Modifying (Editing) Finder 7.x's Command Keys

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Under System 6.0.x, modifying, or editing, Finder's menu was relatively simple. There were Shareware and commercial applications that did an excellent job. Of course, one could always use ResEdit as well. Personally, ResEdit was my choice. Unfortunately, when I made the recent change over to System 7, modifying the Finder's command keys wasn't as easy as it was under System 6.0.x. No longer was there the "Menu" resource I had become so familiar with. Under System 7.x, the "Menu" resource became the "fmnu" resource. To make matters worse, ResEdit 2.1 doesn't open the "fmnu" resource with a template for easy editing. Instead, ResEdit 2.1 opens the "fmnu" resource in a hexadecimal format.

Since fooling around with resources in a hexadecimal format is a bit tricky, especially for the novice ResEdit 2.1 user, I decided to put together this "give me your hand and I'll show you how" guide to modifying, or editing, System 7's Finder with ResEdit 2.1. With this guide, modifying, or editing, Finder's command keys should be as easy as getting a System ID = 2 error 'crash' under System 6.0.x.

This guide will show you how to add command keys to the following Finder menu items:

- 1. File menu's "Make Alias".
- 2. Special menu's:
 - a. "Clean Up Desktop"
 - b. "Empty Trash"
 - c. "Restart"
 - d. "Shut Down"

Note: You do not have to subscribe exactly to command keys I use. I will provide enough information for you to make your own decision as to what keys you will want to use. However, keep in mind that many keys are already used by other menu items.

You will need the following information in order to make the desired changes:

1. ASCII's equivalent hexadecimal characters:

A = 41	J = 4A	S = 53
B = 42	K = 4B	T = 54
C = 43	L = 4C	U = 55
D = 44	M = 4D	V = 56
E = 45	N = 4E	W = 57
F = 46	O = 4F	X = 58
G = 47	P = 50	Y = 59
H = 48	Q = 51	Z = 5A
I = 49	R = 52	

- 2. Finder's existing command keys:
 - A Select All
 - B -----> available for use
 - С Сору
 - D Duplicate
 - E Eject Disk
 - F Find
 - G Find Again
 - H -----> available for use
 - I Get Info
 - J -----> available for use
 - K -----> available for use (might conflict with Suitcase II)
 - L -----> available for use
 - M -----> available for use
 - N New Folder
 - O Open
 - P Print
 - Q -----> available for use
 - R -----> available for use
 - S -----> available for use
 - T -----> available for use
 - U -----> available for use
 - V Paste
 - W Close Window
 - X Cut
 - Y Put Away
 - Z Undo

To make Finder command key changes, carefully pay attention to the following steps:

- 1. Make a copy of the Finder by selecting it and then selecting "Duplicate" from the File menu or 'doing' a command D will work. The duplicate copy is named "Finder copy", which is fine for this exercise. You can also leave it in the System Folder.
- 2. Launch ResEdit 2.1, and then open "Finder copy". Once "Finder copy" is open, locate

the resource named "fmnu" and open it. In the open "fmnu" resource window, you will see components of the Finder's Menu. The components are:

1252 = "File" menu
1253 = "Edit" menu
1254 = "View" menu
1255 = "Special" menu
1256 = "Labels" menu

3. In order to give "Make Alias" a command key of "L", open "fmnu ID = 1252". The following captured windows are a 'before' and an 'after' modification:

		BE	FOR	E		
∎□ fπ	inu ID	= 12	252 f	rom I	Finder 🔳	
000060 000068	012D 4900	7369 0847	6E66 6574	1002 2049	O-sinfOO IOOGet I	4
000070	6E66	6F00	7370	7276	nfoOsprv	
000078 000080	1002 7269	0000 6E67	0853	6861 7364	00000Sha rina…Osd	
000088	7570	1002	4400	0944	upOODOOD	
000090	7570 7361	6069	6361	7465	uplicate saliNNNN	
0000A0	0A4D	616B	6520	4 16C	OMake Al	
0000A8 0000B0	6961 1002	7300	7370	7574 7574	iasOsput nnvnneut	
0000B8	2041	7761	7900	7878	AwayDxx	
0000C0 0000C8	7830 6669	0000 6E64	0000	012D 4600	×0000000- findÅOFO	Ř
		Α	FTER	2		
≣⊡≣ fmnı	J ID =	125	2 fro	m Fir	nder copi	
000060	0.120	7260	SESS.	1002	$D_{}$ inf $DD_{}$	\sim

≣□≣ fmnu	ID =	125	2 fro	m Fir	nder copi 🗏	
000060	012D	7369	6E66	1002	O-sinfOO	슌
000068	4900	0847	6574	2049	100Get	
000070	6E66	6F00	7370	7276	nfo⊡sprv	
000078	1002	0000	0853	6861	00000Sha	
000080	7269	6E67	C900	7364	ring…Osd	
000088	7570	1002	4400	0944	up000000	
000090	7570	6069	6361	7465	uplicate	
000098	7361	6069	1002	4C00	saliDOLO	
0000A0	OA4D	616B	6520	4 16C	OMake Al	
0000A8	6961	7300	7370	7574	iasOsput	
0000B0	1002	5900	0850	7574	00Y00Put	
0000B8	2041	7761	7900	7878	AwayOxx	
000000	7830	0000	0000	012D	×000000-	Ľ
0000C8	6669	6E64	8110	4600	findÅOFD	lPh

Find the line, in the first column, that begins with "000098". The next four columns are in a hexadecimal format. In the 5th column, you will find, in the "before" capture, "0000". Since the hexadecimal equivalent for an ASCII "L" is "4C", replace the first 2 zeros with a "4C". To do this change, place the insertion pointer on the right side of the 2nd zero, and then drag LEFT, highlighting the 2 left-most zeros. Then simply type in a "4" and then a capital "C". The "After" capture shows what it should look like afterwards, without the highlighting or with anything selected. That's it!!

Notice what happens when you selected the 2 hexadecimal zeros — a rectangle appears in the 6th column over its corresponding ASCII character.

Close "fmnu ID = 1252" window, and let's go on...

4. After closing the "fmnu ID = 1252" window, open "fmnu ID = 1255". This is the "Special" menu, and we will be adding an Command-"U" for the "Clean Up Desktop" menu item, a command-"T" for the "Empty Trash" menu item, a command-"R" for the "Restart" menu item, and a command-"Q" for the "Shut Down" menu item.

a. Upon opening "fmnu ID = 1252", you will see a window like the 'before' window below (without the highlighting as shown):

_ _ _ _ _ _

		BE	FOR	RE		
	fmnu 10) = 12	2 55 t	from	Finder 🔳	
000000	0001	0009	0000	04E7	00000000	¢
000008	3 0000	0000	0753	7065	00000Spe	
000010) 6369	616C	6360	6561	cialclea	3888
000018	3 4006	00000	0843	6065	0000001e	
000020) 616E	2055	7000	656D	an Up0em	
000028	3 7074	8006	0000	0C45	ptÄOOODE	
000030) 6D70	7479	2054	7261	mpty Tra	
000038	368 7368	C900	7878	; 7830	sh0xxx0	
000040) 0000	0000	0120	7365	00000-se	
000048	6A65	1002	4500	0845	jeOOEOOE	
000050) 6A65	6374	2044	6973	ject Dis	
000058	6B00	7365	7261	1002	k0sera00	
000060) 0000	0B45	7261	7365	000Erase	2
000068	3 2044	6973	6BC9	7878	Disk…xx	日

In column 1, locate the line "000018". In the 3rd column, select the 2 hexadecimal zeros as shown above. Since we are going to add a Command-"U" to the "Clean Up Desktop" menu item (you can enter you own command equivalent here if you wish), type in a "55". The change will look like this:

		Α	FTER			
≣⊡≣ fmnu	1D =	125	5 fro	m Fir	nder copi	
000000	0001	0009	0000	04E7	00000000	- •
000008	0000	0000	0753	7065	00000Spe	
000010	6369	<u>61</u> 6C	636C	6561	cialclea	33335
000018	4006	3300	0843	6C65	00000Cle	
000020	616E	2055	7000	656D	an_Up0em	
000028	7074	8006	5400	0C45	ptÄDTODE	
000030	6D70	7479	2054	7261	mpty Tra	
000038	7368	C900	7878	7830	sh0xxx0	
000040	0000	0000	012D	7365	00000-se	
000048	6A65	1002	4500	0A45	jeOOEOOE	
000050	6A65	6374	2044	6973	ject Dis	
000058	6B00	7365	7261	1002	k0sera00	
000060	0000	0B45	7261	7365	OOOErase	껃
000068	2044	6973	6BC9	7878	Disk…xx	旧

Continuing on to the other menu items...

b. In column 1, locate the line "000028". It will look like the following 'before' capture:

		BE	FOR	E		
	fmnu ID	= 12	255 f	rom	Finder 🔳	
000000	0001	0009	0000	04E7	00000000	÷
000008	3 0000	0000	0753	7065	00000Spe	
000010) 6369	616C	636C	6561	cialclea	3333
000018	3 4006	0000	0843	6065	00000Cle	
000020) 616E	2055	7000	656D	an_Up0em	
000028	3 7074	8006	0000	0C45	ptÄ000E	
000030) 6070	7479	2054	7261	mpty Tra	
000038	3 7368	C900	7878	7830	sh0xxx0	
000040	0000 (0000	012D	7365	00000-se	
000048	3 6A65	1002	4500	0A45	jeOOEOOE	
000050) 6A65	6374	2044	6973	ject Dis	
000058	3 6BOO	7365	7261	1002	k0sera00	
000060	0000 (0B45	7261	7365	OOOErase	껃
000068	3 2044	6973	6BC9	7878	Disk…xx	日

In this case, we will be adding a command-"T" to the "Empty Trash" menu item. Select the 2 zeros in column 4, as shown above. Type in "54" for the hexadecimal equivalent for an ASCII "T". The 'after' capture looks like the following:

AFTER										
≣⊡≣ fmnu	1D =	125	5 fro	m Fir	nder copi					
000000	0001	0009	0000	04E7	00000000	Ŷ				
000008	0000	0000	0753	7065	00000Spe					
000010	6369	616C	636C	6561	cialclea	39393				
000018	4006	5500	0843	6C65	00000Cle					
000020	616E	2055	7000	656D	an UpBem					
000028	7074	8006	5400	0C45	ptÄ O OOE					
000030	6D70	7479	2054	7261	mpty Tra					
000038	7368	C900	7878	7830	sh0xxx0					
000040	0000	0000	012D	7365	00000-se					
000048	6A65	1002	4500	0A45	jeOOEOOE					
000050	6A65	6374	2044	6973	ject Dis					
000058	6B00	7365	7261	1002	k0sera00					
000060	0000	0B45	7261	7365	OOOErase	껃				
000068	2044	6973	6BC9	7878	Disk…xx	日				

Continuing on to the other menu items...

c. In column 1, locate the line "000078". It will look like the following 'before' capture:

		B	FOR	E		
	fmnu II) = 1;	255 f	rom	Finder 🔳	
000028	3 7074	8006	0000	0045	ptÄDDDDE	Ŷ
000030) 6D70	7479	2054	7261	mpty Tra	
000038	3 7368	C900	7878	7830	shÖxxx0	
000040	0000 0	0000	012D	7365	00000-se	
000048	3 6A65	1002	4500	0845	jeOOEOOE	
000050	D 6A65	6374	2044	6973	ject Dis	
000058	3 6BOO	7365	7261	1002	k0sera00	
000060	0000 0	0B45	7261	7365	000Erase	
000068	3 2044	6973	6BC9	7878	Disk…xx	
000070) 7830	0000	0000	012D	×000000-	
000078	3 7265	7374	8100	00000	restÅ0[0]0	
000080	0752	6573	7461	7274	ORestart	
000088	3 7368	7574	8104	0000	shutÅ000	2
000090	0 0153				OS	日

In this example, we are adding a command—"R" to the "Restart" menu item. As in the above illustration, select the 2 hexadecimal zeros, and then type in a "52". The 'after' capture looks like the following:

			Α	FTER			
	fmnu	1D =	125	5 fro	m Fir	ider copi	
000	028	7074	8006	5400	0C45	ptÄOTOOE	- -
000	030	6D70	7479	2054	7261	mpty Tra	
000	038	7368	C900	7878	7830	sh0xxx0	
000	040	0000	0000	012D	7365	00000-se	
000	048	6A65	1002	4500	0A45	jeOOEOOE	
000	050	6A65	6374	2044	6973	ject Dis	
000	058	6B00	7365	7261	1002	kOsera00	
000	060	0000	0B45	7261	7365	000Erase	
000	068	2044	6973	6BC9	7878	Disk…xx	
000	070	7830	0000	0000	012D	×000000-	
000	078	7265	7374	8100	32 00	restÅ0 R 0	
000	080	0752	6573	7461	7274	ORestart	
000	088	7368	7574	8104	5100	shutÅOQO	2
000	090	0153				OS	印

Continuing on to the other menu items...

d. In column 1, locate the line "000088". It will look like the following 'before' capture:

	fmnu ID	= 12	255 f	rom	Finder 🔳	
000028	7074	8006	0000	0045	ptÄ0000E	¢
000030	6070	7479	2054	7261	mpty Tra	
000038	7368	C900	7878	7830	sh0xxx0	
000040	0000	0000	012D	7365	00000-se	
000048	6A65	1002	4500	0A45	jeOOEOOE	
000050	6865	6374	2044	6973	ject Dis	
000058	6B00	7365	7261	1002	k0sera00	
000060	0000	0B45	7261	7365	000Erase	
000068	2044	6973	6BC9	7878	Disk…xx	
000070	7830	0000	0000	012D	×000000-	
000078	7265	7374	8100	0000	restÅ000	
000080	0752	6573	7461	7274	ORestart	
000088	7368	7574	8104	00000	shutÅ 0 00	2
000090	0153				os 🖸	먼

In this example, we are adding a command-"Q" to the "Shut Down" menu item. As in the above illustration, select the 2 hexadecimal zeros on line "000088", and then type in a "51". The 'after' capture looks like the following:

							_
	ider copi	m Fir	5 fro	125	ID =	≣□≣ fmnu	
	ptÄOTOOE	0C45	5400	8006	7074	000028	
	mpty Tra	7261	2054	7479	6D70	000030	
	sh0xxx0	7830	7878	C900	7368	000038	
	00000-se	7365	012D	0000	0000	000040	
	jeOOEOOE	0A45	4500	1002	6A65	000048	
	ject Dis	6973	2044	6374	6A65	000050	
	k0sera00	1002	7261	7365	6B00	000058	
	000Erase	7365	7261	0B45	0000	000060	
	Disk…xx	7878	6BC9	6973	2044	000068	
	×000000-	012D	0000	0000	7830	000070	
	restÅORO	5200	8100	7374	7265	000078	
	ORestart	7274	7461	6573	0752	000080	
2	shutÅOQO	5100	8104	7574	7368	000088	
旧	os –				0153	000090	
	kOseraDO DODErase Diskxx x000000- restÂORO ORestart shutÂOQO OS	1002 7365 7878 012D 5200 7274 51 00	2044 7261 7261 6BC9 0000 8100 7461 8104	7365 0B45 6973 0000 7374 6573 7574	6B00 0000 2044 7830 7265 0752 7368 0153	000058 000060 000068 000070 000078 000078 000080 000088 000088	

- 5. Quit ResEdit 2.1, and when asked if you want to save the changes you made, choose the "Yes" or "OK" button to save the changes you made.
- 6. Go back into the System Folder, drag the original 'Finder' into another folder a new 'empty folder' is fine as you will be trashing it later. Then, rename "Finder copy" to "Finder", and then choose Restart from the "Special" menu.
- 7. After the restart, find the "empty folder" where the original Finder is, and then drag it to the Trash Can, and then 'do' a Command-T. That's all there is to it.

You may wish to make a copy of modified Finder, and store it on floppy for that rainy day when everything gets corrupted. This will save you the time from having to go back and re-do the changes you just made on a fresh copy of Finder.