user options to the "factory" defaults, including general, display, match, scan, and filter options, with the sole exception of the window positions. Window positions will be reset to the last saved positions.

### TIPS FOR USING FILELIST+

Here are a couple of suggestions for using **FileList+**. Several of them are referred to above.

- Use unique and descriptive names for each disk, and mark them clearly.
- Use consistent file and volume naming conventions, so you can identify the items easily.
- If you are interested in checking your executable files (applications, INITs etc.) for proper versions, enable the version scan in the Scan Options... dialog.
- Set up and save your standard preferences and save them in the FileList+ Options file, then do a Reset Options to Defaults or otherwise reconfigure your options (without saving) for special cases.
- If you are a "keyboard" type person more than a "mouse" type person, check out all the keyboard shortcuts in the documentation above and following. Most commonly used operations may be performed with keys.

# COMPATIBILITY

Just a couple of known incompatibilities exist:

In CE Softwares QuicKeys™ Version 1.2 you will bomb out of **FileList+** if you attempt to define a program specific QuicKey. This problem existed in FileList 1.4 also. Version 2.1 of QuicKeys does not seem to have this problem.

Another bug was discovered in AlarmsClock version 2.0 from Now Utilities. It seems this INIT expects the System heap to never be compacted. During list conversion, some System heap is used temporarily. In the process of obtaining this memory allocation, resources may have to be purged. AlarmsClock apparently never checks to see if the resources are still there, as Inside Mac says it should.

When using a printer driver that uses a lot of memory, such as the HP DeskWriter, you may need to allocate more memory to the application heap. To do this, select the Options menu with the Option key down and select the General Options... menu item. Set the Heap Size variable to at least 200K, then save and quit **FileList+**. The next time you launch **FileList+** it will have this configuration. Note that this parameter is saved in the FileList+ Options file, not the application.

# Change History

Following is a detailed history of the most recent **FileList+** updates. For history of previous versions, see the separate FileList+ Revision History document.

### New to version 1.0b16 of FileList+

- changed menu command key for Find Again to command-G and added to command-A for Select All Records
- fixed bug where window header could be corrupted.
- fixed Compare File Versions to show version number with letter appended as newer than one without, for example 4.0a is newer than 4.0
- fixed bug with list records being displayed in geneva font when auto-scroll is performed with the shift key down.
- when all files are deleted from a folder, the folder is now being deleted from the database also.
- fixed bug where group stack info not reset when list is cleared with New menu item
- fixed bug with save text with selected field not shown causing name field to be copied twice
- added Created date and Modified date options to File Filter
- added Display Option for displaying file size in K bytes
   all values shown in Kbytes are rounded up, i.e. 1-1024 bytes = 1K, 1025 2048 = 2K etc.
   Calculations use original numbers and may not reflect use of rounded numbers.
   Note: File sizes do not necessarily reflect disk space
- fixed several bugs with selections
  - extended de-selecting of volumes was not working statistics for files window was not updated when extended selections made
- changed cmd-click on file record to select all files in the current files folder AND sub-folders, was just same folder
- added cmd-option-click (2cd Parent modifier keys) on file record to select all files in the current files
  parent's folder AND sub-folders, for example, a file in the folder "A" which is in the Folder "B" when
  clicked with cmd-option down will select all files in folder "B", including sub-folders. The 2cd Parent
  key(s) must be in ADDITION to the key(s) used to select the parent folder.
- changed current version number for options file to 6, will read window data from older versions and reset other options to defaults
- made all click modifiers user selectable via the Options menu item
- changed "Special" selection dialog to always allow match flag selection, even when match info is not current
- fixed bug when out of memory occurs during merge operation, was indicating wrong value for Get Info application size
- fixed bug where list file that was shortened will still take up same space on disk unless written to new file,
  - problem was no new EOF was written after the (shortened) data, leaving old EOF
- fixed bug with font menus not showing check mark if last item in any menu selected
- changed select field field is now fixed on the left column of the window with a diamond symbol indicating record is selected
  - save as text with save select field option selected will place a bullet in the first field output for each record that is selected
- added lines to Find Controls area and seperating fixed Select field and other, scrolling fields
- fixed bug where if secondary sort was by Select field, header was not cleared when selections changed
- added command keys for Options dialog
- added Text file Creator option to the Options... dialog effects both the Save Text and Log files
- fixed line across statistics and find controls header when activate/deactivate window
- fixed bug with resized windows being messed up whenever Display Options were changed

- · fixed bug where font info not being updated when Reset Options performed
- added menu bar item "Sort" to replace both view-by menus, added "Files" and "Options" menus, moved many menu items
- changed command keys Changed Find Again to command-G, added command-R for Find Last, command-U for General Options
- marking last sort by field in menu with a diamond symbol
- fixed bug where when sorting Files list by Path, the volumes list sort was cleared
- speeded up Find All, stopped showing cursor on each match, return to last selected if no matches, otherwise, jumps to first match
- fixed edit (cut, copy, paste, clear) commands for editing text items in Find area
- · added Tile Windows menu item to the Options menu
- modified Stack windows to set window width for large monitors to a maximum width of 560 pixels
- when options file is corrupted or a different version than this version of application, the program will put up a warning message and reset all options to defaults
- allow f2-f4 to work as Cut, Copy, and Paste while editing text items in dialogs and search parameters

### New to version 1.0b15 of FileList+

- · fixed bug with Options... dialog bomb on Mac Plus, Classic and SE
- fixed bug in delete file records. It was deleting any selected volume records also!
- · fixed bug where Font selections were saved in Options but not retrieved at program load
- · fixed bugs with window titles not being in sync for "changed" status
- fixed bugs with editing search values
  - clicking a menu bar without selecting anything was deselecting edit item was performing automatic find when name was clicked and timeout occurred while entering text
- · added statistics update during extended selection of records
- deleted file records (deleted from files window) will not actually remove data from database until a Save, Save As, Save As Old Format, scan, or Merge is performed. Instead, they are just marked as deleted until one of these operation is performed, or until they are unmarked by entering the Undo command.
- · improved speed of menus
- changed sort to indicate when it uses the Name field as the default secondary sort (for sorts by size or dates)
- keeping track if version info is present, display field if it is present and enabled, don't display field if no values present for it in current list, even if it is enabled
- Text Export option Text as Displayed worked backwords, was using fixed format when selected, format as displayed when not selected. Fixed it to work like name says.
- no longer loses list sort when following operations are performed

Rename Volume

Delete Volume

Delete files

Save As Old Format

- added Options... button to Save Text dialog so that text options may be set
- copies text from Name, Type or Creator field in Files list or Name in Volumes list to the Find text item of the same name whenever one of those fields is clicked in a record with the Option key down. For example, to find all files of the same name, click on the name of a file in the list with the name you want with the Option key down. The name will be put into the Name field in the Find controls. Click Find All to set selected flag for each of these records. Use enter key to skip to the next selected record.
- · fixed bug with menu items not being updated from find controls for cmd-key entries
- Changed search path for FileList+ Options file at application launch.
  - When opening FileList+ Options file, looks first in application's folder, then in Preferences folder in System Folder, then in System Folder itself. Application folder was last.

•	When saving FileList+ Options file, sequence is Preferences, then System folder. when a scan is canceled, no longer ejecting the disk
	end of FileList+ preface
	Following is the original documentation for FileList version 1.4.

'FileList"	Macintosh Volume And File Lister
==========	

Version 1.4 (14-Sep-1990)

### ABOUT FILELIST

First of all, this program is free (but NOT public domain), including the sources. So don't pay anybody for it. Make sure to include this documentation when you give the program away.

"FileList" is a file and disk organizer. It reads entire volumes and saves volume and file information. There is an option that enables "Stufflt" (Classic and Deluxe) and/or "Compactor" archives to be opened and to be treated like a folder: all files in the archive (including encrypted entries) will be listed.

The collected information can be displayed, sorted by multiple criteria, searched for, saved as text files (to be printed later on, or to be imported into databases). Entire volumes can be deleted or renamed. There is an automatic disk insert/eject mode, meaning any inserted disk (be it a floppy or a CD-ROM disk) gets scanned then ejected, or any mounted volume can be added by selecting from a list of on-line volumes.

"FileList" is useful for managing large collections of floppy disks, or can be used to quickly locate files on a big disk, e.g. CD-ROM. Here is what "MacUser" December 1989 said about "FileList 1.2": "FileList is a basic but very effective file lister. Insert a disk, and its contents are quickly listed with volume and folder paths, size, dates, creator and type. The resultant file can be printed, edited, or exported as text. The data transfers well to databases. FileList is currently the best of this type of program available."

Changes from version 1.3:

- \* Some small bugs were corrected (multiple monitors, font problem, folder that only has folders and no files, file count per volume, cancel, file server volume).
- \* Existing volumes are recognized and can easily be replaced in the list.
- \* Recognize Compactor archives.
- \* Recognize StuffIt Deluxe archives.

"FileList" should run on any Macintosh Plus or newer Macintosh. HFS (Hierarchical File System) is required, but MFS (Macintosh File System) disks are supported. I used System 6.05 with MultiFinder 6.1b9 on a Macintosh Plus and Macintosh Ilcx to develop and test the program. The program was developed with THINK C 4.02 and the source code is available (on the services where I personnaly upload "FileList" I also upload the sources).

### WINDOWS

There are always two windows: a volume window and a file window. The title of each window shows how many entries are in the each list. The windows can be moved around, resized and zoomed. Clicking in the close box sends the window to the back, showing the other window. The window positions and sizes can be saved with the options (see options below).

Each volume or file entry is on one line. A line can be selected by clicking on it. Clicking on a selected line deselects the line again. The "Copy" menu item (or function key F3) copies the selected line to the clipboard as text.

The scroll bars can be used to move around in the list as expected. The following keyboard keys can be used to navigate:

home Scroll to beginning of list

end Scroll to end of list
page up Scroll one page up
page down Scroll one page down

cursor keys Scroll one line up/down or column left/right

(use the option key to scroll one page left/right)

return, enter Move to selection

### **MENUS**

\*\*\* File Menu \*\*\*

### New

Clear current list. Create new empty volume and file list.

#### Open..

Open existing list from existing FileList file.

#### Close

Same as clicking in the close box of the active window.

### Save

Save list into FileList file.

### Save As...

Save list into FileList file under new name.

# Save Text...

Export list of active window (volumes or files) into text file. (Note that text files cannot be opened again by FileList!)

### **Default Windows**

Resize and reposition windows to default settings. (Default settings can be set with the Options... dialog)

```
Options...
 Options dialog.
 Quit the application.
*** Edit Menu ***
Undo
 Not used.
Cut
 Not used.
Copy
 Copy selected line to clipboard.
Paste
 Not used.
 If the option key is also pressed this clears both the volume and file
Find...
 Find dialog.
Find Again
 Find next item.
Move To Selection
 Bring selected item into view (same as return or enter key).
*** Volume Menu ***
Automatic
 Select/deselect automatic insert/eject mode.
 (Can also be selected by using the Options... dialog)
Add...
 Show on-line (mounted) volumes. Select those to add to list.
Delete
 Delete selected volume from the list, and all its files.
 (Note that this deletes the volume in the list, not on the disk!)
Rename...
 Rename selected volume.
 (Note that this renames the volume in the list, not on the disk!)
```

```
*** View/Files ****
by name
by size
by type
by creator
by created
by modified
by volume
by path
*** View/Volumes ***
by name
by free
by total
by files
by created
by modified
OPTIONS
```

This dialog presents the following options:

- \* Automatic disk insert/eject
  Anytime a disk is inserted, it is scanned, added to the list, then
  ejected. This works with any movable medium: floppy disks, CD-ROM
  disks, ...
- \* Recognize StuffIt archives
  Anytime a StuffIt archive is found it is treated like a folder, i.e.
  all its files, folders, sub-folders, ... are listed.
- \* Recognize Compactor archives

  Anytime a Compactor archive is found it is treated like a folder, i.e.
  all its files, folders, sub-folders, ... are listed.
- \* Use tabs between fields
  When exporting the list to a text file, tabs are put between fields, instead of spaces. This is used to import the data into databases.
- \* Date format Select the data format you want. The format selected will be used to show the dates on the screen and to export to text files.
- \* Set default window settings
  The current window positions and sizes become the default values.

You can press the following buttons:

### \* Ok

Options take effect but are not saved.

#### \* Save

Options take effect and are saved in a settings file in the System folder.

### \* Cancel

Nothing happens.

If you press the option key while choosing the options menu item the following memory options can be set, but become active only on the next program start:

### \* Heap size

The heap size that should remain after "FileList" has allocated all it's tables. You should leave at least 30000 Bytes for the heap.

### \* Volumes percentage

The percentage of how many volume records (any volume, folder and file is considered a record) are expected. Clicking on the associated text automatically calculates and displays the current volume percentage.

### \* Files percentage

The percentage of how many file records (any volume, folder and file is considered a record) are expected. Clicking on the associated text automatically calculates and displays the current file percentage.

#### \* Average name size

Average name size (of volumes, folders and files) expected. Clicking on the text automatically calculates and displays the current average name size.

These values are used by "FileList" to allocate its tables. Everything must fit into available memory. You can use the "About FileList..." menu item in the Apple menu to see how memory is allocated. To get more memory under MultiFinder for longer lists use the Finder's "Get Info" command. E.g. to be able to list all files on my "EduCorp CD-ROM 4.0" disk containing 14550 files I must set the partition size to 1000 K.

# FIND

The find dialog corresponds to the selected window: Files or volumes. For both you can search by giving part of the name. Enter a string and set one of the following radio buttons:

### \* Equals

The search string must be exactly equal to the name.

#### \* Starts

The name must start with the search string.

### \* Includes

The name must include the search string.

### \* Ends

The name must end with the search string.

That's all for volumes. For files there are two more criteria: file type and file creator. If the type or the creator is not filled out it is not used, otherwise it must exactly match (4 characters). One can also use an empty name string and only find files based on the type and creator, or type alone, or creator alone, or any possible combination thereof.

### RESOURCES

You can use ResEdit to modify the following resources in "FileList":

'STR ' 136 File name for storing options. This file is created in the active System folder. Is set to "FileList Options". This might be changed to "Preferences:FileList Options" if you have a "Preferences" folder in your System folder.

'STR ' 138 Creator (4 characters) for text files. Is set to 'PEDT' the creator signature of my text editor.

### COMMENTS

Send any comments to:

CompuServe: 73720,2200

Internet: 73720.2200@compuserve.com

Packet Radio: LX1YZ @ LX0PAC

Erny Tontlinger 33 route d'Arlon L-8410 Steinfort Luxembourg

Thanks to all those who sent me comments and suggestions for the previous versions of "FileList". I did not have the time yet to include everything into this new version, but everything is on the new feature list.