

BinHqx DA Version 1.01

User's Guide

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Version 1.01 is provided as a free upgrade for registered users of version 1.0.

To register send \$5 in U.S. currency to:

Rainbow Software
1233-A 7th Ave.
Honolulu, HI 96816

Please write "BinHqx" in the memo portion of your check. Sending cash through the mail.

Thanks to Mom and Dad for putting me through school, Brad Hathaway for various help and being a really cool guy, Michael Ikeda, Richard Ford, Steve Martin (not the comedian) for help with a THINK C™ bug, and all registered users of BinHqx for their support.

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Introduction

Welcome to BinHqx. In 1985, Yves Lempeur released BinHex 4.0 for public use. The BinHex (.hqx) file format became the standard for transmission of Macintosh® binary files (applications, MacWrite® files, etc.) over electronic mail and bulletin boards.

I wrote BinHqx because I felt that BinHex 4.0 was a little dated and certain new functions were needed to simplify downloading. BinHqx does encoding and decoding of Macintosh® binaries in the BinHex 4.0 format, but adds few new features. Since 1985, the average Macintosh® now has much more RAM than before and that extra memory can be used to speed translation. In addition BinHqx adds file splitting and file joining. This is conveniently packaged in a desk accessory so you can do file translation in any application that supports DA's, including the Finder™.

BinHqx uses several methods to speed up translation. It uses file buffers with default size of 32K, but you can set it for as little as 8K. I also uses several translation tables to speed performance. In all BinHqx is approximately twice as fast as BinHex 4.0. This number may vary according to the type of Macintosh® you have and the type of storage device you use. I haven't tested this explicitly, but I believe BinHqx should even be able to work on a Macintosh® with the older 64K ROMs.

Installing BinHqx

To install BinHqx, you must have a copy of either Apple's Font/DA Mover or some desk accessory utility, such as Suitcase II™ by Fifth Generation or MasterJuggler™ by ALSoft. You should follow the normal procedure for installing a DA. The following discussion briefly covers the use of the Font/DA Mover, for those unfamiliar with it. For a more thorough discussion, see your Macintosh® Utilities User Guide.

Copy BinHqx to the disk with either the System file or Font/DA Mover. Open the BinHqx DA by choosing "Open" from the **File** menu or double-clicking on the BinHqx icon (suitcase). **BinHqx 1.01** will show on the list on the left side of the Font/DA Mover window. Press the "Open..." button on the right hand side of the window. You will be presented with a "Standard File" dialog. If the disk with the System file is not the disk shown in the upper right hand corner of the dialog, press the "Drive" button until you get to your disk. Open the System file by selecting it and pressing the "Open" button. The Standard File dialog will go away and the Font/DA Mover window will be in the visible once again.

Select "BinHqx 1.01" from the left-hand list and press the ">>Copy>>" button. You have just installed BinHqx into your System file. Now press the "Quit" button. **Using BinHqx**

BinHqx DA

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Segment file...

Join & Decode... ⌘J

Close ⌘Q

BinHqx Commands:

About BinHqx...

Opens a window with basic information about BinHqx and the address for registration. Don't forget to register. Clicking on the window or pressing a key will close the window.

Preferences...

Opens a dialog and lets you set various options for BinHqx. These options are discussed in the preferences section. Press OK to save the changes, or cancel to revert to the old values. If the "Remember settings" box is checked, preferences values are saved in a file called "Hqx Prefs" in your System folder when you close BinHqx.

Encode BinHex File...

This command turns a binary (regular Macintosh®) file into an BinHex file. A "Standard File" dialog will open. Select the file you want to encode. Then another dialog will appear and ask you what name you want to save the file under. The default is the original file name with a suffix of ".hqx".

Decode BinHex File...

This command will take a BinHex file and turn it back into a binary file. You are prompted to select the file to decode. You will then be presented with another dialog asking you what name to save the file under. The default file name is the file's original name. Any mail headers will be ignored by BinHqx.

Segment File...

This command allows you to split a BinHex file. For reasons why this would be used, see the section "File Splitting". You will be prompted to select a file to be split, then you will be prompted to select the size for each section. Each section will be this size except perhaps, the last section. Finally, you will be prompted to make a name for each section. The name should be of the form "My file name-part 00". The "00" (double zeros) are important. BinHqx will substitute each part number for "00". For example "Inter•Poll 1.0.hqx.part-00" is a legal name. For more details see the section of "File Splitting".

Join & Decode...

This command will prompt you to select the first part of the archive. It will read the BinHex header from this part and prompt you for a filename to save the output file under. In this mode, BinHqx uses extra error checking so it may be slightly slower. When the end of the file is read and it is not a legal ending to a BinHex file, you will be prompted for the next part. If you happen to be prompted for more parts than there are in the archive, then the file may have been split in a way that BinHqx cannot decode. Extraneous mail headers and footers are automatically ignored by BinHqx for your convenience.

Preferences

Current I/O buffer size is 32K.
Select desired size.

32 K 16 K
 24 K 8 K

Add linefeeds
 Remember settings

K Minimum segment size
 K Default segment size

Buffer Size

You can specify the size of the input/output buffers. 32K will give you the best performance, but under some conditions there may not be enough memory for other DA's to load. The best solution is to close BinHqx DA when you are finished using it, but you may decide to allocate less memory to it instead.

Add Linefeeds

A standard BinHex option is to allow adding of linefeeds in addition to carriage returns at the end of each line. This may be required if you transmit to a machine that does not understand carriage returns alone. In general, unless you experience problems with uploading you should leave this unchecked.

Remember Settings

If you check this option a file named "Hqx Prefs" will be created in your System folder with the current settings saved.

Minimum Section Size and Default Section Size

The first number is the value of the smallest size BinHqx will make any section. This is to avoid being left with a small leftover piece when you split a BinHex file. The default section size is the default size that you will see when you use the **Segment File...** command.

About the BinHex 4.0 File Format

The file format of BinHex 4.0 by Yves Lempour has become the *de facto* standard for transmission of Macintosh binaries. BinHex uses a 64 character subset of the printable ASCII character set. Basically, 3 bytes (8-bit numbers) are "stretched" to 4 characters from the 64 character subset. This means a general 33% increase in file size of the BinHex file over the original binary. Run length encoding is incorporated into the BinHex file format that packs repeated bytes.

What is the BinHex file format used for? If you transmit data files or applications electronically via E-Mail or BBoards, quite often mainframes or workstations will be a part of the transmission. Not all of these machines use a full 8-bit character set and not all mail applications allow non-printable characters to be sent. Many in fact require that all the characters be printable so the BinHex file format is used. If you are familiar with UN*X, you may consider BinHex analogous in application to uuencode (their formats are quite different, but their use is similar).

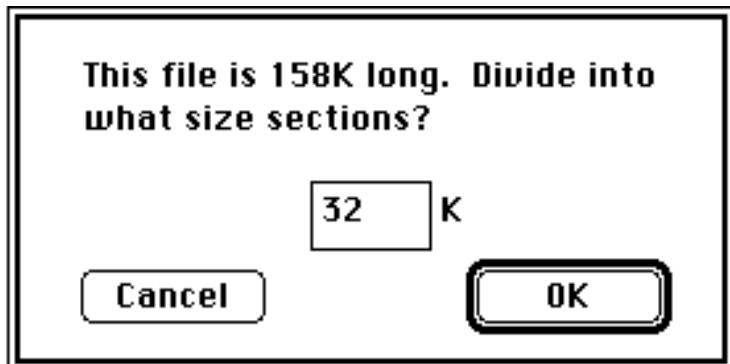
One of the drawbacks of BinHex 4.0 is a bug that occurs when the encoded file has a name longer than 29 characters. Another is that BinHex 4.0 assumes that a colon (':') automatically signals the start of the encoded file. You have to delete any line at the beginning like "Sender: Howard@foo".

With BinHqx, you don't have to worry about either of these. BinHqx looks for other keys to find the beginning of the file and ignores any mail headers. BinHqx also adds the ability to split a BinHex file and join a file that has been split while also ignoring headers for each part. More details about file splitting are discussed next.

File Splitting

Why would you want to split a BinHex file? The mail systems of some machines cannot deal with mail messages longer than 32K byte. Since a BinHex file can become quite a bit longer than that the solution is to split the file into pieces smaller than 32K. (32K is used as an example number.)

BinHqx makes file splitting and joining painless. To split a file, once you have used BinHqx to encode a file, use the **Segment file...** command. You will be asked for the size to make each piece.



The number you input may be adjusted slightly by BinHqx to ensure that the last piece is not smaller than the minimum section size. To change the minimum section size, see the Preferences section. One thing should be noted that if your mail system has an absolute maximum of 32K, you

should set the segment size to 31K, since mail headers may add to the size of the message.

One reminder is that when you are asked for the name of each section, the name should be of the form "My file name-part00". BinHqx replaces "00" with the actual number for you.

Joining a file is accomplished by using the "Join & Decode..." command. Actually, BinHqx does not actually join the split file, but reads each section, decodes it and joins the final file. In this mode, additional error checking is done to make sure the next line is valid. If it is not then BinHqx assumes that this line is a mail footer and that the archive continues in another file. You are then prompted to open the next section. If there are no other sections then an error has occurred and BinHqx cannot join these files (this is rare).

This command will even work properly for files that have not been split, but since additional error checking is involved, it is slower than the normal **Decode BinHex file...** command and the normal **Decode** command is recommended for files that have not been split.

BinHqx assumes that the archive has not been split in the middle of any line. Since this is the case with most utilities that are used to split files (including BinHqx), this is not a bad assumption. If BinHqx was used to split the file then the Join command will be able to successfully join the file. **Warranty**

I hate legal stuff; I try to test BinHqx as thoroughly as possible given the equipment available and release only a high quality version. However, **no warranty**, express or implied, is given on this software. It is sold "as is" and you the purchaser assume the **entire risk** as to its quality and performance. In **no event** shall I, Howard Fukuda, or Rainbow Software be liable for **any** damages, direct, indirect, incidental or consequential, resulting from any defect in this software.

Support

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