

XFERPRO Version 1.1

Information Transfer Professional

**Transfer Any Information Format, such as Video, Audio, Application
Data or Image, via Internet Electronic Mail or Internet Connected
Networks & On-Line Services**

**For Microsoft Windows,™ Windows for Workgroups 3.1/3.11,
Windows 95 or Windows NT**

*Saba***soft**

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Introduction

When to Use XFERPRO

Interoperability Using Standards

How does XFERPRO Work?

When to Use XFERPRO

Whenever you need to send text, application data, messages, images, audio, video, executable files, and other information types via electronic mail (e-mail), then XFERPRO provides you a solution. These information types are used in many applications and are in files including, but not limited to, the following extensions: .EXE, .COM, .DAT, .WAV, .AVI, .DB, .DBF, .MDB, .ZIP, .ARC, .LZH, and .ZOO.

XFERPRO will also allow sending of the aforementioned information types between popular on-line services such as AT&T Mail, America On-Line, Compuserve, Delphi, GENie, MCI mail, and educational and other sites on the Internet, including those based on X.400 message handling.

Another popular use for XFERPRO is with Usenet newsgroups, the "Bulletin Board System (BBS) of the Internet." Again, the reason is to allow various information types to be posted as part of news articles.

Interoperability Using Standards

Because XFERPRO is based on the Internet standards, transferring any information type is possible between your Windows or Windows for Workgroups (WFWG) PC and any other computer system, such as a UNIX system or Macintosh or another PC. XFERPRO uses the Multipurpose Internet Mail Extension (MIME) 1.0 Base64 standards according to RFC1341.

Although MIME is the latest standard, other information encoding techniques, such as UU or XX encoding, are still commonplace defacto standards and therefore XFERPRO fully supports them as well. XFERPRO is fully compatible with the standard "uuencode" and "uudecode" programs found on UNIX or other computer systems.

Macintosh computers typically use another similar defacto standard call Binhex. XFERPRO handles the Binhex 4.0 format so that communications with Macintosh systems is also possible.

How does XFERPRO Work?

XFERPRO supports four methods of base64 encoding. Base64 encoding is a method to convert 8-bit binary data into a form usable by communications links or networks which cannot transport such data. This method generates (encodes) four International Standards Organization (ISO) characters from every three binary characters, which is basically converting 6 bits of binary information into the appropriate 6 bits within an 8-bit character. ASCII is one form of this ISO character set. This guarantees that only printable and language translatable text is sent when the encoded output is sent over computer communication links or networks. Similarly, the decoding process converts four ISO characters into three binary characters. The penalty of this approach is that the encoded file is 33% larger than the original file, but that's better than not being able to transfer binary data at all!

MIME Base64 Encoding & Decoding

UU Encoding & Decoding

XX Encoding & Decoding

Binhex 4.0 Encoding & Decoding

MIME Base64 Encoding & Decoding

MIME stands for Multipurpose Internet Mail Extensions, which is the latest international standard for base64 encoding. It was designed to handle multiple language support and character translations across multiple types of systems (such as IBM mainframes, UNIX systems, and Macintosh and IBM PC's).

UU Encoding & Decoding

UU encoding has been the most popular form of base64 encoding. Limitations of UU encoding is that character sets do not translate well between ASCII and EBCDIC (IBM mainframe).

XX Encoding & Decoding

XX encoding is similar to UU encoding, but uses a different character set than UU encoding so that character set translations will work better across multiple types of systems, i.e. between EBCDIC (IBM mainframe) and ASCII.

Binhex 4.0 Encoding & Decoding

Binhex 4.0 encoding is similar to both UU and XX encoding, but uses yet another different character set. In addition, binhex supports additional capabilities. Firstly, a Run Length Encoding (RLE) mechanism is available which can help reduce the encoded file size. Practically speaking, this only occurs if the original input file is not already compressed before being encoded. Secondly, Macintosh file data, such as the creating application, resource and data forks, and other information, is contained within the encoded file. XFERPRO conveniently supports a transfer of files between Macintosh and PC computers over e-mail or internet connections when binhex encoding is used.

Shareware Concept

XFERPRO is a shareware program. The shareware concept allows you to freely *try* out the software *for a limited time* before you buy it. Unlike demonstration versions of software, XFERPRO is fully functional and not limited or crippled in any way. The shareware version pops up a reminder notice for registration, however, no features are limited or missing.

XFERPRO *is not free software and is copyrighted by the author*. Using the software during the limited trial period is free. However, continued use of the software beyond the trial period requires the software to be purchased, commonly called registration in shareware terms. An order form to purchase XFERPRO is contained in the **ORDER FORM** section. You may also get an order form by pressing F8.

In addition, you may freely distribute the unmodified version of the *shareware* software (e.g. the non-registered version) to allow others to try it before they buy.

For full details of your rights for using and distributing XFERPRO, please refer to the **LICENSE** section.

Association of Shareware Professionals Ombudsman

Association of Shareware Professionals Ombudsman

XFERPRO is produced by Sabasoft, Inc., a member of the Association of Shareware Professionals (ASP). ASP wants to make sure that the shareware principle works for you. If you are unable to resolve a shareware-related problem with an ASP member by contacting the member directly, ASP may be able to help. The ASP Ombudsman can help you resolve a dispute or problem with an ASP member, but does not provide technical support for members' products. Please write to the ASP Ombudsman at 545 Grover Road, Muskegon, MI 49442-9427 USA, FAX 616-788-2765 or send a CompuServe message via CompuServe Mail to ASP Ombudsman 70007,3536.

Documentation Conventions

Programs are indicated using small uppercase letters in the following font (9 point Times New Roman):
XFERPRO OR FILE MANAGER.

File names are indicated using uppercase letters in the following font (12 point Courier New) :

this is a FILENAME.

Menu commands are indicated by [Menu|Item](#), where [Menu](#) is the top level menu for the program, and [Item](#) is the particular choice within the menu.

When you see bold underlined phrases within paragraph text, such as [A Bold Phrase](#), this indicates a pointer to the so named heading elsewhere in this document where more detailed information can be found.

The Windows TrueType ® fonts were used.

Version Information

This package contains **Version 1.1** of XFERPRO, which is a copyrighted shareware program.

Version 1.1

Version 1.0

Version 1.1

XFERPRO version 1.1 was released in August 1995.

New Features:

- Macintosh Binhex 4.0 encoding and decoding (data fork only).
- A capability (which is now the default) to automatically scan the input encoded file to determine what decoding method (i.e. UU,XX, MIME, or Binhex) to use. Previously, the file extension was used as the default for determining what decoding method to use. XFERPRO can still be programmed to use the file extension decoding mechanism if desired (see **Operation Based on Input File Name**).
- The /E (encode) command line option has been added to allow the automatic file scan decoding capability. Therefore, the default is that any files on the command line will be run through the decoding process unless the /E option is used. If the /E option is specified, then all files on the command line will be run through the encoding process.
- The /O (output file name) command line option has been added to permit another program to specify the name of the output file after encoding or decoding when running in **Command Line Operation**.
- Two more multiple part formats. The Squirrel 3.0 mail server format and the America On-Line format. Also, Additional logic was added to better handle the plethora of the multiple part file formats in the Usenet alt.binaries styles. With these additions, XFERPRO can now handle 18 file formats, and potentially many more with the built-in retry mechanism.
- Multiple enclosure support for MIME, Binhex and single file formats. For decoding, multiple enclosures will be decoded from a single input file. For encoding, multiple enclosures can be included in a single encoded output file.

Version 1.0

XFERPRO version 1.0 was released in July 1994.

General Features:

- Support of MIME 1.0 base64, UU, and XX encoding and decoding.
- Support of 16 single and multiple file formats commonly used to send multimedia and other files via internet e-mail. Instead of providing yet another non-standard multiple part format, interoperability with many existing UU, XX, and MIME encoders is used instead.
- Exclusive ability to accept multiple parts in any order so the user doesn't have to waste time piecing them together manually or with separate programs. Let XFERPRO do the work for you!
- Full drag-and-drop support.
- Completely configurable to a user's favorite options.
- Extensive on-line help, error checking, status information, and user choices during operation.
- Options to allow and facilitate program launch from other applications.
- An electronic on-line order form is provided which allows the user to type the registration information into a dialog box and print the order instead of requiring the user to first print an order form and then hand writing the order. In addition, the on-line order form automatically calculates the order price.
- Automated installation program to simplify installation.

Installation

To save time and make installation easier, XFERPRO has an automated setup utility called `SETUP.EXE`, which copies the files to their appropriate location on your destination disk.

Files in This Package

Installing and Running on Various Drive Types

New Installation

Upgrading from Any Previous Version

File Type Association

Files in This Package

This XFERPRO package contains the following files:

README . TXT	Important information and updates about XFERPRO.
WHATSNEW . TXT	New features and bug fixes in this version of XFERPRO.
SETUP . EXE	Automated installation utility.
SETUP . INF	Installation file required by SETUP . EXE.
XFERPRO . EXE	The XFERPRO executable program.
XFERPRO . HLP	The on-line help file for XFERPRO. This includes the shareware license information as well as an order form.
WHIO3 . DLL	A support dynamic link library for file I/O.
BARCTL . DLL	A support dynamic link library for the progress indicator.
FILE_ID . DIZ	Assists in BBS distribution of this program. (shareware version only)

Registered users who have ordered a diskette will also find the following files on their distribution diskette.

XFERPRO . RTF	Copy of this users manual in Rich Text Format (RTF). This file can optionally installed on your system with the automated setup utility provided.
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Installing and Running on Various Drive Types

XFERPRO may be installed on and run from either a floppy disk, hard disk, or networked drive as long as the WHIO3.DLL and BARCTL.DLL files are in the same directory as XFERPRO.EXE or somewhere in the PATH (see your DOS manual for setting the PATH environment variable in the AUTOEXEC.BAT file).

New Installation

Run `SETUP.EXE` from the drive/directory containing the XFERPRO files.

Upgrading from Any Previous Version

Run the `SETUP.EXE` from the drive/directory containing the `XFERPRO` files as for new installation. This will automatically overwrite any previous versions.

File Type Association

Windows 3.X File Association

Windows 95 File Association

Windows 3.X File Association

If you want to run XFERPRO from FILE MANAGER and take advantage of the **Command Line Operation**, you can cause XFERPRO to automatically be invoked when you want to decode a file. Files to be decoded are identified by either a ".UUE", ".UU", ".XXE", ".XX", ".MME", ".MM", ".B64", ".HQX", or ".HEX" extension.

Encoding a file is also possible if you want to associate other file types having extensions different than ".UUE", ".XXE", ".MME" or ".HQX". Usually this is not the case because you may want to run another program on such files, such as a word processor or archive program. The better way to do this is to use **Drag-and-Drop Operation**. If you do want to associate files to encode with XFERPRO from FILE MANAGER, then follow steps 3 and 4 below using the appropriate file extension.

To associate files for decoding with XFERPRO, follow the steps shown below.

- Step 1. Run the FILE MANAGER.
- Step 2. FILE MANAGER requires a file with the appropriate extension to exist so that associations can be made. Copy your AUTOEXEC.BAT or any other file to a file called Z.UUE.
- Step 3. Highlight the Z.UUE file. (do not double click or press Enter to run it).
- Step 4. From the top menu choose, **File|Associate**. When the Associate dialog box pops up, type the full path name of where XFERPRO.EXE is located. Then press Enter or click OK. This completes the association. Rename the Z.UUE file to Z.UU. and repeat this step. You may now delete the Z.UU file.
- Step 5. Repeat steps 2 through 4 with a file called Z.XXE and then with a file called Z.XX.
- Step 6. Repeat steps 2 through 4 with a file called Z.MME and then with a file called Z.MM.
- Step 7. Repeat steps 2 through 4 with a file called Z.HQX and then with a file called Z.HEX.

FILE MANAGER will now automatically run the decoding or encoding portion of XFERPRO when the files with that extension are double-clicked from FILE MANAGER.

Windows 95 File Association

The setup program will normally have prompted you to perform file associations with EXPLORER. If you have already done so via setup, there is no need to do this again. If, for any reason, you did not let setup perform this operation for you, then follow the steps shown below at any time *after* XFERPRO installation.

- Step 1. Run EXPLORER.
- Step 2. Double-click or right-click and open the XFERPRO.REG file which is contained in the destination directory into which XFERPRO was installed. You will see a message indicating that the registry has been updated.

Program Operation

XFERPRO has two modes of operation; interactive mode and quiet mode. **Interactive Mode** is used when the command line argument of *-N is not specified* on the command line when starting XFERPRO. This mode, which is the default, is useful whenever the most user interaction and progress display is desired.

Quiet Mode is used whenever the command line option of *-N is specified* on the command line. This mode is useful for launching XFERPRO from a macro or other program in which user input and query is not desired.

Since each mode operates differently with respect to user query and display of progress, each mode is described separately.

Command Line Arguments

Anatomy of the Main Window

Interactive Mode

Quiet Mode

Operation Based on Input File Name

Command Line Arguments

XFERPRO supports two command line arguments. The options can be declared using UNIX or DOS option style indicators, / (slash) or - (dash), respectively, and may be in either uppercase or lowercase letters.

-J Option (Decode Multiple Files as 1)

-N Option (Quiet Mode)

-E Option (Encode Files on Command Line)

-O Option (Specify output file name)

-J Option (Decode Multiple Files as 1)

/J or **-J** Permits the user to **Decode Multiple Input Files as 1**. When this option is used, all input files specified on the command line are treated as one large input file.

-N Option (Quiet Mode)

`/N` or `-N` Permits the user to run in **Quiet Mode**. When this option is used, user input is never required and all actions are based on the configured options.

-E Option (Encode Files on Command Line)

/E or **-E** If the **/E** option is specified, then all files on the command line will be run through the encoding process. The default is that without the **/E** option, all files on the command line will be run through the decoding process.

If only the **-E** option is specified, the configured encoding default (see **Configure Menu**) will be used. A particular encoding method can be specified via a second option letter as follows:

- EU** UU encode all the files on the command line
- EX** XX encode all the files on the command line
- EM** MIME base64 encode all the files on the command line
- EB** Binhex 4.0 encode all the files on the command line

The second letter must immediately follow the **-E** option (i.e. no spaces after the **-E**) and can be either upper- or lowercase.

-O Option (Specify output file name)

/O or **-O** If the **/O** option is specified, then the output file name after the encoding or decoding process will be named as specified on the command line. This option overrides any other behavior with regard to file naming conventions. The default is that without the **/O** option, the output file name will be selected as described in **Use Default File Names**.

Anatomy of the Main Window

The main window provides detailed interactive status information while XFERPRO is running. This status is provided for all operating modes.

The status information lines indicate the method of encoding or decoding selected, the input and output file names, the encoding or decoding format being processed, and the number of parts.

The cancel button allows the user to cancel the operation while it's running. This button only appears when an operation is in progress.

The progress bar indicates how much of the input file, as a percentage, has been processed.

Interactive Mode

The interactive mode of XFERPRO provides detailed status information during and after the encoding or decoding process. Interactive mode is used whenever **Quiet Mode** is *not selected*.

Interactive mode is most useful when several files will be encoded or decoded. In addition, while in interactive mode, unlike **Quiet Mode**, XFERPRO will prompt the user before the following actions are done:

- A. Prompt for a file to be encoded or decoded. Prompts are not required if file(s) are dropped on the main window (**Drag-and-Drop Operation**) or file(s) are specified on the command line (**Command Line Operation**).
- B. After choosing the encoding or decoding operation, a suggested file name for output is shown. The user is allowed to modify the output file name, unless **Use Default File Names** is enabled.
- C. If a file to be output already exists, XFERPRO will ask permission before overwriting it, unless **Overwrite Existing Files without Asking** is enabled.

Interactive mode can be entered in three ways as described next.

Menu Operation

Drag-and-Drop Operation

Command Line Operation

Menu Operation

Menu operation is started by running XFERPRO without any files specified on the command line. All subsequent activities are carried out via menu choices and dialog box entries. For instructions on how to use XFERPRO via the menus, see either **Encoding a File** or **Decoding a File**.

Drag-and-Drop Operation

Drag-and-Drop operation is activated when files are dropped on XFERPRO via FILE MANAGER. Drag-and-Drop operation can also be started by dropping files on the XFERPRO .EXE file in a FILE MANAGER window when XFERPRO is not yet running. In that case, FILE MANAGER will automatically start running XFERPRO and drop the selected files on it.

XFERPRO supports dropping of one or many files. If multiple files are dropped, they will be operated on one at a time until all files have been processed. Each file is treated independently, unless **Decode Multiple Input Files as 1** is enabled. Therefore, you may encode or decode files as determined by their file name. To determine how the dropped file name affects the operation selected by XFERPRO, see the **Operation Based on Input File Name** section.

Drag-and-Drop With Automatic Decode Detection Enabled

Drag-and-Drop With Automatic Decode Detection Enabled

If you configure XFERPRO for Automatic Detection of Decode File Format, XFERPRO will not know whether the file should be encoded or decoded when drag-and-dropping since the name cannot be used to make that decision. In this case, decoding will first be attempted. If the decode process fails, which it most likely will for files to be encoded, XFERPRO will then prompt the user to encode the file if desired.

Command Line Operation

Command line operation is used via the [File|Run](#) command of either PROGRAM MANAGER or FILE MANAGER or when you double-click a file in FILE MANAGER and you have previously set up your **File Type Association**. Command line operation is most useful when one file or set of files will be encoded or decoded.

XFERPRO will allow multiple files on the command line. Each file name must be separated by one or more spaces from the other names on the command line.

Quiet Mode

The quiet mode of XFERPRO is intended for running by macros or other programs which do not require user input. All operations are done via the programmed defaults (see **Configure Menu**). Quiet Mode is entered whenever the **-N Option (Quiet Mode)** is specified on the command line when starting XFERPRO.

Operation Based on Input File Name

The default operation is to scan the input file for decoding, regardless of the filename or extension. However, the choice of performing an encode or decode process can also be determined by the extension of the file name supplied on the command line, if the **Decode Method** is optioned to do so.

You can also force a particular method decoding, regardless of the input file name, as described in **Decode Method**.

When programmed for decoding based on input file names, files with any extension *other than* ".UUE", ".UU", ".XXE", ".XX", ".HQX", ".HEX", ".B64", ".MME" or ".MM" will be run through the encoding process. The choice of encoding method, either UU, XX, Binhex or MIME, is determined by the previously configured **Encode Method**.

Summary of filename and resulting action:

File extension	Process
".UUE"	UU decode
".UU"	UU decode
".XXE"	XX decode
".XX"	XX decode
".MME"	MIME base64 decode
".MM"	MIME base64 decode
".B64"	MIME base64 decode
".HQX"	Binhex 4.0 decode
".HEX"	Binhex 4.0 decode
"all other"	Encode as configured via <u>Encode Method</u>

Procedures

Encoding a File

Decoding a File

Sending Information/Files via E-mail

Receiving Information/Files via E-mail

Encoding a File

Encoding a file allows you to convert a file containing 8-bit multi-media information (binary data) into a 6-bit ISO character set (ASCII) encoded readable form. The following steps apply to **Interactive Mode**. In **Quiet Mode**, files with extensions other than ".UUE", ".MME", ".HGX" or ".XXE" are automatically encoded without additional user prompting.

- Entry. Selecting the [File|Encode](#) menu item enters the encoding process.
- Step 1. A dialog box will appear showing all files in the directory.
- Step 2. You will first be prompted to select a file to encode. Pick one or more file names and then click the OK button or press Enter. An output file name will be suggested with the default file extension based on the encoding method (see **Operation Based on Input File Name**). You may change it if you wish, unless **Use Default File Names** is enabled. If you want **Multiple Enclosures**, select all the files to be encoded and they will all be placed in the output file.
- Step 3. The encoding process is started by clicking the "OK" button (or pressing Enter). If the output file already exists, XFERPRO will ask if you want to overwrite it, unless **Overwrite Existing Files without Asking** is enabled. You will notice a % complete bar being updated as XFERPRO encodes the input file.
- Step 4. At any time during the encoding process, you may click the "Cancel" button with the mouse and be returned to the main menu, ready for another command. If you cancel the encoding operation, no encoded output file will be generated. When encoding is complete, you will see a dialog box indicating success or failure. If encoding fails, see **Common Causes of Encoding Failures**.

Decoding a File

Decoding a file allows you to convert a file containing a 6-bit ISO character set (ASCII) encoded data into its original 8-bit multi-media information (binary data) form. The following steps apply to **Interactive Mode**. In **Quiet Mode**, files with the typical extensions indicating decoding (see **Operation Based on Input File Name**) are automatically decoded without additional user prompting.

- Entry. Selecting the **File|Decode** menu item enters the decoding process.
- Step 1. A dialog box will appear showing all files in the directory that have the typical extensions which indicate a decoding operation (see **Operation Based on Input File Name**).
- Step 2. You will first be prompted to select a file to decode. Pick the file name and then click the OK button or hit Enter. If you are decoding multiple files, select *all* the files to decode. XFERPRO does not depend on numbering the files in sequential order in the same directory. XFERPRO will read the encoded file to determine the name of the output file. You will be prompted with the output file name, which you can change if you wish, unless **Use Default File Names** is enabled. If there are **Multiple Enclosures**, they will be automatically decoded one after another.
- Step 3. The decoding process is started by clicking the "OK" button. XFERPRO will check if the output file already exists. If it does, you will be asked if you want to overwrite it, unless **Overwrite Existing Files without Asking** is enabled. You will then notice a % complete bar being updated as XFERPRO decodes the input file.
- Step 4. At any time during this process, you may click the "Cancel" button using the mouse and be returned to the main menu, ready for another command. If you cancel the decoding operation, no decoded output file will be generated. When decoding is complete, you will see a dialog box indicating success or failure. If decoding fails, see **Common Causes of Decoding Failures**.

Sending Information/Files via E-mail

In order to send binary files via electronic mail "E-mail," one must have both an electronic mail program as well as XFERPRO. Normally, sending e-mail is a one step process; just use your e-mail program. To send files, an additional step must be taken using XFERPRO. Once the information is sent, the process must be reversed as explained in **Receiving Information/Files via E-mail**.

Step 1. Encode the binary file as explained in **Encoding a File**. For illustrative purposes, let's call the binary file `BINARY.EXE`. The default encoded output file with UU encoding would be called `BINARY.UUE`. If multiple parts are required due to file size limitations, you could have several encoded output files. In this example, let's assume three parts are required; called `BINARY1.UUE`, `BINARY2.UUE`, and `BINARY3.UUE`.

Step 2. Start or activate your e-mail program. Now insert, via cut and paste, the encoded file, called `BINARY.UUE`, as the e-mail data. Some e-mail programs can encode files automatically if an "attach file" feature exists. In that case, you need not encode the file; just attach it. Read your e-mail program documentation to determine this.

Special note: You may still need to encode the file if the receiver cannot decode the format used by the "attach file" feature of the e-mail program. In this case, do *NOT* attach the file. Proceed with inserting the encoded file data as mentioned above. If you attach an encoded file, it will be encoded twice, which is unnecessary, wasteful of network resources, and would need to be decoded twice upon receipt by the receiver.

The recipient of this e-mail message must run the message through the decoding process, which is described in **Decoding a File**. This completes the sending process. The recipient will reverse this process as explained in **Receiving Information/Files via E-mail**.

If you must send multiple encoded parts due to e-mail file size limitations, repeat this step for each part of the encoded file set. Send one encoded file per e-mail message. In this example, each of three e-mail messages would contain one file; `BINARY1.UUE`, `BINARY2.UUE`, and `BINARY3.UUE`.

Receiving Information/Files via E-mail

In order to receive multi-media files via electronic mail "E-mail," one must have both an electronic mail program as well as XFERPRO. Normally, receiving e-mail is a one step process; just use your e-mail program. To receive multi-media files, an additional step must be taken using XFERPRO. These two steps explain how to reverse the process of encoding as explained in **Sending Information/Files via E-mail.**

Note: If you must receive multiple encoded parts due to e-mail file size limitations, first enable **Decode Multiple Input Files as 1** so that all input (encoded) file parts can be decoded in one step.

Step 1. Start or activate your e-mail program. Save the e-mail message to a file. Make sure the saved message is in text only - do not save it in word processor or other application file formats. Most e-mail programs have a "Save As" selection under the File menu. If so, it may also have a save file format, in which case you should select "text" or "MS-DOS text."

For illustrative purposes, call the saved e-mail message file `BINARY.UUE`. You can save the message with all e-mail header information. There is no need to strip off the e-mail header data because XFERPRO will not try to decode it.

If there are multiple parts to decode, repeat this step as many times as required, giving each part a different file name. If there were three parts, save each part with a number, such as `BINARY1.UUE`, `BINARY2.UUE`, and `BINARY3.UUE`. Note that there is no need to number the parts in any particular order.

Step 2. On the saved file called `BINARY.UUE`, run the decoding process as explained in **Decoding a File**. If there are multiple parts, you will have to select *all* the parts for decoding to work. In this multiple part example, you would select `BINARY1.UUE`, `BINARY2.UUE`, and `BINARY3.UUE`.

When complete, the original `BINARY.EXE` file will have been re-constructed in the same directory as the `BINARY.UUE` file resides.

Commands

The following topics explain the menu system of XFERPRO.

File Menu

Configure Menu

Help Menu

File Menu

The file menu allow you to encode or decode files, or exit the program.

Encode Menu Item

Decode Menu Item

Exit Menu Item

Encode Menu Item

Selecting [Encode](#) will cause XFERPRO to begin the process of encoding a binary file (any file type actually) into an encoded ASCII file. See the [Encoding a File](#) topic for details.

Decode Menu Item

Selecting [Decode](#) will cause XFERPRO to begin the process of decoding a previously encoded ASCII file into its binary (original) form. See the [Decoding a File](#) topic for details.

Exit Menu Item

Selecting [Exit](#) will quit the XFERPRO program.

If XFERPRO is running when exit is pressed, XFERPRO will first cancel the operation (as if the Cancel button were pressed) and clean up any temporary files used during the encoding or decoding process. Therefore, it may take a few seconds before XFERPRO completely exits.

Configure Menu

You can configure XFERPRO various ways to operate according to your preferences. There are configuration options for general file handling and window display, encoding, and decoding operations.

In each configuration dialog box, there are both "Configure" and "Save" buttons. If you choose "Configure," all configuration options chosen will be used for the remainder of the time XFERPRO is operation (unless you re-configure XFERPRO again). The next time XFERPRO is run, the configuration options will be set to the previous defaults. If you choose "Save," then all configuration options will be put into effect and saved as the defaults which will be active the next time XFERPRO is run.

All defaults are placed in a local configuration file called XFERPRO.INI, which must be in the same directory as XFERPRO.EXE.

General Configuration

Encoding Configuration

Decoding Configuration

General Configuration

Overwrite Existing Files without Asking

Use Default File Names

Become ICON When En/Decoding

Stay ICON When En/Decoding

No Status Messages

Overwrite Existing Files without Asking

Setting this option applies only when XFERPRO is run in **Interactive Mode**. This option is automatically enabled when **Quiet Mode** is used or when a multiple part encoded output (see also **Encode File Format**) is selected.

Enable this option if you want XFERPRO to automatically overwrite any existing output files.

In **Interactive Mode**, the default is to ask user permission before any previously existing output files are overwritten.

Use Default File Names

Setting this option applies only when XFERPRO is run in **Interactive Mode**. This option is automatically enabled when **Quiet Mode** is used or when multiple part encoded output is selected (see also **Encode File Format**).

Enable this option if you want XFERPRO to automatically choose the output file name for you. The output file name is either the result of encoding a file or the file name as specified in the encoded file when decoding is used.

For encoding and a single file output, the default file name is the input file name with the extension replaced with ".UUE" for UU encoding or ".XXE" for XX encoding. For example, the default file name for encoding ANYFILE.EXE is ANYFILE.UUE.

For multiple file encoded output (see also **Encode File Format**), the output name of each file part is determined automatically. The output file names consist of the first six (6) characters of the input file name or the entire input file name, whichever length is less, with a 1 or 2 digit part number (1 to 99) concatenated, and having an extension of ".UUE", ".XXE", ".HQX" or ".MME". For example, if an encoded output file required four (4) parts and the input file name was MYARCHIV.ZIP, the output parts would be named MYARCH1.XXE, MYARCH2.XXE, MYARCH3.XXE, and MYARCH4.XXE. Similarly, if a file to be encoded was named ABC.EXE, then the four output parts would be ABC1.UUE, ABC2.UUE, ABC3.UUE, and ABC4.UUE.

For decoding, the default file name is that which is specified in the encoded input file. For example, if the file being decoded is named FILE.UUE and contains the file ABC.ZIP, then the default file name is ABC.ZIP.

The default is to ask user permission to use the proposed output file name. This allows the user to manually change the proposed name if desired.

Become ICON When En/Decoding

Setting this option applies only when XFERPRO is run in **Interactive Mode**.

Enable this option if you want XFERPRO to run as an ICON while encoding or decoding files. XFERPRO will automatically restore to its previous size when the operation is completed.

Stay ICON When En/Decoding

Setting this option applies only when XFERPRO is run in **Interactive Mode**.

Enable this option if you want XFERPRO to remain an ICON after encoding or decoding files.

The default is that XFERPRO will automatically restore to its previous size when the operation is completed.

No Status Messages

Setting this option applies only when XFERPRO is run in **Interactive Mode**. This option is automatically enabled when XFERPRO is run in **Quiet Mode**.

Enable this option if you want XFERPRO to run without requiring user confirmation of success or failure of operations when they are completed.

Encoding Configuration

Encode File Format

Encode Method

End of Line String

Max Encoded File Size

Generate Checksums on Encoded Output

Encode File Format

XFERPRO supports many formats for single or multiple part encoding. The encoding formats are as follows (see also [File Formats](#) for a detailed description of each):

- Single file
- SimTel multiple part format
- Comp.binaries Usenet newsgroup multiple part format
- Four of the most common multiple part formats used in Alt.binaries Usenet newsgroups
- UNIX shell archive multiple part format
- DOS UUENCODE/UUDECODE version 5.24 multiple part format
- X-File header style format
- UUXFER version 2.0 multiple part format
- WINCODE version 2.3 multiple part format
- POST version 1.2.0 multiple part format
- xmitBin multiple part format
- BITFTP (BITNET) listserver multiple part format

Select the format required from the list shown.

All but the single file format are considered multiple part formats.

MIME or Binhex can only use the single file format as defined by the standard. All the multiple part formats can use either the UU or XX [Encode Method](#).

Encode Method

XFERPRO supports encoding using MIME, UU, XX, or Binhex 4.0 character set. MIME is the latest standard intended to be the most transportable across all systems. XX encoding uses a different character set than UU encoding which allows for EBCDIC to ASCII conversions. Binhex is used by Macintosh systems.

The most popular method today, however, is still UU encoding, although MIME is quickly catching up. Select UU for UU encoding, XX for XX encoding, MIME for MIME encoding, or Binhex for Binhex 4.0 encoding.

End of Line String

Since XFERPRO encoded output may be transferred to either PC or UNIX systems, an option is provided to allow an end-of-line (EOL) terminator string specific to the destination computer type. DOS uses a carriage return (CR) followed by a line feed (LF), while UNIX uses only a LF. Select DOS/Windows for the CR/LF end-of-line or UNIX for LF end-of-line terminator.

Max Encoded File Size

When encoding using any of the multiple part formats, the maximum output file size parameter limits the maximum number of characters per part to the value specified. The range for this size is 4500 to 1,048,576 (1M) bytes. The default is 60,000 bytes, which is somewhat less than a typical e-mail program limit of 64K (65,536) bytes. Note that the output file(s) may be slightly larger or smaller than this number due to the variable header and trailer data required for the multiple part formats.

The number of output parts is automatically calculated from the input file size and the maximum output file size. There is a ninety-nine (99) part maximum.

When the single file option is chosen, the encoded output file is in one piece, regardless of size. Therefore the maximum output file size field has no effect with this option (and is grayed to so indicate).

See the [Use Default File Names](#) section for information on how the output files are named.

Generate Checksums on Encoded Output

To assist in detecting errors introduced by the transport network carrying UU or XX encoded files, a checksum can be placed in each encoded output file. Decoding programs capable of detecting these checksums, such as XFERPRO, can indicate whether the encoded input appears corrupted.

XFERPRO uses the same checksum algorithm as the UNIX "sum -r" command. Each part, whether single or multiple parts are output, has appended at the end of the part a checksum line containing the checksum data for that part as well as its encoded size in bytes. Additionally, the last part also has appended checksum data for the original input file and input file size so that the decoded output can be checked against the original input file that was encoded.

Enable this option to automatically generate the appropriate checksum data. Please note that the UNIX shell archive format does not support the checksum data option.

The Binhex encoding method requires a CRC-16. Therefore, XFERPRO will always output the CRC-16 into the encoded file regardless of this parameter setting.

Decoding Configuration

Automatic Detection of Decode File Format

Decode File Format

Decode Method

Decode Multiple Input Files as 1

Test Checksum Data if Present

Binhex CRC Data

Automatic Detection of Decode File Format

When decoding, the default is to automatically detect the file format used and decode as required. Due to the prolific number of formats, for which there is unfortunately no standard - defacto or otherwise, it is possible that XFERPRO can be confused by an unsupported format. To assist in decoding, a specific **Decode File Format** can be requested.

Decode File Format

When **Automatic Detection of Decode File Format** is disabled, the specific format to look for is chosen via a list of radio buttons. The default is to automatically detect which file format to use when decoding. The types are as follows (see also **File Formats** for a detailed description of each):

- Single file
- SimTel multiple part format
- Comp.binaries Usenet newsgroup multiple part format
- Four of the most common multiple part formats used in Alt.binaries Usenet newsgroups
- UNIX shell archive multiple part format
- DOS UUENCODE/UUDECODE version 5.24 multiple part format
- X-File header style format
- UUXFER version 2.0 multiple part format
- WINCODE version 2.3 multiple part format
- POST version 1.2.0 multiple part format
- POST version 2.0.1 (without the CRC capabilities)
- xmitBin multiple part format
- BITFTP (BITNET) listserver multiple part format
- Squirrel 3.0 mail server
- America On-Line

Decode Method

XFERPRO supports decoding using the MIME base64, UU, XX, or Binhex 4.0 character set. Normally, XFERPRO determines which method to decode with by reading the input file data. XFERPRO can also be programmed to determine the decoding **Operation Based on Input File Name**.

If a specific decoding method is required, select MIME for MIME decoding, UU for UU decoding, XX for XX encoding, or Binhex for Binhex 4.0 decoding. This will force the particular decoding method regardless of the input file name or input file contents.

If XFERPRO detects that the decoding method is inconsistent with the input supplied, the user is warned of the problem. In this case, another decode method will need to be selected.

The default for this option is to decode based on input file data.

Decode Multiple Input Files as 1

Typically, all parts of an encoded file are present in a single file to decode. If the encoded input is spread across multiple files, enabling this option will cause all input files to be treated as one large input file which XFERPRO can then decode. This option allows decoding of a single encoded data stream split across any number of encoded files with *the parts in any order*. The default for this option is enabled.

Another capability of XFERPRO when decoding multiple parts in multiple files is that any file name can be used. *There is no requirement to name the files in a sequential numbered order or to use a particular file extension* (if **Decode Method** is set to Based on Data Input), such as FILE1.UUE, FILE2.UUE, etc. However, this means that *all files to be decoded must be selected for decoding*. XFERPRO will not search the current directory for specially numbered file names.

This option is also available from the command line as explained in **Command Line Arguments**.

Test Checksum Data if Present

XFERPRO will automatically determine if any file checksum data is present to help detect possible errors introduced during transport across a network. If such checksum data is present, XFERPRO will test that data against its own calculation and report if any mismatches occur. XFERPRO does not abort decoding if mismatches are found, but rather warns that a potential problem with the decoded file exists.

The default is for this option is enabled.

Binhex CRC Data

Embedded in the Binhex 4.0 format are Cyclic Redundancy Checks (CRC) instead of checksum data. XFERPRO will automatically test the Binhex CRC data regardless of the setting of the **Test Checksum Data if Present** option.

Help Menu

This documentation is in both printed and on-line electronic form.

[Index Menu Item](#)

[Commands Menu Item](#)

[Procedures Menu Item](#)

[Keyboard Menu Item](#)

[Using help Menu Item](#)

[About Menu Item](#)

[Can't Encode Menu Item](#)

[Can't Decode Menu Item](#)

[Register Menu Item](#)

[On-Line ORDER FORM Menu Item](#)

[Hand-written ORDER FORM Menu Item](#)

[ASP Ombudsman Menu Item](#)

Index Menu Item

Selecting [Help](#) will run the on-line help mechanism of XFERPRO. You will be placed in the index section which allows you to easily jump to any topic of interest.

Commands Menu Item

Selecting the Commands item provides details on the menus in XFERPRO.

Procedures Menu Item

Selecting this item provides details on how to use XFERPRO for **Encoding a File** or **Decoding a File**.

Keyboard Menu Item

Selecting this item provides details on using the Keyboard short-cuts, i.e. the hot-keys.

Using help Menu Item

Selecting [Using help](#) provides details on using the help system itself.

About Menu Item

Selecting [About](#) will cause XFERPRO to display the version of this software, copyright information, and the location to send the registration fee or order.

Can't Encode Menu Item

Selecting [Can't Encode](#) will cause XFERPRO to call up the on-line help with common problems and suggestions for dealing with encoding failures. (see **Common Causes of Encoding Failures**).

Can't Decode Menu Item

Selecting [Can't Decode](#) will cause XFERPRO to call up the on-line help with common problems and suggestions for dealing with decoding failures (see [Common Causes of Decoding Failures](#)).

Register Menu Item

Selecting [Register](#) will cause XFERPRO to display the dialog box in which you can enter your name and password to stop the registration reminder screens. XFERPRO will indicate whether or not the registration information entered has passed its validity test.

This information is entered only after purchase of this program. If you have received a disk, you need not enter this information; just re-install from that disk.

On-Line ORDER FORM Menu Item

Selecting **On-Line ORDER FORM** will cause XFERPRO to display an on-line order form which can be typed-in while running XFERPRO (i.e. on line) and then printed. This order form automatically calculates the order price from the items selected. Print the form by selecting **Print** button in the dialog box.

Hand-written ORDER FORM Menu Item

Selecting [Hand-written ORDER FORM](#) will cause XFERPRO to display the order form which is ready to print and fill-in by hand. Print the form by selecting [File|Print Topic](#) from the menu.

ASP Ombudsman Menu Item

See the [Association of Shareware Professionals Ombudsman](#) section.

Keyboard

The following hot keys are defined for XFERPRO.

Hot Key	Command/Procedure
F1	Access on-line help file <u>contents</u>
Shift-F1	Display the About dialog box
F2	<u>Encoding a File</u>
F3	<u>Decoding a File</u>
F5	<u>General Configuration</u> of XFERPRO for its file handling and window display characteristics of operation
F6	<u>Encoding Configuration</u> of XFERPRO for the encode operation
F7	<u>Decoding Configuration</u> of XFERPRO for the decode operation
F8	Display the electronic on-line XFERPRO order form.
Shift-F8	Display the hand-writable XFERPRO order form.
F9	Displays information on how to obtain technical support.
Shift-F9	Display the Registration dialog box to enter your registration information (shareware version only).
F10	Exit XFERPRO

System Requirements and Usage

CPU Instruction Set

Windows Operating Systems and Modes

Disk Usage

Memory Usage

CPU Instruction Set

XFERPRO was written for Windows equipped PCs using the 80386 instruction set and will only work on PCs using 80386, 80386SX, 80486, 80486DX, 80486DX2, 80486SX, and Pentium or compatible processors.

Windows Operating Systems and Modes

XFERPRO runs under Windows 3.1, Windows for Workgroups 3.1 and 3.11, Windows 95 and Windows NT. For Windows 95 and Windows NT, XFERPRO runs as a 16-bit application.

XFERPRO runs only in Windows 3.1/3.11 standard or enhanced modes; *not* in real mode. This is the same as Windows 3.1 or later.

Disk Usage

XFERPRO uses approximately 280K of disk space. The exact amount depends on your disk's cluster size. The RTF file for this manual takes approximately an additional 189K. If you don't know about your cluster size, don't worry about it.

Memory Usage

While running, XFERPRO uses about 80K of memory.

General Operating Information

DOS and UNIX End Of Line (EOL) Characters

Cooperative Multitasking

Temporary File Usage

Multiple Instances and File Sharing

File Permissions

Encoding Character for Binary Zero

Multiple Enclosures

Multiple Part File Limitations

Binhex Additional Implementation Information

File Name Conformance

DOS and UNIX End Of Line (EOL) Characters

For decoding, XFERPRO automatically handles any combination of DOS and UNIX end-of-line terminators; those with both Carriage Return (CR) and Line Feed (LF), or just CR or just LF. There is no need to pre-process encoded input to convert the UNIX format to DOS.

When generating encoded files, XFERPRO can be configured to use either a DOS or UNIX **End of Line String**.

Cooperative Multitasking

XFERPRO is a cooperative program with the other applications running under Windows such that it shares the CPU during the encoding and decoding processes which use extensive file I/O. This results in slightly slower performance than if no CPU sharing were done. Even so, it is not recommended that modem communications take place while XFERPRO is running; file transfers might fail.

Temporary File Usage

To allow multiple part decoding with the file parts in any order, XFERPRO creates temporary files. This means that the disk on which XFERPRO is operating must be writable and have sufficient free space of at least twice the size of the input file(s).

Multiple Instances and File Sharing

XFERPRO allows multiple instances of itself. Since Windows 3.1 is a multi-tasking system, it is possible that the same encoded or decoded file might be used by XFERPRO or other applications at one time. This could happen if the user chooses the same file name twice by mistake. To solve this problem, XFERPRO takes advantage of Windows file locking mechanism and does not allow any other application to write the XFERPRO output file as it is being created. However, multiple read accesses to the input files are allowed.

File Permissions

When decoding a file, the permissions identified in the encoded file are ignored. The output file is always created with read and write permissions for all, which is what DOS can support.

To be consistent with the UNIX versions of encoding, the file permission data are set to owner read/write, with read-only permission for group and other (file mode "644").

Encoding Character for Binary Zero

Although the UU encoding specification allows either an ASCII space (hex character 20) or a ASCII back-quote (` - hex character 60), XFERPRO will always UU encode its binary zero (0) output using the back-quote (`) character. This allows for easier viewing and e-mailing of the UU encoded file.

For decoding, XFERPRO will accept input files with either the space or the back-quote character without problems.

XX encoding always uses the plus '+' character for binary 0.

MIME encoding always uses an uppercase 'A' character for binary 0.

Multiple Enclosures

XFERPRO will support multiple enclosure decoding which means that several encoded items may be present in a single physical input file being decoded. When multiple items exist, XFERPRO will automatically decode each one in turn without requiring any additional configuration.

For encoding, multiple enclosures are also provided. To obtain this, just select more than one file to encode and the encoded output file will contain the many selected items.

Multiple enclosures are supported when using the UU or XX encoding and decoding methods only when single file format is used. Multiple enclosures are also supported for MIME and Binhex encoding and decoding methods.

Multiple Part File Limitations

For the decoding operation, XFERPRO allows the individual parts of a multiple part encoded binary file to exist in any order, e.g. not be restricted to sequential order. However, *all* the parts of one encoded binary file *must* be present in one or more encoded input files to be decoded.

For multiple part formats (see **File Formats** for details), no more than one binary file's worth of encoded data can be present in any set of encoded input files (i.e. **Multiple Enclosures** are not supported).

XFERPRO will detect and report any violations of these requirements should they occur.

Binhex Additional Implementation Information

Since Binhex 4.0 was originally designed for the Macintosh, XFERPRO operates on the relevant portions of the file for a Windows-based PC. To achieve maximum interoperability, the Binhex encoded data is “wrapped” in a MIME header format using a standard content-type/subtype of “application/mac-binhex40”. XFERPRO will support decoding of Binhex files if the MIME header is present or not. Other details of Binhex 4.0 support are listed below.

Macintosh File Forks

Transferring Files between a PC and a Macintosh

CRC-16

Macintosh File Creator and File Type

Run Length Encoding

Macintosh File Forks

For encoding, the PC file is put into the data fork section of the Binhex encoded output. The resource fork is always empty.

For decoding, only the data fork is decoded. The resource fork is ignored.

Understanding the file fork concept is not critical in operating XFERPRO. The resource fork is an Apple Macintosh operating system component which does not have any meaning to PCs.

Transferring Files between a PC and a Macintosh

When transferring Binhex encoded files from a PC to a Macintosh, the Macintosh user, after decoding, cannot just double click the decoded file to start the appropriate application. The Macintosh user must first start an application which can read the decoded file and then use the Open command to read the file. This is because the PC does not create a resource fork in the Binhex encoded file.

When transferring Binhex encoded files from a Macintosh to a PC, typically the PC user must rename the file to acceptable DOS conventions, including the filename extension. If the filename extension is chosen to match an application that will read the Macintosh file, double clicking the decoded file will start the appropriate application. If the filename extension is not associated to an application on the PC, then the PC user must start an application that can read the Macintosh file and use its File|Open command to read the Macintosh file.

CRC-16

Full support of the CRC-16 in both the header and data forks is provided. The CRC-16 is present in resource fork when XFERPRO encodes a file. When decoding, the resource fork CRC-16 is ignored since the resource fork is not decoded.

Macintosh File Creator and File Type

The Macintosh file type is set to the extension of the file being encoded. If there is no extension, the file type is set to “data”. The file creator is set to “XFRP”.

Run Length Encoding

For decoding, the Run Length Encoding (RLE) compression mechanism is fully supported.

For encoding, the RLE compression mechanism is not implemented. This will still interoperate with any other standard Binhex decoder. Since most Binhex files are already compressed, it is unlikely that any encoded file size savings will be realized.

File Name Conformance

Because decoding is supported from UNIX and Macintosh systems which allow filenames much longer than the 8+3 DOS/Windows format as well as non-DOS characters in the filename, XFERPRO will automatically process the filename such that it conforms to the DOS/Windows format.

When encoding, the file name indicated in the encoded output always conforms to DOS/Windows conventions, which works for both UNIX and Macintosh computers.

File Formats

Ideally, only one file format would be required for encoded files. However, the multiple part encoded formats were designed to allow a large file transfer by encoding one large file into multiple parts for transmission across a network. This is necessary because the E-mail on many systems cannot handle more than 64K of data (or less) for any one file. Today, large binary files are common which would prohibit sending them via E-mail unless the multiple part format is used. The file formats supported by XFERPRO are summarized and briefly described below. In the examples, it is assumed that three parts are used and that they are in order (not a requirement for XFERPRO).

File Format Support Summary

Single File Format (UU or XX Encoding)

Single File Format (MIME Encoding)

Single File Format (Binhex 4.0 Encoding)

SimTel File Format

Comp.binaries Usenet Newsgroup File Format

Alt.binaries Usenet Newsgroup File Format 1

Alt.binaries Usenet Newsgroup File Format 2

Alt.binaries Usenet Newsgroup File Format 3

Alt.binaries Usenet Newsgroup File Format 4

UNIX Shell Archive File Format

DOS uuencode/uudecode R.E.M. v5.24 File Format

X-File File Format

UUXFER version 2.0 File Format

WINCODE version 2.3 File Format

POST version 1.2.0 File Format

POST version 2.0.1 File Format

xmitBin File Format

BITFTP Archive File Format

Squirrel 3.0 File Format

America On-Line File Format

File Format Support Summary

The following table describes the support provided for each file format. The Encode column indicates if XFERPRO can encode information into the listed file format, the Decode column indicates if XFERPRO can decode information contained in the file format, the Methods column indicates what method of encoding / decoding is supported (see [How does XFERPRO Work?](#)), the Checksum column indicates if checksums on encoded data is supported (see [Generate Checksums on Encoded Output](#) and [Test Checksum Data if Present](#)), and the Multiple Enclosures column indicates if multiple encoded files are allowed in a single physical input file for decoding (see [Multiple Enclosures](#)). A 'Y' indicates the capability is supported, a blank entry indicates the capability is not supported.

File Format	Encode	Decode	Methods	Checksum	Multiple Enclosures
Single File	Y	Y	UU, XX	Y	Y
Single File	Y	Y	MIME		Y
Single File	Y	Y	Binhex 4.0	CRC-16	Y
SimTel File Format	Y	Y	UU, XX	Y	
Comp.binaries Usenet Newsgroup	Y	Y	UU, XX	Y	
Alt.binaries Usenet Newsgroup 1	Y	Y	UU, XX	Y	
Alt.binaries Usenet Newsgroup 2	Y	Y	UU, XX	Y	
Alt.binaries Usenet Newsgroup 3	Y	Y	UU, XX	Y	
Alt.binaries Usenet Newsgroup 4	Y	Y	UU, XX	Y	
UNIX Shell Archive	Y	Y	UU, XX		
DOS R.E.M v5.24	Y	Y	UU, XX	Y	
X-File File Format	Y	Y	UU, XX	Y	
UUXFER version 2.0	Y	Y	UU, XX	Y	
WINCODE version 2.3	Y	Y	UU, XX	Y	
POST version 1.2.0	Y	Y	UU, XX	Y	
POST version 2.0.1		Y	UU, XX		
xmitBin	Y	Y	UU, XX	Y	
BITFTP Archive	Y	Y	UU, XX	Y	
Squirrel 3.0		Y	UU, XX		
America On-Line		Y	UU, XX		

Single File Format (UU or XX Encoding)

```
begin 644 archive.zip  
Encoded data goes here  
end
```

Single File Format (MIME Encoding)

MIME-Version: 1.0

Content-Type: APPLICATION/octet-stream; name="archive.zip"

Content-Transfer-Encoding: BASE64

Content-Description:

Encoded data goes here

NOTE: blank lines after data indicate the end of encoded data

Single File Format (Binhex 4.0 Encoding)

MIME-Version: 1.0

Content-Type: multipart/mixed; boundary="boundary_string"

--boundary_string

Content-Type: application/mac-binhex40; name="archive.zip"

Content-Description: archive.zip binhex encoded by xferpro

Content-Disposition: attachment; filename="archive.zip"

(This file must be converted with BinHex 4.0)

:*Encoded data goes here:*

--boundary_string--

SimTel File Format

```
----- Part 1 of 3 -----  
begin 644 archive.zip  
Encoded data goes here  
----- End of part 1 of 3 -----  
  
----- Part 2 of 3 -----  
Encoded data goes here  
----- End of part 2 of 3 -----  
  
----- Part 3 of 3 -----  
Encoded data goes here  
end  
----- End of part 3 of 3 -----
```

Comp.binaries Usenet Newsgroup File Format

```
Archive-name: archive/part01  
BEGIN--cut here--cut here--  
begin 644 archive.zip  
Encoded data goes here  
END--cut here--cut here--
```

```
Archive-name: archive/part02  
BEGIN--cut here--cut here--  
Encoded data goes here  
END--cut here--cut here--
```

```
Archive-name: archive/part03  
BEGIN--cut here--cut here--  
Encoded data goes here  
end  
END--cut here--cut here--
```

Alt.binaries Usenet Newsgroup File Format 1

NOTE: For the four following alt.binaries formats, XFERPRO will accept decoding "Subject:" lines with any of the following formats. For encoding, however, the output is exactly as shown in the examples below. 'X' identifies the current part number and 'Y' identifies the total number of parts.

The filename may have an extension (filename.ext), no extension (filename or description) or be preceded by a dash '-' (- filename.ext).

The parts count identifiers can be in any of the formats (X/Y), (partX/Y), (part X/Y), (part X of Y), [X/Y], [partX/Y], [part X/Y], or [part X of Y].

```
Subject: archive.zip (1/3)
e-mail header data goes here
```

```
BEGIN --- CUT HERE --- Cut Here --- cut here --- archive.zip
begin 644 archive.zip
Encoded data goes here
--
```

```
Subject: archive.zip (2/3)
e-mail header data goes here
```

```
BEGIN --- CUT HERE --- Cut Here --- cut here --- archive.zip
Encoded data goes here
--
```

```
Subject: archive.zip (3/3)
e-mail header data goes here
```

```
BEGIN --- CUT HERE --- Cut Here --- cut here --- archive.zip
Encoded data goes here
end
--
```

Alt.binaries Usenet Newsgroup File Format 2

Subject: archive.zip [part 1/3]
e-mail header data goes here

```
BEGIN-----> cut here <-----  
begin 644 archive.zip  
Encoded data goes here  
END-----> cut here <-----
```

Subject: archive.zip [part 2/3]
e-mail header data goes here

```
BEGIN-----> cut here <-----  
Encoded data goes here  
END-----> cut here <-----
```

Subject: archive.zip [part 3/3]
e-mail header data goes here

```
BEGIN-----> cut here <-----  
Encoded data goes here  
end  
END-----> cut here <-----
```

Alt.binaries Usenet Newsgroup File Format 3

Subject: archive.zip [1/3]

NOTE: blank lines after e-mail header indicate start of encoded data

begin 644 archive.zip
Encoded data goes here

--

Subject: archive.zip [2/3]

NOTE: blank lines after e-mail header indicate start of encoded data

Encoded data goes here

--

Subject: archive.zip [3/3]

NOTE: blank lines after e-mail header indicate start of encoded data

Encoded data goes here
end

--

Alt.binaries Usenet Newsgroup File Format 4

Subject: archive information text [1/3]
e-mail header data goes here

BEGIN-----CUT HERE-----
begin 644 archive.zip
Encoded data goes here
END-----CUT HERE-----

Subject: archive information text [2/3]
e-mail header data goes here

BEGIN-----CUT HERE-----
Encoded data goes here
END-----CUT HERE-----

Subject: archive information text [3/3]
e-mail header data goes here

BEGIN-----CUT HERE-----
Encoded data goes here
end
END-----CUT HERE-----

UNIX Shell Archive File Format

```
#!/bin/sh
#
# This is a shell archive. Cut everything off before
# the #!/bin/sh and feed the rest to /bin/sh
#
part=1
file=archive.zip
sed -e '/^BEGIN/d' -e '/^END/d' << \End_of_Section > $file.uue.$part
BEGIN----- archive.zip ----- part 1/3 ---
begin 644 archive.zip
Encoded data goes here
END----- archive.zip ----- part 1/3 ---
End_of_Section
echo $file, part $part extracted.
if [ `echo $file.uue.[0-9]* | wc -w` = 3 ]; then
cat $file.uue.* | uudecode
if [ $? -gt 0 ]; then
    echo Error encountered when uudecoding pieces...
exit 1
fi
echo $file successfully uudecoded. Removing uencoded pieces.
rm $file.uue.[0-9]*
fi
exit

#!/bin/sh
#
# This is a shell archive. Cut everything off before
# the #!/bin/sh and feed the rest to /bin/sh
#
part=2
file=archive.zip
sed -e '/^BEGIN/d' -e '/^END/d' << \End_of_Section > $file.uue.$part
BEGIN----- archive.zip ----- part 2/3 ---
Encoded data goes here
END----- archive.zip ----- part 2/3 ---
End_of_Section
echo $file, part $part extracted.
if [ `echo $file.uue.[0-9]* | wc -w` = 3 ]; then
cat $file.uue.* | uudecode
if [ $? -gt 0 ]; then
    echo Error encountered when uudecoding pieces...
exit 1
fi
echo $file successfully uudecoded. Removing uencoded pieces.
rm $file.uue.[0-9]*
fi
exit

#!/bin/sh
#
# This is a shell archive. Cut everything off before
# the #!/bin/sh and feed the rest to /bin/sh
#
part=3
```

```
file=archive.zip
sed -e '/^BEGIN/d' -e '/^END/d' << \End_of_Section > $file.uue.$part
BEGIN----- archive.zip ----- part 3/3 ---
Encoded data goes here
end
END----- archive.zip ----- part 3/3 ---
End_of_Section
echo $file, part $part extracted.
if [ `echo $file.uue.[0-9]* | wc -w` = 3 ]; then
cat $file.uue.* | uudecode
if [ $? -gt 0 ]; then
    echo Error encountered when uudecoding pieces...
exit 1
fi
echo $file successfully uudecoded. Removing uuencoded pieces.
rm $file.uue.[0-9]*
fi
exit
```


DOS uuencode/uudecode R.E.M. v5.24 File Format

section 1 of uuencode 5.24 of file archive.zip
NOTE: blank lines indicate start of encoded data

begin 644 archive.zip
Encoded data goes here
NOTE: blank lines indicate end of encoded data

section 2 of uuencode 5.24 of file archive.zip
NOTE: blank lines indicate start of encoded data

Encoded data goes here
NOTE: blank lines indicate end of encoded data

section 3 of uuencode 5.24 of file archive.zip
NOTE: blank lines indicate start of encoded data

Encoded data goes here
end
NOTE: blank lines indicate end of encoded data

X-File File Format

X-File-Name: archive.zip
X-Part: 1
X-Part-Total: 3

BEGIN-----cut here-----
begin 644 archive.zip
Encoded data goes here
END-----cut here-----

X-File-Name: archive.zip
X-Part: 2
X-Part-Total: 3

BEGIN-----cut here-----
Encoded data goes here
END-----cut here-----

X-File-Name: archive.zip
X-Part: 3
X-Part-Total: 3

BEGIN-----cut here-----
Encoded data goes here
end
END-----cut here-----

UUXFER version 2.0 File Format

archive.zip section 1/3 UUXFER X.Y

```
BEGIN-----CUT HERE-----  
begin 644 archive.zip  
Encoded data goes here  
END-----CUT HERE-----
```

archive.zip section 2/3 UUXFER X.Y

```
BEGIN-----CUT HERE-----  
Encoded data goes here  
END-----CUT HERE-----
```

archive.zip section 3/3 UUXFER X.Y

```
BEGIN-----CUT HERE-----  
Encoded data goes here  
end  
END-----CUT HERE-----
```

WINCODE version 2.3 File Format

section 1/3 file archive.zip [Wincode vX.Y]
NOTE: blank lines indicate start of encoded data

begin 644 archive.zip
Encoded data goes here
NOTE: blank lines indicate end of encoded data

section 1/3 file archive.zip [Wincode vX.Y]

section 1/3 file archive.zip [Wincode vX.Y]
NOTE: blank lines indicate start of encoded data

Encoded data goes here
NOTE: blank lines indicate end of encoded data

section 2/3 file archive.zip [Wincode vX.Y]

section 3/3 file archive.zip [Wincode vX.Y]
NOTE: blank lines indicate start of encoded data

Encoded data goes here
end
NOTE: blank lines indicate end of encoded data

section 3/3 file archive.zip [Wincode vX.Y]

POST version 1.2.0 File Format

POST V1.2.0 archive.zip (Part 1/3)

```
BEGIN -- Cut Here -- cut here
begin 644 archive.zip
Encoded data goes here
END -- Cut Here -- cut here
```

POST V1.2.0 archive.zip (Part 2/3)

```
BEGIN -- Cut Here -- cut here
Encoded data goes here
END -- Cut Here -- cut here
```

POST V1.2.0 archive.zip (Part 3/3)

```
BEGIN -- Cut Here -- cut here
Encoded data goes here
end
END -- Cut Here -- cut here
```

POST version 2.0.1 File Format

POST V2.0.1 archive.zip (Part 1/3)

POST Crc: 0xxxxxxxxx Size: nnnnnn

BEGIN -- Cut Here -- cut here
begin 644 archive.zip
Encoded data goes here
END -- Cut Here -- cut here

POST V2.0.1 archive.zip (Part 2/3)

POST Crc: 0xxxxxxxxx Size: nnnnnn

BEGIN -- Cut Here -- cut here
Encoded data goes here
END -- Cut Here -- cut here

POST V2.0.1 archive.zip (Part 3/3)

POST Crc: 0xxxxxxxxx Size: nnnnnn

BEGIN -- Cut Here -- cut here
Encoded data goes here
end
END -- Cut Here -- cut here

xmitBin File Format

```
BEGIN --- CUT HERE --- Cut Here --- cut here --- archive.zip 1/3  
begin 644 archive.zip  
Encoded data goes here  
END --- CUT HERE --- Cut Here --- cut here --- archive.zip 1/3
```

```
BEGIN --- CUT HERE --- Cut Here --- cut here --- archive.zip 2/3  
Encoded data goes here  
END --- CUT HERE --- Cut Here --- cut here --- archive.zip 2/3
```

```
BEGIN --- CUT HERE --- Cut Here --- cut here --- archive.zip 3/3  
Encoded data goes here  
end  
END --- CUT HERE --- Cut Here --- cut here --- archive.zip 3/3
```

BITFTP Archive File Format

Subject: archive.zip, Part 001 of 003 (uuencoded)

The following line should contain ASCII characters 0x20-0x5F
`!"#\$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMN O PQRSTUVWXYZ[\]^_

begin 644 archive.zip
Encoded data goes here

Subject: archive.zip, Part 002 of 003 (uuencoded)

The following line should contain ASCII characters 0x20-0x5F
`!"#\$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMN O PQRSTUVWXYZ[\]^_

Encoded data goes here

Subject: archive.zip, Part 003 of 003 (uuencoded)

The following line should contain ASCII characters 0x20-0x5F
`!"#\$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMN O PQRSTUVWXYZ[\]^_

Encoded data goes here
end

Squirrel 3.0 File Format

```
----- begin of archive.zip -- uuencoded -- part 1 of 3 -----  
begin 644 archive.zip  
Encoded data goes here  
----- end of archive.zip -- uuencoded -- part 1 of 3 -----  
  
----- begin of archive.zip -- uuencoded -- part 2 of 3 -----  
Encoded data goes here  
----- end of archive.zip -- uuencoded -- part 2 of 3 -----  
  
----- begin of archive.zip -- uuencoded -- part 3 of 3 -----  
Encoded data goes here  
end  
----- end of archive.zip -- uuencoded -- part 3 of 3 -----
```

America On-Line File Format

Subj: #1(3) archive.zip
Mail Split By AOL Gateway

----- cut here -----
begin 644 archive.zip
Encoded data goes here
----- cut here -----

Subj: #2(3) archive.zip
Mail Split By AOL Gateway

----- cut here -----
Encoded data goes here
----- cut here -----

Subj: #3(3) archive.zip
Mail Split By AOL Gateway
----- cut here -----
Encoded data goes here
end
----- cut here -----

If You Encounter Problems

If you encounter problems, check the following for more information. *After attempting to solve the problem as indicated in the suggestions*, you may contact Sabasoft, Inc. for technical support. See **Contacting Sabasoft**. If you do require technical support, please provide *explicit* details of what you tried to do and the resulting messages and system behavior seen.

Common Causes of Decoding Failures

Common Causes of Encoding Failures

Common Causes of Decoding Failures

There are many possible causes for decoding failures. A description of the most common causes are as follows. These are most likely related to multiple part decoding.

Before troubleshooting, two common multiple part configuration issues should be understood.

- 1) If you are decoding multiple part formats and have the various encoded parts in separate files, make sure XFERPRO is configured to decode multiple files as one large multiple part file. See **Decode Multiple Input Files as 1** for details. This is the default and should therefore need to be changed only if the defaults have been modified.
- 2) Make sure that all files to be decoded *are selected*, either through drag-and-drop or via the File|Decode dialog box. XFERPRO *will not* search the current directory for specially numbered file names. See also **Decode Multiple Input Files as 1** for details.

The troubleshooting tips are enumerated next.

- A. The encoded file got corrupted in transmission. The checksum option helps, if available, for UU, XX, and MIME encoded files. Binhex encoded files have a built-in CRC to alleviate this problem. XFERPRO will detect and report any encoded file corruption if checksum or CRC data is present. If this happens, the only solution is to get the file again so a clean copy is available to decode.
- B. Getting only some parts of a multiple part file. XFERPRO will detect and report exactly what's missing in this case. You may see a report of specific parts missing or an indication of the begin or end missing, which apply to the first part or last part, respectively. It will not be possible to decode unless all parts of the multiple part file are collected.
- C. The complete encoded file has not been downloaded or saved from your email or Usenet newsgroups program. This may be due to size limits on email systems, i.e. 64K on America On-Line, which will result in truncated messages. If the complete email message cannot be received, it will be impossible to decode it. If possible, ask the sender to resend the file in smaller sized parts. In some cases, you may have to request your email or Usenet newsgroup system to send all of the data, i.e. America On-Line's "more" button if the size exceeds 32K (but is less than 64K).
- D. The encoded file was not saved in pure ASCII format. Some programs, such as NetCruiser, WinCIM and word processors normally save the email files in a non-ASCII format. In order for decoding to work, save the email messages in straight ASCII format.
- E. The file format is not one that XFERPRO supports. Use the built-in retry mechanism to attempt decoding using all file formats. As a last result, edit the encoded file manually and strip out all email header and signature line information.

Unable to Determine File Format **Invalid UU/XX/MIME/Binhex Encoded Data**

Checksum Error Details
What if the Output File Seems Corrupt

Unable to Determine File Format

Due to the plethora of non-standard multiple part file formats, XFERPRO may not be able to automatically determine where the encoded data starts and ends in the input file. In this case, the user is prompted to retry decoding. The choices are to retry with a particular multiple part format or retry with all formats.

First, retry with all formats. XFERPRO will attempt all supported file formats, one after another. If XFERPRO succeeds, in its opinion, at decoding successfully, a message indicating so will be displayed. However, in this case double check the output file created since it's possible that XFERPRO was fooled by an unsupported multiple part format.

If decoding still fails after trying all formats, XFERPRO probably doesn't support that format.

You can print a portion of the encoded files and compare it to the formats supported in XFERPRO, as described in **File Formats**. This will indicate whether or not XFERPRO can support the file to automatically decode. If you see a format that appears to match, it's possible that other email header data is spoofing the automatic format detection. Choose the specific format, versus try all formats, when retrying to decode again.

If, after comparing the input file format to those supported by XFERPRO, you *know* that the format of your encoded input file is not one of those supported by XFERPRO, then you must manually put the encoded data portion only of each file part into the correct order for XFERPRO to work. To do this, any e-mail header information must also be stripped out. For UU or XX encoding, keep only the portions starting with 'begin' and up to and including 'end'. For MIME encoding, keep the parts from 'Content-Type:' up until a blank line. Use any standard text editor, such as Windows NOTEPAD or DOS's EDIT, to do this. For very large files which EDIT or NOTEPAD cannot handle, you'll need a third party utility such as Emacs for Windows (mewin.exe) or Programmer's File Editor (pfe.exe).

In any case, if you get XFERPRO to indicate successful decoding after forcing it, make sure to double-check the output file as per the **What if the Output File Seems Corrupt** section.

Invalid UU/XX/MIME/Binhex Encoded Data

During decoding, XFERPRO checks the encoded data for validity. If the input file contains invalid encoded data, XFERPRO will show the user the offending line of data and will prompt the user with various options as described below.

Dialog Box Button	Action
Skip This Invalid Line	Skip decoding of the offending line but continue with the remaining data.
Skip All Invalid Lines	Skip decoding of the offending line and also skip decoding of any subsequent line with invalid encoded data. This sometimes decodes an entire file successfully (if multiple parts are in sequential order) because the chances of email header data being in proper format is small. <i>Use this with caution as the output file may be corrupted!</i>
Decode This Invalid Line*	Decode the offending line in spite of having errors. This may cause a corrupted output file!
Decode All Invalid Lines*	Same as Decode Line but do this for any subsequent line of invalid encoded data. This may cause a corrupted output file!
Abort Decode	Stop decoding this file and be ready for new files to decode.

*Note: Decode Line and Decode All have been provided because some e-mail systems truncate lines with trailing spaces, which are possible when using UU encoding. XFERPRO assumes the remaining (i.e. missing) data on the line are spaces and decodes the data as such. This may be an incorrect assumption, which could result in corrupt output (decoded) files! Use this feature with great caution.

Checksum Error Details

To help detect if the encoded file was corrupted during transmission, XFERPRO may test option checksum or CRC data if contained in the encoded file (see **Test Checksum Data if Present**). If there is checksum data present and XFERPRO's calculation does not match what was sent along with the encoded file, the user is warned of this potential problem. Since the checksum is a 16-bit number, there exists a small (1/65535th) chance that the file may be corrupted even though the checksum is correct or that the checksum data itself got corrupted and the file is not. With checksum errors present, the output (decoded) file is still generated, but should be tested for corruption by the application which will use the decoded file. XFERPRO cannot determine if the decoded (output) file is corrupt, only if the encoded (input) file seems corrupt.

What if the Output File Seems Corrupt

Typically XFERPRO is used to send binary files containing compressed archives. Those files typically end in extensions of .ZIP, .ARC, .LZH, or .ZOO. If you find that XFERPRO reports a complete and correct decoding but your archive file has problems (e.g. checksum errors), then it is likely that XFERPRO cannot filter any e-mail header information contained within the file or the multiple part format used is not supported by XFERPRO.

Try manually putting together the encoded file using any ASCII text editor such as Windows NOTEPAD or DOS's EDIT. Then re-run decoding on that file.

Common Causes of Encoding Failures

There are a few common causes for encoding failures. The error messages usually indicate “Can’t Read ...” or “Can’t Write to ...” for encoding failures.

- A. The destination disk to which or the source disk from which the file to be encoded is full. Ensure there is at least 133% of the file to be encoded size. To encode a 100k file, you need at least 133k of available disk space, and some additional space if multiple part output is selected due to multiple parts file format overhead.
- B. The destination disk or directory for which the encoded file is to be stored is not writable. This is more common if you’re on a network which has per disk and per directory permissions. Make sure the destination disk and directory is writable by you.
- C. There are too many file open. Try closing other Windows applications and then retry the encoding process. You can look for `FILES=nn` in your `CONFIG.SYS` file. When running Windows, it’s good to have at least `FILES=40` or even `FILES=60` when running Windows with a network.

Technical Support

Questions about the operation of XFERPRO or problems encountered can be directed to Sabasoft, Inc. as indicated in **Contacting Sabasoft**. *Please read the complete on-line manual before asking for technical support.*

If you contact Sabasoft, please provide the following information:

1. Program name and version,
2. Operation being performed (decoding, encoding, installation, etc.),
3. Explicit steps taken, exact error messages, and resulting output files,
4. Information about any other programs used to obtain encoded files (for decoding), such as email or usenet programs, and
5. If there was a General Protection Fault (GPF), provide a Dr. Watson log entry.

Technical support is provided via email only. Telephone support is not provided.

Contacting Sabasoft

Please read the complete on-line manual before asking for technical support.

You may contact Sabasoft, Inc. by several means:

1. US Mail - write to:

Sabasoft, Inc.
924 Bayhill Avenue
Naperville, IL 60565 USA

2. World Wide Web - point your browser to:

<http://members.aol.com/sabasoft>
<http://www.sabasoft.com>

3. Electronic mail at America On-Line (AOL) - send a message to:

sabasoft@aol.com

Check with your e-mail provider to learn how to send e-mail to America On-Line.

Note 1: AOL has an incoming mail limit from other networks (via the Internet) of 250,000 (\cong 250K) bytes. If you are a subscriber to AOL, then you may attach a file which avoids this limitation.

Note 2: Due to Internet restrictions, you cannot send binary data from other networks to AOL. If you need to send binary data, then use XFERPRO! (Remember the size limitation as stated in Note 1) If you are a subscriber to AOL, then you may attach a file which avoids this limitation.

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You may make as many copies of the Shareware Package as you need for backup purposes only.

DISTRIBUTION

You may distribute the Shareware Package to others via an electronic transfer mechanism or electronic storage media provided that no files are deleted from the Shareware Package or are modified in any way. Files may be added to the Shareware Package expressly for the purpose of identifying the party distributing the Shareware Package. You may also place the Shareware Package into any archive or compressed format for ease of distribution.

You may not distribute the Password to others under any circumstances.

GENERAL

This agreement shall be governed by the laws of the state of Illinois and shall inure to the benefit of Sabasoft, Inc. and any successors, administrators, heirs, and assigns. Any action or proceeding brought by either party against the other arising out of or related to this agreement shall be brought only in a STATE or FEDERAL COURT of competent jurisdiction located in DuPage County, Illinois. The parties hereby consent to in personam jurisdiction of said courts.

ORDER FORM

Note: You may print this form by selecting File|Print Topic from the File menu on the help system.

Program: **XFERPRO 1.1.1**

Name _____

Company (if company purchase) _____

Address 1 _____

Address 2 _____

City _____ State/Province _____

Zip/Postal Code _____ Country _____

E-mail Address _____

(important for information on updates)

Choose one of the following (required):	Price Each	Quan	Net
XFERPRO 1.X Registration for New Customers	US\$13.95	_____	_____
XFERPRO 1.X Upgrade from UUCODE v3.X	US\$9.95	_____	_____

Options - Add to Registration Price

Latest copy on disk and electronic manual (<i>this option is required if a disk is needed - quantity limited to registration quantity only</i>). <i>Only 3.5" 1.44 MB disk is available.</i>	US\$3.00	_____	_____
---	----------	-------	-------

Shipping and IL Sales Tax Options

Shipping and Handling <i>per copy on disk</i> :	see info	_____	_____
USA: \$1.00, Canada: \$2.00, Europe: \$3.50, Elsewhere: \$5.00	at left		
PO handling fee for <i>non-prepaid</i> POs under \$US100.00.	US\$10.00	_____	_____
IL Sales Tax (<i>Illinois Residents only</i> - 6.75% × total above)		_____	_____

Please Remit Total (US\$ Funds drawn on USA bank/branch - see **PAYMENT TERMS**) _____

Payment Method: Purchase Order # _____ Check # _____ Other _____

Credit Card Type: [] Visa [] Mastercard [] AMEX

Card Number: _____ Expiration Date: _____

Signature (credit card only): _____

Mail this form to: Sabasoft, Inc., 924 Bayhill Avenue, Naperville, IL 60565 USA

PAYMENT TERMS

Please remit payment to:

Sabasoft, Inc.
924 Bayhill Drive
Naperville, IL 60565 USA

Payment must be in US\$ funds drawn on a US bank or US branch of a non-US bank.

Personal check, bank check, money orders and credit cards are accepted. The type of credit card accepted include Visa, Mastercard and American Express. *Please note that checks returned with non-payment for any reason are subject to an additional (e.g. plus the original payment due) US\$ 30.00 handling fee.*

Cash is also accepted, however, Sabasoft Inc. will not accept responsibility of funds lost in the mail. *If cash is sent, the purchaser agrees to accept all risks of loss.*

Purchase orders are accepted for orders over US\$100.00. For orders under US\$100.00, bill to purchase orders are also accepted for an additional US\$10.00 handling fee. Pre-paid purchase orders are not subject to the additional handling fee, regardless of the amount of purchase. Terms are Net 30 days.

Purchasers outside the USA are also responsible for any VAT, duties, or tariffs.

If you are ordering a large quantity of this program, please see **Contacting Sabasoft** for information regarding site license agreements.

Please allow from 1 until 4 weeks for delivery.

