Topics for File Transfer Operations:

File Transfer

File Transfer Edit Options

Send File Dialog
Receive File Dialog
If File Exists

Send Transfer Status
Receive Transfer Status

Protocols:

Character
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    Receive Settings
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    Send Settings
    Receive Settings
FTP
    Settings
    Send Settings
    Receive Settings
Ind$File
  VM/CMS Option
    Settings
    Send Settings
    Receive Settings
    Host File Characteristics
  MVS/TSO Option
    Settings
    Send Settings
    Receive Settings
    Host File Characteristics
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    Settings
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Kermit
    Settings
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    Send Settings

Help for Edit Options

Softerm includes a selection of edit options, available for Send and Receive file transfer operations, to compensate for the variations in data formats used by host computers.

These options allow the source file to be reformatted as the file is transferred to its destination.

Edit options may be set for a particular File Transfer Object so they will be in effect each time the object is used.   Edit options also may be changed from the Session Window's File menu before starting a file transfer operation.

For additional information about the File Transfer Edit Options, select:

High Bit
End of Line character
Hex dump
Pad blank lines
Space compress
Translate characters
Remove characters
Tab length

High Bit

The High Bit of each character in the source file may be Set, Cleared or left at No Change.   In most cases, you would leave this option set to No Change to leave the High Bit unaffected.

Application: If you transferred a text file from an Apple computer to a PC, you would want to Clear the high bit to obtain standard text rather than graphics characters.

End of Line

End of Line lets you choose what line terminator is to be used for the destination when transferring text files.   The line terminators may be:

- No Change (no end of line modifications)
- Carriage Return
- Line Feed
- Carriage Return/Line Feed

Hex Dump

Hex Dump, if checked, will cause the source file to be converted to a displayable hexadecimal dump format.

Each line will display the 8-character hexadecimal address of the position in the file followed by a colon, 16 data characters from the source file in hexadecimal format, and the ASCII equivalent displayable characters.   Non-displayable character codes will be shown as a period.

This option is extremely useful in debugging communications problems when interacting with a host computer system.

Important: If the Hex Dump option is checked, all other editing options except for the High Bit option, and the End of Line option when the transfer is to a printer, are ignored.

Pad Blank Lines

Some host systems throw away any blank lines;   that is, lines consisting only of a line terminator character, such as a Carriage Return + Line Feed used to double-space between paragraphs of a document.   To have the document retain its format when it is transferred to the host, check the Pad Blank Lines option.   This will substitute a space plus the line terminator for any line containing only a line terminator.

Space Compress

Space Compress, if checked, will cause any sequence of multiple space characters to be changed to a single space character as the source file is transferred to the destination.

Translate Characters

Translate is used to convert characters or ranges of characters to other characters or strings of characters.   This option is useful if a file contains unwanted formatting characters which must be converted before the data can be processed.

Application: Some word processors use non-standard control sequences for format control.   If you know what these codes are, you can translate them to the codes used by your word processing program.

The Translate string entry field may contain multiple arguments which may be optionally separated by spaces or commas (,), or ranges separated by a hyphen (-).   Arguments in the Translate field must be specified in pairs so that both a from and a to argument are included for each translate entry in the field. Character arguments and ranges may be specified in either ASCII or hexadecimal characters in the range $00-$7F.   A hexadecimal character is indicated by a **$** followed by 2 digits in the range 0-9 or A-F.

The backslash character (\) is used to indicate that the next character has no special interpretation.   It may be used with a space, comma, hyphen, dollar sign, and backslash to allow these characters to be used in arguments.

The following are examples of valid arguments in the Translate edit option field:

```
 Argument  Function

 A         Single ASCII Character
 $41       Single Hexadecimal Character
 a-z       ASCII Character Range
 $61-$7A   Hexadecimal Character Range
 \,        Comma as Argument
```

The following are examples of valid specifications for Translate:

```
 a-z,A-Z $7F,$20 (,[ ),]
```

This string, if used in the Translate edit option field, will convert lowercase to uppercase and convert all DEL ($7F) characters to a space ($20), and will convert parenthesis ( ) to square brackets [ ].   Arguments in the Translate field must be specified in pairs.

Remove Characters

Remove is used to remove selected characters and ranges of characters from the source file as the file is written to the destination.   This option is useful if a file contains unwanted formatting characters which must be removed before the data can be processed.

Application: Some word processors use non-standard control sequences for format control.   If you know what these codes are, you can remove them to get a destination file that is readable.

The Remove string entry field may contain multiple arguments which may be optionally separated by spaces or commas (,), or ranges separated by a hyphen (-).   Character arguments and ranges may be specified in either ASCII or hexadecimal characters in the range $00-$7F.   A hexadecimal character is indicated by a **$** followed by 2 digits in the range 0-9 or A-F.

The backslash character (\) is used to indicate that the next character has no special interpretation.   It may be used with a space, comma, hyphen, dollar sign, and backslash to allow these characters to be used in arguments.

The following are examples of valid arguments in the Remove edit option field:

```
 Argument  Function

 A         Single ASCII Character
 $41       Single Hexadecimal Character
 a-z       ASCII Character Range
 $61-$7A   Hexadecimal Character Range
 \,        Comma as Argument
```

The following is an example of a valid specification for Remove:

```
 $00-$08 $0B $0E-$1F
```

This string, if used in the Remove edit option field, will remove control characters **except** for HT ($09), LF ($0A), FF ($0C), and CR ($0D).

Tab Length

This option accepts values in the range 0-9 and defaults to 0, which disables this option.   This option will substitute an appropriate number of spaces for tab characters in the source file.

Application: If you downloaded a file that you knew was written with tab stops set every 8 columns, and you wanted it to retain its format for your text editor, you could change the default 0 to 8

Retries

Specify the maximum retry count for error conditions.   Possible error conditions include timeouts and block check errors.   If an error condition occurs during a file transfer operation and the Retries count is exhausted, a Line Failure message will be displayed on your screen.   This parameter accepts values from 0 to 255.

Receive Acknowledgment Timeout

This parameter sets the number of seconds before a transfer operation will cancel when an acknowledgement for data transmitted to the host is expected to be received.   Valid values are from 0 to 65535.

Send Character Transmission Delay

Note: This also is called Transmit Delay.

Character Transmission Delay is specified in milliseconds of delay between characters, from 0 through 255.   Many host computers expect to receive data at manual typing speed.   When Softerm transmits a file of data, the interval between characters is much shorter than when they are typed, and the host computer may be unable to keep up with the transmission rate.   As a result, data may be lost or garbled. This parameter introduces an inter-character delay to reduce the host processing load.   If the data received by the host is incomplete or consistently incorrect, increasing the inter-character delay may improve the situation.

Retries

Specify the maximum retry count for error conditions.   Possible error conditions include timeouts and block check errors.   If an error condition occurs during a file transfer operation and the Retries count is exhausted, a Line Failure message will be displayed on your screen.   This parameter accepts values from 0 to 255.

Host Command for Send

A string of up to 35 characters may be entered to be transmitted to the remote system when the Send command is processed.

This string could be used as a command to the remote computer system to prepare to receive data, and might resemble:

```
ACCEPT filename [CR]
kermit -r filename [CR]
XRCV filename [CR]
```

The first 32 ASCII characters (0 through 31) also are control codes which can be included by using the appropriate acronym enclosed in square brackets ([ ]).   These are listed in the ASCII column in ASCII Character Codes   (If you need to send a '[' or ']', precede it with a tilde '~'.)   For example:

```
Acronym    Decimal Value   Name

[NUL]             0         Null character
[CR]             13         Carriage Return
[ESC]            27         Escape
[US]             31         Unit Separator
```

The string is transmitted exactly as entered and must include any terminator characters, such as a carriage return, required by the remote computer.

The string is transmitted at 5 characters per second to allow for systems which expect commands to be entered at normal keyboard entry speeds.

Receive Data Timeout

This parameter sets the number of seconds before a transfer operation will cancel when data is expected to be received. Valid values are from 0 to 65535.

Receive Character Transmission Delay

Note: This also is called Transmit Delay.

Character Transmission Delay is specified in milliseconds of delay between characters, from 0 through 255.   Many host computers expect to receive data at manual typing speed.   When Softerm transmits a file of data, the interval between characters is much shorter than when they are typed, and the host computer may be unable to keep up with the transmission rate.   As a result, data may be lost or garbled.   This parameter introduces an inter-character delay to reduce the host processing load.   If the data received by the host is incomplete or consistently incorrect, increasing the inter-character delay may improve the situation.

Retries

Specify the maximum retry count for error conditions.   Possible error conditions include timeouts and block check errors.   If an error condition occurs during a file transfer operation and the Retries count is exhausted, a Line Failure message will be displayed on your screen.   This parameter accepts values from 0 to 255.

Host Command for Receive

A string of up to 35 characters may be entered to be transmitted to the remote system when the Receive command is processed.

When used with Receive, this string could be used as a command to the remote computer system to prepare to transmit data, and might resemble:

```
TYPE filename [CR]
kermit -s filename [CR]
YSEND filename [CR]
```

The first 32 ASCII characters (0 through 31) also are control codes which can be included by using the appropriate acronym enclosed in square brackets ([ ]).   These are listed in the ASCII column in ASCII Character Codes   (If you need to send a '[' or ']', precede it with a tilde '~'.)   For example:

```
Acronym     Decimal Value   Name

[NUL]            0          Null character
[CR]            13          Carriage Return
[ESC]           27          Escape
[US]            31          Unit Separator
```

The string is transmitted exactly as entered and must include any terminator characters, such as a carriage return, required by the remote computer.

The string is transmitted at 5 characters per second to allow for systems which expect commands to be entered at normal keyboard entry speeds.

Help for Send File Dialog

Complete this dialog and choose Send to transfer files from this computer to the host computer system.

The file transfer protocol settings and the File Transfer Edit Options can be examined and changed by choosing Change.

If the appropriate objects have been created, you can select a different file transfer protocol.

For more information, select:

File Transfer Name
Edit Options
PC File Name
Files
Directory
Drive
Host File Name
Transmit to Host

Help for Receive File Dialog

Complete this dialog and choose Receive to transfer files from the host computer system to this computer.

The file transfer protocol settings and the File Transfer Edit Options can be examined and changed by choosing Change.

If the appropriate objects have been created, you can select a different file transfer protocol.

For more information, select:

File Transfer Name
Edit Options
PC File Name
Files
Directory
Drive
If File Exists
Host File Name
Transmit to Host

Cancel File Transfer

Cancel this dialog and return to the terminal emulation display.

Send

When all fields are correct, choose Send to start the file transfer.

Receive

When all fields are correct, choose Receive to start the file transfer.

File Transfer Name

The displayed name defaults to the object linked to thisP Session.   The drop-down list box shows the names of any other existing File Transfer Objects.   Select the Object you want to use for this operation.

Note: If a File Transfer Object has not been linked to this session, this field defaults to the first File Transfer Object found in the data base file.

To examine or change the protocol-specific options or the File Transfer <u>Edit Options</u>, choose Change.

PC File Name

If you know the name of the file you want to send and it is located in the current directory, or in another directory whose path name you know, type the path (if required) and name.

If you do not know the exact path and filename, use the Drive, Files and Directory options to locate and select the file you wish to transfer.   Once selected, the file name will appear in this field.

Note: If you are connected to a Unix host, file names are case-sensitive.

Files

Select the name of the file to be sent from this list.   If no filename is selected from this list, all files that match the template supplied in the PC File Name field will be sent.

For those protocols that support multiple file sends (Kermit, Softrans, Ymodem, Zmodem) multiple files may be selected from this list.

Drive

If you do not know the exact path and filename, use the Drive, Files and Directory options to locate and select the file you wish to transfer.

Directory

If you do not know the exact path and filename, use the Drive, Files and Directory options to locate and select the file you wish to transfer.

Host File Name (Send)

You can rename a file as it is transferred.

If a different name is not provided, the file will have the same name at its destination.

Note: If you are connected to a Unix host, file names are case-sensitive.

Transmit to Host

This field is optional.

A string of up to 35 characters may be entered to be transmitted to the remote system when the SEND command is processed.   This string could be used as a command to the remote computer system to prepare to receive data.

For more information, select:

Host Command for Send

Change

To examine or change the protocol-specific options or the File Transfer <u>Edit Options</u>, choose Change.

File Transfer Name

The displayed name defaults to the object linked to this Session.   The drop-down list box shows the names of any other existing File Transfer Objects.   Select the Object you want to use for this operation.

Note: If a File Transfer Object has not been linked to this session, this field defaults to the first File Transfer Object found in the data base file.

To examine or change the protocol-specific options or the File Transfer Edit Options, choose Change.

Host File Name (Receive)

Type the name of the file you want to receive from the host.

Note: If you are connected to a Unix host, file names are case-sensitive.

Drive

If necessary, select the drive for the file.

Directory

If necessary, select the directory for the file.

If File Exists

If a file with the name you have assigned already exists on your PC, you can specify that you want the received file to:

- Stop transfer.   Stop is the default value.
- Append to the end of the existing file;
- Replace the existing file;
- Resume the transfer (if using Zmodem);

PC File Name

Enter the local PC name for the received file in this field.
If this field is left blank, a received file will have the same name as that specified in the Host File Name field.
If global file name characters are specified in this field and the protocol selected supports this feature, the PC file name will be derived from this template and the filename as received by the file transfer protocol from the host.

Files

Select the name of the file to be received from this list.   If no filename is selected from this list, the filename template supplied in the PC File Name field will be received.

Note: If a file name is selected from this list, an appropriate 'If File Exists' option should be selected, for example Append, Replace or Resume, since the file will already exist.

Transmit to Host

This field is optional.

A string of up to 35 characters may be entered to be transmitted to the remote system when the RECEIVE command is processed.   This string could be used as a command to the remote computer system to prepare to transmit data.

For more information, select:

Host Command for Receive

Change

To examine or change the protocol-specific options or the File Transfer <u>Edit Options</u>, choose Change.

Hide

Minimize the transfer to an icon.
To restore the file transfer status panel, select the file transfer icon.

Stop Transfer

Stop the transfer.

Send Transfer Status

The status window shows several parameters, such as the Session name; the File Transfer Object Name; the PC file name; the Host file name; and the status of the transfer operation.   The status information will include (where relevant) the number of characters transferred, the number of errors, the last error type, the transfer rate, the time remaining and the percent complete.

To minimize the file transfer operation to an icon, choose HIDE.

To stop the file transfer, choose Stop Transfer.

To perform another task while the transfer is in progress, use any of the task switching mechanisms supported by the operating system.

Receive Transfer Status

The status window shows several parameters, such as the Session name; the File Transfer Object Name; the PC file name; the Host file name; and the status of the transfer operation.   The status information will include (where relevant) the number of characters transferred, the number of errors, the last error type, the transfer rate, the time remaining and the percent complete.

To minimize the file transfer operation to an icon, choose HIDE.

To stop the file transfer, choose Stop Transfer.

To perform another task while the transfer is in progress, use any of the task switching mechanisms supported by the operating system.