

DA Key 2.1

Documentation

DA Key 2.1 is both an improvement over and a regression from the 1.x versions (up to version 1.7 at this writing). They both have the same objective: to allow you to run desk accessories that haven't been installed in the System file, but instead reside in a file (created by Apple's **Font/DA Mover** or by Dreams of the Phoenix's **DA Installer** or **DA Installer+**), either on the disk you are using or on another disk. **DA Key 1.x** took an approach to this problem that made it clumsy to use; limited you to running a single "additional" desk accessory at a time; and did not allow you to use that desk accessory simultaneously with the program you were running. The 2.x series of **DA Key** (and of the desk accessory **Other...**, which does substantially the same thing but installs as a desk accessory) represent a new approach, which I hope will be easier to use and more functional.

First, the bad news. Unlike earlier versions of **DA Key** (but like **Other...**), **DA Key 2.1** will run only from within a program that itself supports desk accessories. So you can't use it to sneak a look at a DA from **Font/DA Mover** or anything else that won't let you run DA's from the Apple menu. (If you need to run desk accessories from a program that does not itself support them, you should get **DA Key 1.7**.) In addition, **DA Key 2.1** requires that there be at least one vacant DRVR slot in the System file for each additional accessory that you intend to use.

Second, the good news. **DA Key 2.1** is easy to operate: it installs the vagrant DA in the Apple menu (it will stay there until you quit the program you are running, or remove it with **DA Key 2.1**), and you can operate it just like any other desk accessory in the menu. There is no finagling with "save screen" options, and none of the frustration of seeing your program's window on the screen and being unable to access it. Moreover, although **DA Key 2.1** is not crash-proof, in my own testing it has proved far more resilient than the 1.x versions. I have not come close to testing it with every available DA. However, in my own experience it seems to have problems only with (a) DA's (like **SkipFinder**) that expect to survive beyond a single application and (b) a few DA's that don't follow Apple's guidelines for desk accessories.

Note: The current version of **DA Key** (2.1b4) is still a beta-test version. I think it is pretty solid on new ROM machines, but have only tried it once or twice on machines with the old ROM and never on a Mac XL. I would particularly appreciate hearing of reproducible bugs from users with the old ROMs or Lisas.

Installing DA Key

DA Key installs as an FKEY resource in the System file. It can be installed using the **FKEY Installer** from Dreams of the Phoenix (on **Quick & Dirty Utilities**™ vol. 2, or available on many bulletin boards in a fully-functional version licensed for noncommercial distribution), or Apple's **ResEdit**. It has no owned resources that need renumbering. Its native ID is 9 (so you'd press command-shift-9 to invoke it), but that can be freely changed to any number from 5 to 9, or zero. For a reason I don't understand, it seems to be safest to reboot the Mac after you have installed **DA Key 2.1**.

Running DA Key 2.1

Adding accessories to the menu

Assume you've installed it as FKEY number 9. **DA Key 2.1** will appear, display my usual message asking for money, and show the SFGetFile box. (If you are running HFS, DAKey should set the SFGetFile box to open to the Blessed Folder, if one there be on the default disk.) From that box you can select any **Font/DA Mover** or **DA Installer+** file to install -- but the file should contain only a single desk accessory. Select the file and click "Open", or just double-click the file name.

If all goes well, the desk accessory you chose will be opened and its name installed at the bottom of the Apple menu. The name will be preceded by the sign to distinguish it from desk accessories installed in the normal manner see **ConCode** and **Camera** in the display below:



You can then treat the newly-installed accessory just like any other, opening and closing it as you will. It will remain installed and available until you quit the application or remove it with **DA Key 2.1** (see below for instructions how to remove the accessory).

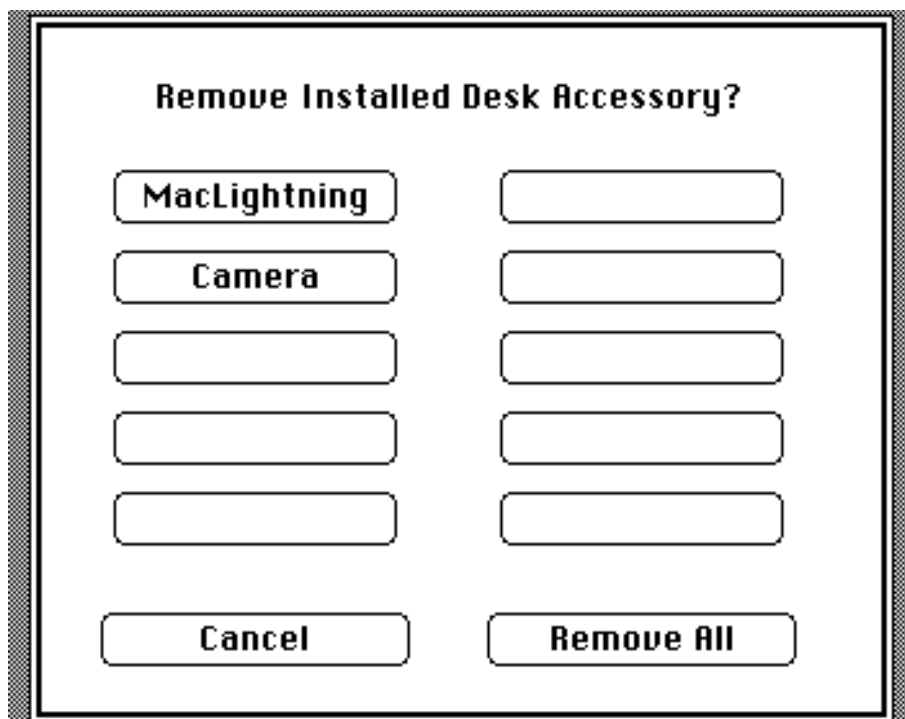
Automatic Renumbering

If the desk accessory you chose has an ID that is already in use, **DA Key 2.1** will tell you that the slot is in use and ask whether you would like it to be renumbered. Renumbering will take a while (usually about a minute with the old ROMs, less with the 128K ROMs), and (although I believe I have the renumbering routines working correctly now) renumbering is potentially dangerous. Renumbering will modify the desk accessory file on your disk, so you should not agree to renumber unless you have a backup of that file.

Closing and Removing the Installed Desk Accessory

A desk accessory installed by **DA Key 2.1** can be closed (and reopened) in the usual fashion. In addition, if you like you can both close the accessory and remove it from the Apple menu. (If you have the old ROMs, the accessory's name in the Apple menu will be replaced by the disabled word, "Gone".) There are two ways to do this without leaving the program you are running. First, if the desk accessory closes in the "normal" fashion -- by a click on its close box -- you can both close the accessory and remove it from the Apple menu (thus freeing up its slot) by holding down the option key when you click on the close box.

Alternatively, you can hold down the Option key when you invoke **DA Key**. (To do this, press ⌘-shift-9 and keep the keys pressed down. Then press down on the option key and, while you are holding the option key down, release the ⌘ key. This will bring up a dialog box that looks more or less like the following:



From this dialog box, you can click "Cancel" to do nothing; "Remove All" to remove all desk accessories installed with **DA Key**; or you can click on the name of an individual desk accessory to remove it and free up the slot.

Testing and Bug Reports

I have used **DA Key 2.1b4** for some time on my system [512K Mac with new ROMs and a MacBottom hard disk drive]. In addition, I have attempted to test the old ROM routines by using those calls on my system. I have fixed all the bugs that I have found but there are certainly others I haven't found. Moreover, I haven't been able to test it at all on a Lisa running MacWorks. I'd appreciate receiving bug reports and suggestions for improvement.

Bug reports are most useful to me if you can tell me (a) your setup (version of the Mac and System you are using), (b) what program you were running, (c) what desk accessory you attempted to install, and (d) if possible, what DA's were already installed (and what if any were running) when the error occurred.

I would be particularly interested to know whether, **DA Key 2.1** can be used with **Q&D Terminal** (or **MockTerm**) and **BackDown** (the background XModem downloader) so that you can start a download and then return to the application you are running, doing useful work in the meantime. This is a combination I can't test since (at the moment), **BackDown** won't work with a MacBottom. If you do test this, please let me know. Likewise, let me know other interesting combinations that work for you.

Application Notes

1. Each desk accessory installed by **DA Key** takes up some additional memory, and requires the system to open (and maintain) one additional resource file. This means that with several accessories installed by **DA Key**, some operations may slow down somewhat; and it generally means that the practical limit to the number of additional accessories you can install at once is below the theoretical limit. In practice, I've found that 4 or 5 is generally safe; more than that may cause problems, depending on how the accessory, and the program that is running, handle memory. I have, however, successfully installed ten additional accessories at one time. Let me know your experiences.

2. I have used **DA Key** to run two copies of **Acta** simultaneously, making it easier to move back and forth between outlines. I do this by installing one copy of **Acta** in the System file, and keeping another copy in a desk accessory file with a special name (like "Acta Renamed"). The copy must have a different name from the version of **Acta** installed in the System file—you will probably have to use **ResEd** or **DA Installer+** to do this. (Note that just renaming the file isn't enough—the accessory itself should be renamed.) You can then use the regular version normally, and use the copy, as a second one, through **DA Key**.

If you do this, be careful not to open the same file in both **Actas**; you may get confused about which one you're using. (I have my System copy configured to automatically open the System file, and my other copy configured not to.) And if you do this from the Finder, you will note that some icons (trash can, floppy disks) turn into **Acta** icons because of a resource conflict. I think you can safely remove the extra ICN#'s from the renamed copy of **Acta**, but I'm not certain. Proceed with caution.

You can probably use a similar trick to run multiple copies of other desk accessories. Let me know your experiences.

Compatability Notes

The following desk accessories, as far as I know, will not work properly if run from **DA Key**. They may do nothing; they may do nothing useful; or they may cause a system crash or other serious error.

Crash Fix. Installs and appears to run properly, but a System crash will generally produce a second, unrecoverable crash after the "resume" button is pressed.

SkipFinder (5.3, 6.0). Installs properly, but has no effect. Needs permanent installation in the System file to work.

The following desk accessories, as far as I know, will work if run from **DA Key**, but may cause occasional problems. I am not certain whether the problems relate to **DA Key** or to the desk accessory running under HFS.

Cheap Paint. On one occasion failed to save changes, presenting an error message, "Can't save to the Scrapbook". The result was a damaged **Cheap Paint** desk accessory file, but no other damage. I think it is best to avoid using desk accessories that open other files (and thus may reset the default volume) while using **Cheap Paint** under **DA Key**.

Sidekick (1.0). Sometimes has trouble finding the files it needs under HFS. I think this is a general HFS problems, and not specific to DA Key. A workaround is to keep the needed files ("DeskStuff" in particular) in the root directory on a floppy disk that can be inserted as needed.

These DA's (partial list) have been run successfully with **DA Key**.

Talking Moose. Still has to have MacInTalk and Moose Phrases in the System file.

ConCode 1.3.
Time Out.
Acta (1.1).
MiniWriter (1.0).
Control Panel
Key Caps
Alarm Clock
Cray Calculator
Abacus

Versions and Bug Fixes.

Version 2.00 has a serious bug in the renumber routines that will cause crashes with desk accessories that use DITL's with PICT resources, and with other DITLs using the new ROMs. I have withdrawn it, and you should not use version 2.00 or distribute it.

Version 2.02 fixes the above bug, but will cause a System crash (more often with the old ROMs) if too many accessories are installed. This happens only if there are no free slots between 12 and 31 (old ROMs) or between 12 and 47 (new ROMs, highly unlikely).

Version 2.1 properly limits the maximum (renumbered) ID to 31 with the old ROMs, and 47 with the new ROMs. It fixes a minor bug that could occasionally corrupt some low memory globals. It adds a dialog box for removal of DA's. It uses new routines to check for installed drivers that should find and avoid slots used by hard disk drivers installed at boot time in the System heap and not represented by a DRVR file in the System (I know this works with the MacBottom; previous versions would fail when they tried to install a desk accessory with an ID of 28). Marks installed drivers with a diamond sign in the desk accessory menu. Grabs a small block in the System heap and a larger one in the application heap (relocatable) and installs only one CloseOrnHook routine for all accessories. Checks handle to storage in application heap for validity.

Notes for Hackers and Developers

1. **DA Key** allows the technical user to "lock out" some driver slots to assure that **DA Key** will never attempt to install a desk accessory in that slot. The list of locked-out slots is hard-coded as an array of 48 bytes; \$FF means the slot is locked out, \$00 means the slot can be used (if **DA Key** doesn't find something else installed in it). As shipped, **DA Key** locks out slots 0-11, which are reserved by Apple. It doesn't lock out anything else.

You can change the list of locked out slots with a disk editor such as **Fedit**. The array appears in **DA Key** at the start of the file, immediately following four bytes which read (in ASCII) 'flag'. The next 48 bytes consist of the array. **If you modify the array in any way, please do not distribute copies of the modified version.** Setting a byte to "00" will allow use of the slot if it appears to be vacant. Setting a byte to "FF" will forbid use of the slot even if it otherwise appears to be vacant.

2. **DA Key 2.1** works by installing a small block in the System heap with a handle to a larger, relocatable block in the application heap in order to keep track of installed files. It also installs its own routine in CloseOrnHook, saving a pointer to whatever other routine was installed there. If a Close call is made to an accessory not installed by **DA Key**, it passes control on to the other routine if one was there. When all the accessories installed by **DA Key** are removed, it removes its CloseOrnHook routine and reinstalls any other routine that was present.

3. **DA Key 2.1** will attempt to open files of type 'DFIL' or 'DAMN'. I gather that some development systems make it difficult to set the Type bits on a newly-created desk accessory. If you want, you can use FEDIT+ to search for 'DFIL' or 'DMOV' and replace the four characters of either one to whatever your development system sets as the Type bits. Alternatively, if you send me a blank disk, a mailer, and an extra \$5 with your registration, I will provide you with a version of **DA Key** that will attempt to open **all** kinds of files.

4. I believe strongly that **DA Key** and similar accessories should not be necessary: the System, or at least the application, should support a similar feature. To this end I am willing to make my source code available to any developer who would like to add the feature to his or her application. Contact me if you are interested.

Registration

DA Key 2.1 isn't public domain software: it's shareware, and it's copyrighted. Feel free to try it out; but if you continue to use it after a week or so, you should send me \$15.00 for registration. The program has taken me a long time to write and will take me more time to support. **Please, if you use it, register it.** When you register, if you send a disk, and a postpaid mailer, I will return the disk with a copy of the most recent version and documentation.

If you registered **any** previous version of **DA Key** before September 5, 1986, you should consider version 2.1 a free upgrade.

It will help me in knowing where to post upgrades if, when you register, you tell me what version you have and where you got it.

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Users' groups and others distributing disks may freely distribute **DA Key** under two conditions: (1) you distribute this documentation file along with the FKEY; and (2) you aren't charging users significantly more than your costs of duplication and distribution for the disks you distribute.