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.

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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.

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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
C   Copy
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:

BEFORE

```
≣□≣  fmnu ID = 1252 from Finder  ≣
000060    012D 7369 6E66 1002    □-sinf□□    ⇧
000068    4900 0847 6574 2049    l□□Get l
000070    6E66 6F00 7370 7276    nfo□sprv
000078    1002 0000 0853 6861    □□□□□Sha
000080    7269 6E67 C900 7364    ring…□sd
000088    7570 1002 4400 0944    up□□D□□D
000090    7570 6C69 6361 7465    uplicate
000098    7361 6C69 1002 0000    sali□□□□
0000A0    0A4D 616B 6520 416C    □Make Al
0000A8    6961 7300 7370 7574    ias□sput
0000B0    1002 5900 0850 7574    □□Y□□Put
0000B8    2041 7761 7900 7878     Away□xx    ⇩
0000C0    7830 0000 0000 012D    x□□□□□□-
0000C8    6669 6E64 8110 4600    findÅ□F□    ⊡
```

AFTER

```
≣□≣  fmnu ID = 1252 from Finder cop!  ≣
000060    012D 7369 6E66 1002    □-sinf□□    ⇧
000068    4900 0847 6574 2049    l□□Get l
000070    6E66 6F00 7370 7276    nfo□sprv
000078    1002 0000 0853 6861    □□□□□Sha
000080    7269 6E67 C900 7364    ring…□sd
000088    7570 1002 4400 0944    up□□D□□D
000090    7570 6C69 6361 7465    uplicate
000098    7361 6C69 1002 4C00    sali□□L□
0000A0    0A4D 616B 6520 416C    □Make Al
0000A8    6961 7300 7370 7574    ias□sput
0000B0    1002 5900 0850 7574    □□Y□□Put
0000B8    2041 7761 7900 7878     Away□xx    ⇩
0000C0    7830 0000 0000 012D    x□□□□□□-
0000C8    6669 6E64 8110 4600    findÅ□F□    ⊡
```

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):

BEFORE

```
≣□≣ fmnu ID = 1255 from Finder ≣
000000    0001 0009 0000 04E7    □□□□□□□□    ⇧
000008    0000 0000 0753 7065    □□□□□Spe
000010    6369 616C 636C 6561    cialclea
000018    4006 ▓▓00 0843 6C65    @□□□□Cle
000020    616E 2055 7000 656D    an Up□em
000028    7074 8006 0000 0C45    ptÄ□□□□E
000030    6D70 7479 2054 7261    mpty Tra
000038    7368 C900 7878 7830    sh…□xxx0
000040    0000 0000 012D 7365    □□□□□-se
000048    6A65 1002 4500 0A45    je□□E□□E
000050    6A65 6374 2044 6973    ject Dis
000058    6B00 7365 7261 1002    k□sera□□    ⇩
000060    0000 0B45 7261 7365    □□□Erase
000068    2044 6973 6BC9 7878    Disk…xx     ▱
```

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:

AFTER

```
≣□≣ fmnu ID = 1255 from Finder copy ≣
000000    0001 0009 0000 04E7    □□□□□□□□    ⇧
000008    0000 0000 0753 7065    □□□□□Spe
000010    6369 616C 636C 6561    cialclea
000018    4006 ▓5▓00 0843 6C65   @□□□□Cle
000020    616E 2055 7000 656D    an Up□em
000028    7074 8006 5400 0C45    ptÄ□T□□E
000030    6D70 7479 2054 7261    mpty Tra
000038    7368 C900 7878 7830    sh…□xxx0
000040    0000 0000 012D 7365    □□□□□-se
000048    6A65 1002 4500 0A45    je□□E□□E
000050    6A65 6374 2044 6973    ject Dis
000058    6B00 7365 7261 1002    k□sera□□    ⇩
000060    0000 0B45 7261 7365    □□□Erase
000068    2044 6973 6BC9 7878    Disk…xx     ▱
```

Continuing on to the other menu items…

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

BEFORE

```
▤□▤▤ fmnu ID = 1255 from Finder ▤▤▤
 000000    0001 0009 0000 04E7   ▯▯▯▯▯▯▯▯   ⇧
 000008    0000 0000 0753 7065   ▯▯▯▯▯Spe   ▯
 000010    6369 616C 636C 6561   cialclea   ▯
 000018    4006 0000 0843 6C65   @▯▯▯▯Cle   ▤
 000020    616E 2055 7000 656D   an Up▯em   ▤
 000028    7074 8006 ▮▮00 0C45   ptÄ▯▯▯▯E    ▤
 000030    6D70 7479 2054 7261   mpty Tra   ▤
 000038    7368 C900 7878 7830   sh...▯xxx0  ▤
 000040    0000 0000 012D 7365   ▯▯▯▯▯-se   ▤
 000048    6A65 1002 4500 0A45   je▯▯E▯▯E   ▤
 000050    6A65 6374 2044 6973   ject Dis   ▤
 000058    6B00 7365 7261 1002   k▯sera▯▯   ▤
 000060    0000 0B45 7261 7365   ▯▯▯Erase   ⇩
 000068    2044 6973 6BC9 7878    Disk...xx  ⊡
```

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 ID = 1255 from Finder cop▮ ▤▤▤
 000000    0001 0009 0000 04E7   ▯▯▯▯▯▯▯▯   ⇧
 000008    0000 0000 0753 7065   ▯▯▯▯▯Spe   ▯
 000010    6369 616C 636C 6561   cialclea   ▯
 000018    4006 5500 0843 6C65   @▯U▯▯Cle   ▤
 000020    616E 2055 7000 656D   an Up▯em   ▤
 000028    7074 8006 ▮▮00 0C45   ptÄ▯▯▯▯E    ▤
 000030    6D70 7479 2054 7261   mpty Tra   ▤
 000038    7368 C900 7878 7830   sh...▯xxx0  ▤
 000040    0000 0000 012D 7365   ▯▯▯▯▯-se   ▤
 000048    6A65 1002 4500 0A45   je▯▯E▯▯E   ▤
 000050    6A65 6374 2044 6973   ject Dis   ▤
 000058    6B00 7365 7261 1002   k▯sera▯▯   ▤
 000060    0000 0B45 7261 7365   ▯▯▯Erase   ⇩
 000068    2044 6973 6BC9 7878    Disk...xx  ⊡
```

Continuing on to the other menu items...

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

BEFORE

```
≣□≣≣ fmnu ID = 1255 from Finder ≣≣≣≣
  000028    7074 8006 0000 0C45   ptÄ0000E   ⇧
  000030    6D70 7479 2054 7261   mpty Tra   ▓
  000038    7368 C900 7878 7830   sh…0xxx0   ▓
  000040    0000 0000 012D 7365   00000-se   ▓
  000048    6A65 1002 4500 0A45   je00E00E   ▓
  000050    6A65 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   x000000-   ▓
  000078    7265 7374 8100 0000   restÄ000   □
  000080    0752 6573 7461 7274   0Restart   
  000088    7368 7574 8104 0000   shutÄ000   ⇩
  000090    0153                  0S         ⊡
```

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:

AFTER

```
≣□≣ fmnu ID = 1255 from Finder cop! ≣≣≣
  000028    7074 8006 5400 0C45   ptÄ0T00E   ⇧
  000030    6D70 7479 2054 7261   mpty Tra   ▓
  000038    7368 C900 7878 7830   sh…0xxx0   ▓
  000040    0000 0000 012D 7365   00000-se   ▓
  000048    6A65 1002 4500 0A45   je00E00E   ▓
  000050    6A65 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   x000000-   ▓
  000078    7265 7374 8100 5200   restÄ0R0   □
  000080    0752 6573 7461 7274   0Restart   
  000088    7368 7574 8104 5100   shutÄ0Q0   ⇩
  000090    0153                  0S         ⊡
```

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 = 1255 from Finder  ▤▤▤     │
├──────────────────────────────────────────┤
│ 000028    7074 8006 0000 0C45  ptÄ0000E  ⇧ │
│ 000030    6D70 7479 2054 7261  mpty Tra  ▓ │
│ 000038    7368 C900 7878 7830  sh…0xxx0  ▓ │
│ 000040    0000 0000 012D 7365  00000-se  ▓ │
│ 000048    6A65 1002 4500 0A45  je00E00E  ▓ │
│ 000050    6A65 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  x000000-  ▓ │
│ 000078    7265 7374 8100 0000  restÄ000    │
│ 000080    0752 6573 7461 7274  0Restart    │
│ 000088    7368 7574 8104 0000  shutÄ000  ⇩ │
│ 000090    0153                 0S        ▣ │
└──────────────────────────────────────────┘
```

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:

```
┌──────────────────────────────────────────┐
│ ▤□▤  fmnu ID = 1255 from Finder cop!  ▤▤▤ │
├──────────────────────────────────────────┤
│ 000028    7074 8006 5400 0C45  ptÄ0T00E  ⇧ │
│ 000030    6D70 7479 2054 7261  mpty Tra  ▓ │
│ 000038    7368 C900 7878 7830  sh…0xxx0  ▓ │
│ 000040    0000 0000 012D 7365  00000-se  ▓ │
│ 000048    6A65 1002 4500 0A45  je00E00E  ▓ │
│ 000050    6A65 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  x000000-  ▓ │
│ 000078    7265 7374 8100 5200  restÄ0R0    │
│ 000080    0752 6573 7461 7274  0Restart    │
│ 000088    7368 7574 8104 5100  shutÄ000  ⇩ │
│ 000090    0153                 0S        ▣ │
└──────────────────────────────────────────┘
```

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.