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Procedures for running LHAWIN

The procedures for using the program LHAWIN are defined under topics listed in the index. In general, the overall procedure for running the program is to complete the following steps. The steps may be performed in any order, except that an archive file must be specified, the files mask set, the command selected, and the options set before selecting the RUN command.

- 1) Set the name of the archive file.
- 2) Set the file mask to be used (the files to be archived or extracted).
- 3) Select the command to be executed.
- 4) Select the options to control how LHA operates, and
- 5) Select the RUN LHA command from the Files menu.

Specifying the Archive File Name

The archive file name is the name of the .LZH file to be processed by LHA. The file name must be specified before LHA is executed. To specify the name, use the Archive Name menu item under the Files menu. Either enter the name of the archive file in the file name box or use the list box to select an existing archive file. When the appropriate file name is displayed in the file name box, press the OK button.

Specifying the Files To Be Processed

Most LHA commands require that a file specification be provided to tell LHA which files to process. This specification indicates which files are to be archived, extracted from the archive, deleted from the archive, etc.

To specify the file mask, use the File Mask command under the Files menu. Enter the desired mask in the edit box, and press Enter. LHAWIN does not check this entry in any way. The entry may contain anything which is valid on the LHA command line after the archive file name. This includes LHA's base directories, multiple file specifications, etc.

Specifying LHA Commands

LHA commands instruct LHA as to what action to execute. Commands include adding files to the archive, updating files in the archive, deleting files from the archive, etc. All commands are mutually exclusive. That is, only one command can be specified at a time. The commands are listed in the index to this help file.

To specify the command to be executed, select the Commands menu item. A dialog box will appear listing all available commands. Select the command desired, and then select the OK button.

Specifying Options

LHA supports a wide variety of options. The options range from the mundane to the esoteric. Options control various aspects of how LHA operates. All of the options are listed in the index to this help file, and are explained in detail under their own topics.

To select options, select the Options menu item. A dialog box will appear showing the current settings of all of the options. Set each option to the desired behavior, and select the OK button.

Executing LHA

Once the archive file name, file mask, command, and options have been set, you are ready to execute LHA. LHAWIN will build the appropriate command line and execute LHA.

In order for LHAWIN to execute LHA, the file LHA.EXE should be in a directory contained within your DOS path. Windows will also find the file LHA.EXE if it resides in the current directory, or in the directory from which Windows was started.

For best operation, it is recommended that you create a .PIF file to control the execution of LHA.EXE. The checkbox in the PIF file marked "Close Window on Exit" should be unchecked so that the window in which LHA executes will be left open when the program terminates. This will give you a chance to make sure that LHA terminated without errors, or read any error messages which LHA generates. The window can then be closed by double-clicking on the system menu box in the top left corner of the window.

Saving LHA Options

When LHAWIN starts executing, it looks in the file WIN.INI for initial values for the various options. If initial values are not found in WIN.INI, then LHAWIN defaults all options initial values to those used by LHA.

Option values can be recorded in WIN.INI using any ascii text editor. The section in WIN.INI for LHAWIN will appear something like the following:

```
[LHAWIN]
aOption=0
rOption=2
```

WIN.INI can be set using any ascii text editor. The names and valid values for each option are specified in the descriptions of the options. See the options listed in the index of this help file.

The easiest way to set the values desired in WIN.INI for the options is to perform the following steps:

- 1) Run the program LHAWIN
- 2) Select the Options menu item, and set all of the options to the desired default values
- 3) Select the OK button of the options dialog box
- 4) Select the Save Options command under the Files menu.

This will cause LHAWIN to create the appropriate entries in the WIN.INI file for you. After this is done, LHAWIN will set the initial values of the options as specified in WIN.INI each time it is executed.

LHA Commands

There are 12 mutually exclusive commands which tell LHA what action to perform. The commands are listed below, and in the index. To select the desired command, select the Commands entry on the menu bar. A dialog box showing the 12 commands will appear. Select the command desired, and then press the OK button. LHAWIN defaults to the List command when it starts executing. The differences between some of the commands are very subtle. See the descriptions of the various commands for details. The commands are:

- Add - Add files to the archive
- Update - Updating files in the archive
- Freshen - Freshen files in the archive
- Move - Move files to the archive
- Extract - Extract files from the archive
- Extract Files w/ Pathnames - Extract files to their original directories
- Delete - Delete files from the archive
- List - List files in the archive
- View - View files in the archive
- Print - Print files in the archive
- Test - Test archive file integrity
- Create Self-Extracting Archive - Create .EXE file which extracts contents when it executes

Adding Files to the Archive

This command adds new files to an archive. If a file with the same name is already contained in the archive, LHA will terminate the command with an error message. This command is primarily used to create new archive files.

Updating Files in the Archive

The Update Files command is used to add new files to, and update existing files in, an existing archive. Any files which are not already contained in the archive are added. Any files which already exist in the archive are replaced if the file on the disk has a more recent time stamp.

Freshening Files in the Archive

The Freshen Files command is used to update files in an existing archive. This command replaces each file in an archive with the file from the disk with the same name, if the file from the disk has a more recent time stamp. This command will not add new files to an archive.

Moving Files to the Archive

The Move Files command operates exactly as the Update File command, except that files which are stored in the archive are deleted from the disk. The Move Files command is equivalent to the following sequence of commands:

```
LHA u archive *.c  
del *.c
```

Extracting Files

The Extract Files command is used to extract files from an archive and restore them to the disk. The Extract Files command extracts the files to the current directory. A file is skipped during the extraction if a file with the same name and a more recent time stamp already exists in the current directory.

Extracting Files with Pathnames

This version of the Extract Files command operates the same as the Extract Files command, except that the files are restored to the directories from which they were archived. Files must have been archived with full-pathnames (see the Extended Filenames option). LHA will create the directories if they do not already exist.

Deleting Files

The Delete Files command is used to delete files from an archive. The files thus deleted are not restored to the disk before being deleted.

Listing Files

The List Files command is used to list the files contained within an archive. Files archived with pathnames are denoted with a '+' at the beginning of the filename. Using the Extended Filenames option will list the full filenames, with a 2 line listing per file.

Viewing Files

The View Files command is the same as the List Files command with the Extended Filenames option. That is, it lists the files in the archive with a 2 line listing per file. The file list shows the full filenames, including pathnames. The following commands are identical:

```
LHA l /x archive  
LHA v archive
```

Printing Files

The Print Files command allows you to see the contents of the files in an archive. It does this by dearchiving the file to the standard output. Note that this command displays the contents of the files, not the list of files stored in the archive. The file is not stored on the disk in the process, unless the standard output is redirected to a disk file.

Testing an Archive File

The Test Archive command tests the integrity of an archive file. This ensures that the archive file has not been damaged, and that the files contained in it can be successfully extracted.

The Test command will also test the integrity of LHA.EXE using a CRC check. This ensures that the copy of LHA.EXE which you have has not been "hacked" or corrupted with a virus.

Creating a Self-Extracting Archive

A self extracting archive is an executable program which, when executed, extracts the files contained within itself to the disk. This is convenient when you wish to provide another person with a set of files, but you do not know if that person has the program LHA. If they do not have the program, they would not be able to extract the files from the standard .LZH file. By making a self-extracting archive, you ensure that the individual can extract the files.

LHA can create a small model or large model self-extracting archive. This is controlled with the Extended Filenames option. With a small model executable, (the default), the files in the archive will always be extracted to the current directory. With a large model archive, it is possible to extract the files to the directories from which they were archived, creating the directories if necessary.

In order to create a self-extracting archive, you must first create the archive file using the appropriate archiving commands (add, update, freshen, or move). After creating the archive file, rerun LHA with the self-extract command to create the self-extracting archive.

Options

There are a number of options which control how LHA performs. Most of the LHA options are supported by this program. The ones which are not supported are:

- o Old compatible mode
- i Upper/Lower case differentiation
- First letter switch

The following options are supported:

Messages

Recursion

Compression

Filename Display

Header Level

Processing Indicator

Extended Filenames

File Name Matching

Archive Time Stamp

Time Stamp Comparisons

File Attributes

Skipped Messages

Work Directory

Messages Option

WIN.INI entry: moption=[0|1|2]

When extracting files from an archive, the normal operation of LHA is to generate a query under certain circumstances, and to proceed based on the users response. The query "Overwrite? [Y/N]" is produced when a file already exists on the disk with the same name as the file to be extracted. The query "Directory DIR does not exist. Create [Y/N]" is produced when a directory does not exist to which a file is to be extracted.

There are three settings to this option. They are:

Query - This is the normal operation of LHA as described above.

Assume Yes - This switch causes LHA to assume all queries are answered Yes, and proceed accordingly.

Unique Extensions - This switch causes LHA to create unique files by adding an unused extension of 000 to 999 to the base file name, rather than replace an existing file. Directories are created as required.

Recursion

WIN.INI entry: roption=[0|1|2]

The normal operation of LHA is to search only the directory specified in the file mask for files to be archived. The recursion option allows LHA to search subdirectories of the specified directory as well.

There are three settings to this option. They are:

No Recursion - This is the normal operation of LHA as described above.

With File Spec - This option breaks the file specification into a directory and a file mask. The directory specified, and all of its subdirectories, are searched for files matching the file mask.

Without File Spec - This option assumes that the file mask entered is a directory specification, with no file mask. ALL files from the specified directory, and its subdirectories, are archived. With this option, LHA will NOT work correctly if the file mask contains anything other than a directory name. For example, entering "C:*.*" will act as if **No Recursion** had been specified. Only the files in the root of the C: drive will be archived. To archive ALL files on the C: drive using this option, the file specification must be "C:\".

Compression

WIN.INI entry: zoption=[0|1|2]

LHA normally compresses files when it stores them in an archive. This reduces the size of the archive file. It is not unusual for LHA to compress files in the archive to the point where they require only about 30% of their original storage space.

There are three settings to this option. They are:

Normal - This is the normal operation of LHA as described above.

No Compression - With this setting, files are not compressed as they are stored in the archive.

No Archive Compression - With this setting, files with the extensions .ARC, .LZH, .LZS, .PAK, .ZIP and .ZOO are not compressed as they are stored in the archive, but all other files are.

LHA supports another form of the /Z switch. It is possible to specify one or more switches of the form /Zxxx in the command line. (I.E, /ZCOM /ZEXE /ZBAT) With this form, all files with the extension "xxx" are stored in the archive in an uncompressed format. LHAWIN does NOT support this use of the compression switch.

Filename Display

WIN.INI entry: loption=[0|1|2]

This option controls how LHA displays the names of the files being archived or extracted. LHA normally displays only the file name, without the full pathname. Each file name processed is displayed on a single line.

There are three settings to this option. They are:

Name Only - This is the normal operation of LHA as described above.

Full Pathnames Stored - With this setting, LHA displays the full path and file name of each file stored in the archive, displaying 2 lines per file on the screen.

Full Pathnames Accessed - With this setting, LHA displays the full path and file name of each file accessed, displaying 2 lines per file on the screen. With the update, freshen and move commands, LHA can access files and decide not to archive them.

Header Level

WIN.INI entry: hoption=[0|1|2]

LHA can use 3 different header levels. The documentation does not described the different levels or their uses. Header level 0 is the default.

Processing Indicator

WIN.INI entry: noption=[0|1|2]

As LHA archives or dearchives files, it normally displays the name of the file being processed followed by a series of periods. The number of periods is proportional to the size of the file being processed. As the processing proceeds, the periods are replaced by an "o". This gives an indication of the progress made.

There are three settings to this option. They are:

ooo... - This is the normal operation of LHA as described above.

Names Only - Only the file names and compression rates are displayed. The "ooo..." indicator is not shown.

No Indicator - Nothing is displayed as the processing proceeds.

Extended Filenames

WIN.INI entry: xoption=[0|1]

LHA normally stores only the names of the files in the archive. There are two immediate consequences to this:

- 1) The files can not be automatically restored to the directories they came from by LHA and
- 2) Two files with the same name can not be stored in the archive, even if they come from different directories.

There are two settings to this option. They are:

File Name Only - This is the normal operation of LHA as described above.

Full Path Names - LHA stores not only the file name, but the name of the directory from which the file came. This allows two files with the same name to be stored in the archive, as long as they come from different directories.

File Name Matching

WIN.INI entry: poption=[0|1]

When searching an archive for a file, LHA normally only looks at the file name. A command like:

```
LHA e archive file.ext
```

will find all files named file.ext, regardless of the subdirectories they are in. If the archive contains both C:\FILE.EXT and C:\SUBDIR\FILE.EXT, both will be extracted to the current directory. The second one found will be the one left on the disk.

There are two settings to this option. They are:

File Name Only - This is the normal operation of LHA as described above.

Full Path Names - This setting causes LHA to look at the full path and file name when searching for files. To extract C:\SUBDIR\FILE.EXE from the archive, the full name must be provided.

Archive Time Stamp

WIN.INI entry: toption=[0|1]

By default, the time stamp placed on an archive is the time the archive file is closed by LHA after adding files to it.

There are two settings to this option. They are:

Current Time - This is the normal operation of LHA as described above.

To Newest File - This setting causes LHA to force the time stamp of the archive to match the time stamp of the newest file contained in the archive.

Time Stamp Comparisons

WIN.INI entry: `option=[0|1]`

The Update, Freshen and Move commands compare the time stamps of the files contained in the archive with the matching file on the disk. If the time stamp of the file on the disk is more recent than the time stamp of the file in the archive, the file in the archive is replaced with the one from the disk.

There are two settings to this option. They are:

Compare - This is the normal operation of LHA as described above.

Ignore - This setting tells LHA to ignore the time stamps, and always replace the file in the archive with the one from the disk, even if the one in the archive is more recent than the one on the disk.

File Attributes

WIN.INI entry: aoption=[0|1]

When archiving files, LHA ignores hidden and system files. Read-only files are archived as read-only. When dearchiving, hidden and system files can not be dearchived, and read-only files are dearchived as read/write.

There are two settings to this option. They are:

Normal - This is the normal operation of LHA as described above.

System/Hidden - With this setting, system/hidden files can be archived and dearchived. Read-only files are dearchived as read-only.

Skipped Messages

WIN.INI entry: soption=[0|1]

When extracting files from an archive, if LHA finds a file with the same name as one to be extracted which has a more recent time stamp, LHA skips that file and prints a message to that effect.

There are two settings to this option. They are:

Display - This is the normal operation of LHA as described above.

Do Not Display - Skipped files messages are not displayed.

Work Directory

WIN.INI entry: `workdir=dirname`

The Work Directory option allows you to tell LHA to use a specific directory for its temporary work files. To enter a work directory, enter a directory name, without the trailing backslash. For example, if you wish LHA to use the directory C:\WORK for its work area, enter C:\WORK in the edit box.

A Base Directory is a directory which LHA makes the current directory before processing the file specifications which follow it. For example:

```
lha a archive.zip c:\ *.*
```

will cause LHA to make C:\ the current directory, and then archive all files using the mask *.*.

The Dos Path is an environment variable which determines where the operating system looks for executable files. Each directory in the specified path is searched, in order, until the required file is found. See your MS-DOS or PC-DOS documentation for further details.

A PIF file is a file created with the Windows PIF editor to control how windows executes a non-windows application. See your Windows users guide for further details.

WIN.INI is a file associated with Windows. It is usually located in the directory with the Windows program. This file contains data used by Windows applications for configuration purposes.

A time stamp is a date and time associated with each file on a disk, or in an archive. The time stamp is maintained by the operating system, and indicates the date and time that the file was created or last modified.

The Standard Output is a device which acts as the default output device for many commands. Ordinarily, the standard output device is the monitor. The standard output can be redirected to a disk file or the printer as follows:

```
LHA p archive >prn:
```

```
    Standard output redirected to printer
```

```
LHA p archive >diskfile
```

```
    Standard output redirected to disk file named diskfile
```

Hacking, as used in this context, is the reprehensible practice of altering an executable program to change its behavior or appearance. Shareware and freeware software should always be distributed in the original form released by the author of the program.

A virus is a computer program which "infects" computer systems. Usually, a virus will attach itself to a program or data file, or hide itself on a diskette. When the program or diskette is loaded into a computer system, the virus will often infect the computer system and cause unusual or erratic behavior of the system. Computer viruses range from the benign to the malignant, and can cause serious loss of critical data. Computer files downloaded from bulletin boards, or diskettes obtained from non-commercial sources, should be scanned with a virus checker to ensure that they are virus free.

Recursion, as used by LHA, means to search not only the specified directory, but all of it's subdirectories, the subdirectories of the subdirectories, etc.

File compression is the act of storing a file in a special format which requires less disk space than the normal, uncompressed file.

This symbology means to select exactly one of the options 1, 2 or 3. For example, the line in WIN.INI would appear as:

```
moption=0
```