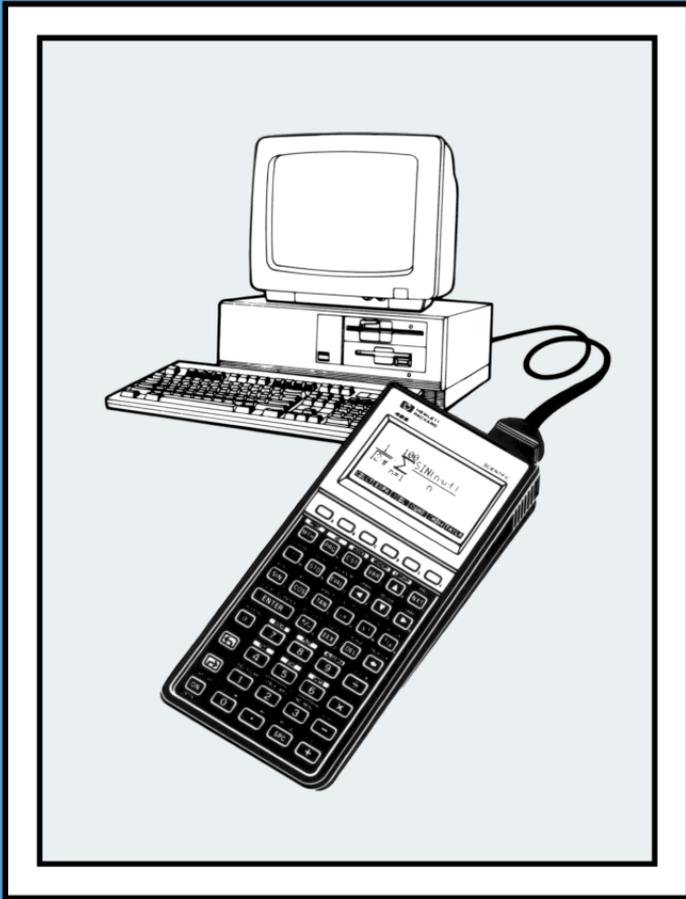


The HP 48 File Manager



James Donnelly

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Getting Started

The HP 48 File Manager is an HP 48 program that has been designed to simplify the display of your data within the HP 48, and simplify transfer to or from a Kermit server on either an IBM compatible computer or Sparcom disk drive.

Seven files are on the disk provided with this manual:

README Read this file to find the current version of the File Manager and any update information.

FMLIB The HP 48 File Manager library.

KERMIT.EXE The Kermit file exchange program for a PC.

KERMIT.HLP The Kermit help file.

KERMIT.PIF The Kermit PIF file for Windows.

KERMIT.BWR The latest update information for Kermit.
KERMIT.UPD

The files **KERMIT.HLP**, **KERMIT.UPD**, and **KERMIT.BWR** contain help information and information about this latest release of Kermit. The older version of Kermit distributed by Hewlett-Packard will also work with the File Manager, but may give incorrect results for some MS-DOS / hard disk configurations when the File Manager requests the available free space on the hard disk.

Installing the File Manager

The File Manager has been implemented as a library object with library ID #832h. To install the File Manager, perform the following:

- Connect the HP 48 and the PC.
- Start the Kermit program on the PC. At the Kermit prompt, specify the port that the HP 48 is connected to by typing `SET PORT COM1` (or `COM2` as appropriate). Type `SET BAUD 9600` to specify the baud rate.
- Use the `[↵][I/O] SETUP` menu in the HP 48 to set the baud rate to match the Kermit communications settings. The default settings are wire transfer, 9600 baud, no parity, and checksum type 3.
- In the `[↵][I/O]` menu, press `RECV`, then type `SEND FMLIB` on the computer. Kermit will now transmit the File Manager library to the HP 48. If this doesn't work, check that the correct port has been specified on the computer and that the communications settings match.
- Recall the library to the stack from the variable `FMLIB`.
- Purge the variable `FMLIB`, leaving the library object in level one of the stack.
- Store the library object in a port, such as port 0. For instance, when the library object is in level one of the stack, execute `0 STO`.
- Turn the calculator off, then on again. The calculator will perform a system halt, which updates the system configuration to recognize the new library. The File Manager library automatically attaches itself to the `HOME` directory.

Before running the File Manager, you may want to verify your settings of HP 48 system flags -36, which enables receive overwrite if set, and -39, which suppresses Kermit messages in the HP 48 display if set.

To display the File Manager commands, press **←** **LIBRARY**
FMGR:

```
{ HOME }
4:
3:
2:
1:
FMGR VER
```

The command **FMGR** starts the File Manager, and **VER** displays the version of the software:

```
HP 48 File Manager
VERSION A
COPYRIGHT © JAMES DONNELLY 1991
ALL RIGHTS RESERVED
FMGR VER
```

Make sure that Kermit is running on the computer, and that the communications settings are correct. At the Kermit prompt, type **SERVER** to start the server operation. The server may be interrupted by pressing control-C.

Removing the File Manager

To remove the library, switch to the HOME directory, enter **:Ø:823** (where Ø refers to the port in which the library is stored), duplicate the entry, and execute **DETACH** and then **PURGE**. The HP 48 display will flicker briefly as the library is purged.

Using the File Manager

The File Manager assumes it is talking to a remote Kermit server running on an MS-DOS platform. The KERMITEXE program supplied on the disk will work on most IBM PC compatible systems. Connect the HP 48 to the remote host, ensuring that the data transfer settings are correct.

Press **[←][LIBRARY] FMGR** to start the File Manager. The current directory in the HP 48 is displayed first:

{ HOME }		
X	Y	PRTPAR
▾ E	▾ P	CST
▾ ASTRO	▾ TK	IOPAR
SEND	CDIR	INFO
MARK	DISK	QUIT

Viewing Directories

The path to the current directory is shown at the top of the display. The objects stored in that directory are shown in the main portion of the screen. If there are more objects in the current directory than will fit in the display, small arrows will appear to the left of the path to indicate that there are additional objects to view.

Moving the Highlight

The menu keys at the bottom of the display, in combination with various other keys, control the actions of the File Manager. The arrow keys (**▼▲◀▶**) move the highlight from one object to another. The left-shifted arrow keys (**←▲** and **←▼**) move the highlight up or down a page at a time. The right-shifted arrow keys (**▶▲** and **▶▼**) move the highlight to the top or bottom of the directory.

Selecting Files

The **MARK** menu key is used to select one or more files for transfer or deletion. A prefix character (▶) indicates that an file has been marked:



...

^		
WFMLIB	AOE2091	MERCURY
VENUS	▶R508	▽DIR1
... GET CROIR INFO MARK HP48 QUIT		

If no files are marked, the currently highlighted file will be assumed.

Changing Directories

A prefix character (▽) indicates that an object is a directory. To show the contents of the directory, press **[ENTER]**. The path list at the top of the display will now indicate that the current path has changed. To go up a directory level, press **[←][UP]**. To go to the **HOME** directory, press **[→][HOME]**.

Menu Key Commands

The menu keys `HP48` and `DISK` switch the directory display between the HP 48 and the remote system. There are two sets of menu keys in the File Manager. The first set, called the *local* menu, contains menu keys that refer to objects in the HP 48 directory. The second set, called the *remote* menu, contains menu keys that refer to files on the remote host.

Local Menu Keys

The local menu keys are defined as follows:

- `SEND` Sends the highlighted object (or marked objects) from the HP 48 to the remote system.
- `CRDIR` Creates a new directory object in the current directory in the HP 48.
- `INFO` Shows the name, type, and size of the currently highlighted object.
- `MARK` Marks the highlighted object for a future `SEND` or `PURGE` command. Pressing `[↵] MARK` marks all objects, and `[⇨] MARK` clears all marks.
- `DISK` Reads and displays the remote directory. Also displays the remote menu.
- `QUIT` Terminates the File Manager.
↓ `[NXT]` ↑
- `MEM` Displays the available memory in the HP 48.
- `NAME` Renames an object.
- `ARCHI` Backs up the HP 48 to the remote system.

In addition to the menu keys, the `[↵]PURGE` key is used for deleting marked objects (or the highlighted object if none are marked).

Remote Menu Keys

When the local menu keys are displayed, pressing **DISK** displays the remote menu keys. The remote menu keys are defined as follows:

- GET** Copies the highlighted file (or marked files) from the remote system to the HP 48.
- CRDIR** Creates a directory on the remote system.
- INFO** Displays the name and size of the highlighted file.
- MARK** Marks the highlighted file for a future **GET** or **PURGE** command. Pressing **[←] MARK** marks all files, and **[→] MARK** clears all marks.
- HP48** Reads and displays the current HP 48 directory. Also displays the local menu.
- QUIT** Terminates the File Manager.

↓ **[NXT]** ↑

- FREE** Displays the free space on the remote disk.
- NAME** Renames a file.
- DIR** Rereads the directory on the remote system.

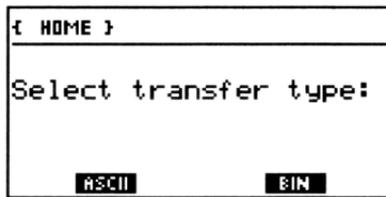
In addition to the menu keys, the **[↵] [PURGE]** key is used for deleting marked files (or the highlighted file if none are marked).

Local Operations

Sending One or More Objects

To transfer the marked objects (or the highlighted object if none have been marked) from the HP 48 to the remote system, press **[SEND]**. The File Manager will present a choice of *ASCII* or *binary* file transfer. If an object is to be sent in ASCII form, make sure the translate code for the HP 48 has been set to your desired setting. The **[←][I/O] SETUP** menu or the TRANSIO command may be used to set the translate code. The most reliable setting is TRANSIO 3.

If no objects have been marked, the highlighted file will be sent. The File Manager prompts for ASCII or binary transfer for *the entire group* of objects to be sent:



```
{ HOME }  
  
Select transfer type:  
  
ASCII      BIN
```

To send all objects in ASCII, press **ASCII**. To send all objects in binary, press **BIN**. Some object types, such as libraries, will be sent in binary mode regardless of the choice made in this menu. To abort the send process, press **[ATTN]**.

Purging One or More Objects

To purge the marked objects (or the highlighted object if none have been marked), press **[↵]PURGE**. The File Manager will generate a confirmation screen for each object to be purged:



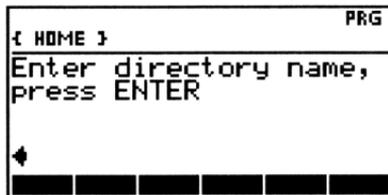
If the object to be purged is a directory, the File Manager will sound a beep to alert you. Press **YES** to purge the object, or **NO** to skip this object and continue on the the next marked object. Press **[ATTN]** to abort the entire purge operation and return to the directory display.

-- WARNING --

*If the object to be purged is a directory, the File Manager will sound a beep to alert you. Pressing **YES** will purge the directory and any objects it contains, including any sub-directories.*

Creating a Directory

To create a new subdirectory in the HP 48, press **CRDIR**:



Enter the name of the new directory and press **[ENTER]**, or press **[ATTN]** to abort the operation.

Displaying Object Information

To display the name, type of stored object, and object size of the currently highlighted object, press **INFO**:

```
{ HOME }
-----
Name: PRTPAR
Type: List
Size: 33.5

PRESS ANY KEY TO CONTINUE...
SEND QDIR INFO MARK DISK QUIT
```

Press any key to return to the directory display.

Archiving the HP 48

To create an archive of the HP 48 on the remote system, press **ARCHI**. The File Manager requests a remote file name, which defaults to *Ammdyy*, (or *Addmmy* if flag -42 is set) where the digits are taken from the current date. Edit the file name and press **ENTER**, or press **ATTN** to abort the operation and return to the directory display.

Note: The ARCHIVE command on the HP 48 does not save either the contents of independent memory or the states of user and system flags.

Displaying Available Memory

To display the available memory in the HP 48, press **FREE** :



Press any key to return to the directory display.

Renaming an Object

To rename the highlighted object, press **NAME** :



Enter the new name and press **ENTER**, or press **ATTN** to abort the operation and return to the directory display.

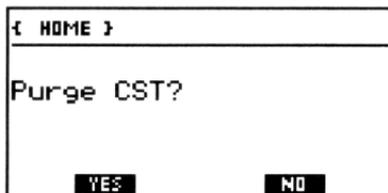
Remote Operations

Getting One or More Files

To transfer the marked files from the remote system into the HP 48 (or the highlighted file if none are marked), press **GET**. The type of transfer (ASCII or binary) is determined by the first few bytes of the remote file, so the transmission mode doesn't have to be set on the HP 48.

Purging One or More Files

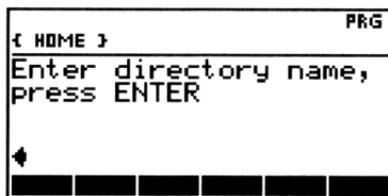
To purge the marked files (or the highlighted file if none have been marked), press **⇧**[PURGE]. The File Manager will generate a confirmation screen for each file to be purged:



If the file to be purged is a directory, the File Manager will sound a beep to alert you. Press **YES** to purge the file, or **NO** to skip this file and continue on the the next file. Press **ATTN** to abort the entire purge operation and return to the directory display.

Creating a Directory

To create a new subdirectory on the remote system, press **CRDIR**:



Enter the name of the new directory and press **[ENTER]**, or press **[ATTN]** to abort the operation.

Displaying File Information

To display the name and size of the currently highlighted file, press **INFO**:



Press any key to return to the directory display.

Displaying Free Space

To display the free disk space, press **FREE** :

```
C:\ASTRO\HP4B
-----
Disk space: 102651904

PRESS ANY KEY TO CONTINUE...
FREE NAME DIR
```

Press any key to return to the directory display.

Renaming a File

To rename the highlighted object, press **NAME** :

```
{ HOME } PRG
-----
Enter new name,
press ENTER

HELLO.SYM
```

Enter the new name and press **ENTER**, or press **ATTN** to abort the operation and return to the directory display.

Re-reading the Directory

If you have changed disks in the remote system, press **DIR** to force the File Manager to read the new directory

Exiting the File Manager

You may press either **[ATTN]** or **QUIT** to exit the File Manager. If the HP 48 has been communicating with a remote host, the File Manager will ask if a “finish” command should be sent to the remote host:



Press **YES** to send the “finish” command which will either exit server mode in Kermit or turn off the Sparcom disk drive. Press **NO** to exit without sending the finish command. You may also press **[ATTN]** to return to the directory display.

File Naming Conventions

MS-DOS file names and HP 48 variable names allow different sets of characters in their file names. This can create some problems when files are transferred between the two systems.

HP 48 Variable Names

Variable names may contain letters, digits, and most characters. Names must not:

- Start with a digit
- Contain object delimiters or the characters + - * / ^ f = < > ≤ ≥ ≠ ∂ ! , @ or a space.
- Duplicate a built-in command name or reserved word

MS-DOS File Names

File names may contain up to eight characters, followed by an optional period and extension containing up to three characters. Names must not:

- Use a period except to separate the extension
- Exceed eight characters in the name or three characters in the extension
- Contain the characters . " / \ < > + , : = ; or a space.
- Contain .EXE or .COM extensions, which are reserved for DOS executable files.

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