

## More About File Transfers (Uploading & Downloading)

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In the previous two chapters on mail and conferences the basic methods for transferring messages from GreenNet to your own computer, and vice versa, were covered. In this chapter the whole subject of file transfers, including 'binary' files, is covered and file transfers using 'anonymous ftp' for those connecting to GreenNet over the Internet are explained. The special option 'burst' for uploading many topics (and responses) at once to a single conference is also covered.

### File Types

In the arena of computer file transfer, there are two "types" of files: **ascii** (also known as DOS, text only and/or "non-document") and **binary** (computer programs, formatted wordprocessed files and spreadsheet or database files).

#### Ascii

"Ascii" is plain and simple text only. It contains no formatting codes such as underlining, tabs, bold or italic fonts, etc. Binary files, on the other hand, can contain all the internal codings for formatting. While it might seem preferable to transfer binary files in order to retain formatting, binary files are not readable online. They can only be read if downloaded from the system first and then read with the same software program that created them! When transferred on to GreenNet, their contents do not appear on the screen. Therefore, if you want your uploaded file to be readable online transfer files as ascii text.

Most wordprocessing, spreadsheet and database programs have the option to save your data in ascii form. Saving the data in this fashion strips it of any and all internal program code. For example, if you wanted to send someone a list of your funders with their phone numbers and addresses, and you stored this information in a database program, you could go into your database program, select the records you wished to send to your colleague, save this information as TEXT ONLY (some databases have a "print to text file" command) and then upload it in a message or conference on GreenNet. When the person receives this information it is no longer in database format, but is simply a list of names and numbers with spaces (or commas or tabs depending on your software) separating the names, addresses and telephone numbers.

You can use any of the protocols offered on GreenNet that match one of the protocols

available in your communications software for transferring ascii files. Be sure to convert to (a)scii if you are asked to do so when the upload is completed to make sure that your message will be readable online.

### **Binary**

Binary files can contain any computer codes and formatting or can be computer programs. If you want to transfer a formatted wordprocessing file keeping all formatting intact, or if you wish to transfer a public domain computer game, for example, use one of the the non-ascii protocols to send and receive these types of files. They will not lose special codes and will be transferred intact. However, as stated above, their contents will not appear on your screen while you are online. You can use any choice **except (a)scii** for transferring binary files.

## Saving ascii Files

Although you can type a mail message directly while logged into GreenNet, you might find it difficult to edit what you're typing using GreenNet's text editors. If you type your text first in your wordprocessor, you can do all your editing there, on a system with which you are familiar, and you will save online time and charges by doing so. As discussed above and in the tutorial section about Mail, you must first save that wordprocessed file as **ascii** text. Below are listed some of the more popular word processing packages for both IBM-PC-compatible and Macintosh computers, and the methods for saving files as ascii or DOS text.

- MacWrite II — Select "Save As...", click on "Save As..." button above the title, select "Text Only with line breaks," name the file and save.
- MS Word (Mac) — Use "Save As", select "File Options" and select "Text Only with Line Breaks". Depending on what version you have, you may need to do this with each revision.
- MS Word (PC DOS) — Select TRANSFER, SAVE. The filename appears in the lower left corner; "Formatted (yes)no" appears at the lower right corner. Use the <tab> to move the cursor to the "no" position and hit <RETURN>. Subsequent saves will remember that the file is NOT formatted.
- MS Word (Windows) — Select "File / Save As" and then choose "DOS text with line breaks (tx8)." But remember that, if you are using small type or a proportional font, you probably have more than 80 characters per line -- so set wide margins or a big type size to get fewer characters per line. This is a problem with most word processors.
- WordPerfect for Windows Version 5.1/5.2— Click on "File" and then "Save As" or just press F3). Then click on "Format" and select "ASCII Text (DOS)" and change the file name if you do not wish to overwrite your formatted WordPerfect file..
- MultiMate — There is no *fast* way to save an ASCII file; you must use the MultiMate conversion programs to convert from MultiMate format to ASCII format.
- PC-Write — Files are already ASCII files; just be sure that you don't use any PC-Write formatting codes or insert ruler lines into the text. If you do, remove them.
- Sidekick — Sidekick Notepad files are already ASCII files.
- Windows — Notepad files are already ASCII files, however, 'Write' files are not.
- WordPerfect (PC) — Press <CONTROL> and <F5> and then select the "Save as DOS text file" option and type the filename in.
- WordStar — Select "non-document" mode when you first create the file. If you have already created a regular document and want to be able to transmit it, move your cursor to the beginning of the document, turn INSERT off, then hit <RETURN> until your cursor reaches the end of the file. This will insert carriage returns on each line, making the file acceptable for file transfer. In WordStar v4 and higher, open your file as a non-document and do ^QU. Remove all print style commands, especially ^S (underline: halts on-line scrolling) and ^D (double: GreenNet

reads this as end-of-message!).

- Others — Look for references to “ASCII save” or “DOS Text file save” in your user manual or online help, or look in the “micro” conference on GreenNet for help.

If you are using an IBM-PC-compatible computer, you can verify that you have saved the file correctly as an ascii file by returning to the DOS prompt from your word processor and entering `c:\>TYPE <filename>` where *<filename>* is replaced by the name of the file you created. You will see the text whizz up your screen. If it looks OK, without extra characters, then you are OK for uploading. There are various other programs that will display text files, too numerous to go into in detail here. If you are having problems with this then call support and we will help you to figure out what you have on your system that will work for you. If you are using Windows, then open the file in Notepad - again, if it looks fine and has no odd-looking characters, then you're OK for uploading.

On a Macintosh, open the file with McSink or Vantage or a similar Desk Accessory such as MiniWriter or MockWrite (these are actually excellent for writing messages to send on-line). If what appears on the screen looks intelligible and has the same content as the message that you created in your word processor, then it is probably okay to send it to GreenNet. If you are using a Macintosh, do however be sure to check your text for occurrences of “special characters”. Change “curly quotes” into “straight quotes” and em- and en-dashes into ordinary dashes, for example. These will otherwise appear on-line as unexpected capital letters.

The conference “micro” is a good place to go to ask questions about specific software (We obtained much of the above information from there ourselves!).

## Protocols

Diplomats use the word “protocol” to describe a set of rules for having a conversation: who speaks first, how they introduce themselves and establish what language will be used, how they check that a clear understanding has been reached, and so on and so forth. Computers use it in exactly the same sense.

“Ascii” when used to describe uploads and downloads is virtually a non-protocol: the sending computer simply sends characters to the receiving computer, which can signal back that it’s got too much to handle (in Procomm you may see “XOFF RECEIVED”) but not much else.

Kermit, ftp, and X-, Y-, and Z modem are error-checking protocols. A block of data is sent, followed by some kind of check code. The receiving computer re-calculates the check code from the data. If it does not match the code sent, there must have been an error in transmission. The receiving computer requests the sender to try that block again. You may see “BAD BLOCK” or “BLOCK RESENT” when this happens. A file can be sent correctly even if there are many errors, so long as there are not so many that the same block is bad several times in a row.

On an absolutely error-free link, kermit takes longer than xmodem and xmodem longer than zmodem, which takes longer than ascii; but with kermit and xmodem, as with the other binary protocols you have the reassurance that the odds of an error getting through are millions to one against. Over a noisy phone line, compared to sending the same ascii transmission repeatedly until it arrives OK, it will save you a lot of time to use the slower error-correcting protocols. If your communications software offers the choice of Zmodem protocol, we recommend using it because it is the fastest of the error-correcting protocols.



## Uploading Binary Files Using Kermit , Xmodem, Ymodem or Zmodem.

If you wish to send a file and maintain the format and content exactly as it was produced by your graphics, wordprocessing, spreadsheet, or database program, you must use the one of the other file transfer procedures instead of ascii. Paragraph formatting, underlining, bold, special fonts, etc. will all be retained. However, neither you nor the recipient will be able to read it online. Before a file uploaded as binary can be used, it must be downloaded into a computer and opened by the recipient *using the same software* that created it, or compatible software.

The next example shows uploading of a graphic file using Mail. In Conferences, the procedure is the same from the 'u' for (u)pload point onwards. It is good practice to include the name of the software required in the "Subject " line of the message. This means the recipient can tell from the title what software should be used to open the file after it has been downloaded from GreenNet.

```
Mail: (i)ndex (u)nread (w)rite (c)apture (d)elete (s)ave (h)elp (q)uit: w <RETURN>
Do you want: (r)eply message (n)ew message (s)end copy? n <RETURN>
To: ysmith <RETURN>
Subject: Proposal graphic (MacPaint) <RETURN>

Hit <RETURN> or <ENTER> to type in a message, or 'u' to (u)pload a file: u <RETURN>
Protocol: (a)scii-text (k)ermit (x)modem (y)modem (z)modem (f)tp(? for help): z <RETURN>

I hope you've already set your parameters to 8 bits, no parity.
Please start your zmodem upload soon. Hit <RETURN> when done.
```

At this point, you would instruct your communications software to send the binary file that you have in your computer. Options in your communications software might include: Send File - Kermit or Send File - Zmodem (as opposed to Send TEXT File); or hitting the "Page Up" key for ProComm. Instead of seeing the text scroll by on the screen (as we did when sending ascii text), your communications software provides a message informing you of the progress of the transfer. Typically it will tell you how many bytes (pieces of information) or blocks have been sent, how many are left to go, and if there have been any transmission errors. Note that the transfer can be successful even if errors are reported. If all goes well, your communications software will respond with something like: "File Transfer Successful!" You may then need to use a command acknowledge this announcement, before you can proceed (e.g. click in "OK" box with mouse. to close the window).

After the successful transfer notice from your communications software hit <RETURN> to let GreenNet know the upload is completed.

Your screen should look something like this:

```
**B010000012f4ced
### Send (Z) tmp: 434 bytes, 0:04 elapsed, 73 cps, 7%

434 characters received.
File contains non-ascii characters (first one is ^@)
Convert to : (a)scii-text (b)inary (? for help): b <RETURN>
```





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In most cases, you will select (b)inary in answer to this question. The option of (a)scii is provided so you can use one of the binary protocols to transfer *text* files.

NB The “\*\*B010000012f4ced” appears when using Zmodem and is part of the Zmodem instructions. It is normal - ignore it. You may see similar strange strings with other protocols. They are no cause for concern!

The next question you will see is:

```
Do you want to edit the uploaded file? (y/n/q) ? n <RETURN>
```

**Note:** You cannot actually edit the *contents* of an uploaded *binary* file, but you can (a)dd text *at the (b)eginning* of it to tell the recipient what they are receiving. If you converted the file to (a)scii, you can edit it and may well want to (v)iew it.

For our purposes here, do not edit the message (type **n** and hit <RETURN>). As in any other message, GreenNet comes back with the “Cc:” prompt. You do not wish to save it online or send it to another account so press <RETURN>:

```
Cc: <RETURN>  
Message sent.
```

## Uploading using ftp over an Internet connection

If you connect to GreenNet directly over the Internet from a system that lets you run more than one session at once (for example many university systems) and your software has no references to protocols like Zmodem or Xmodem or Kermit, then you will probably need to use 'ftp' (file transfer protocol) to do your uploads and downloads. This does not apply to users who connect via the EUnet Internet dialup points since they use modems and ordinary communications software; Zmodem should work over that link.

You can only ftp files onto GreenNet using 'anonymous ftp' - we have not set up our system to allow secure access to files in your own 'home area' on GreenNet. So, to upload the text for a message, first use ftp to connect to GreenNet and place the file in the 'upload' directory in a file with the same name as your username.

It isn't possible for us to give an exact example of that process, because it can vary a lot from one system to another (e.g. a networked PC using Windows might look quite different from an Apple Mac running MacIP or from a mainframe unix interface.) Here is an example using a plain non-windows style interface; first start the ftp command on your system and tell it to connect to 'gn.apc.org'. This example is being done by user 'jbloggs' whose local system is called 'your.home.system'.

Note that in the line showing the full email address (on your local system) being entered as the password, you will not actually see what you type on your screen.

```
ftp gn.apc.org <RETURN>
Connected to gn.apc.org.
220 gn FTP server (SunOS 4.1) ready.
Name (your.home.system:jbloggs): anonymous <RETURN>
331 Guest login ok, send ident as password.
Password: jbloggs@your.home.system <RETURN> [typed but not seen on screen]
230 Guest login ok, access restrictions apply.
ftp> cd upload <RETURN>
250 CWD command successful.
ftp> put myfile jbloggs <RETURN>
200 PORT command successful.
150 ASCII data connection for anonymous (193.137.135.2,1215).
226 ASCII Transfer complete.
local: myfile remote: jbloggs
597 bytes sent in 0.023 seconds (25 Kbytes/s)
ftp> quit <RETURN>
221 Goodbye.
```

Note that if you are uploading a binary file, you must give the additional command 'bin' before uploading your file, or it will strip out all the non-printable characters. Now log in to GreenNet as usual, and choose 'm' for (m)ail:

```
Mail: (i)ndex (u)nread (w)rite (c)apture (d)elete (s)ave (h)elp (q)uit: w <RETURN>
Do you want: (r)eply reply with (c)opy (n)ew message (s)end copy ? n <RETURN>
To: ysmith <RETURN>
Subject: ftp uploading text <RETURN>

Hit <RETURN> to type in a message, or 'u' to (u)pload a file: u <RETURN>
Protocol: (a)scii-text (k)ermit (x)modem (y)modem (z)modem (f)tp (? for help):f <RETURN>
Please use your ftp program to log in as 'anonymous',
and place your file in upload/jbloggs
Hit <RETURN> when done, '?' for help, q to quit : <RETURN>
591 characters received.
Do you want to edit the uploaded file (y/n/q/'?' for help)? n <RETURN>
Cc: <RETURN>

Message sent.
```

Since you must use your username as the name of the file, you can only put one file at a time in the upload area. So you must switch between your GreenNet session and your ftp if you want to upload several files for several messages in one session. Thus if you do not have the possibility to run more than one session at once this can be very tedious as you have to log off GreenNet and back on as anonymous ftp in between each message.

However, most users who access from the Internet are likely to have either multiple session capability, or the possibility to send email from your local system.

An alternative to uploading directly to GreenNet is to email the message into GreenNet. This works even for conferences unless they are very private (in which case you must ask the facilitator to give access to your local username as well as your GreenNet username.) To email into a conference on GreenNet, send email to "confname"@conf.gn.apc.org - for example, to email to the conference 'gn.announcements', send email to:

**gn.announcements@conf.gn.apc.org**

The topic title will be the first 39 characters of the 'Subject line' of your message, and it will be posted as a new topic unless the Subject exactly matches an existing topic title, in which case your message will be posted as a response to that topic. This is useful if you want to email in a whole set of messages, you can give them the same Subject line to make them appear as topic plus responses. Be sure to leave a gap between mailing the first topic and mailing responses so that the order doesn't get mixed up as they arrive at GreenNet.

## Downloading binary files

If someone has sent you a message that contains a binary file you must use (c)apture, (d)ownload, and then select one of the binary options to download the file. If your communications software has downloading options for several, including Zmodem, we recommend that you use Zmodem as it is slightly faster.

For example, when Yorma Smith reads the mail that J. Bloggs sent containing the graphic to be used in the proposal, Yorma will see:

```
To: ysmith
From: jbloggs Thu Aud 3 1992 BST
Subject: Proposal Graphics (MacPaint)
```

```
This message contains a binary file -- a file with special formatting
codes -- in it. You cannot read it online. First download it using
(k)ermit, (x)modem, (y)modem or (z)modem or (ftp). Then you can open the
file using the appropriate word processing or other program.
```

```
To begin download, select (c)apture from the Mail? or Conf? prompt, followed
by (d)ownload, followed by (k), (x), (y) or (z).
Mail: (i)ndex (u)nread (w)rite (c)apture (d)elete (s)ave (h)elp (q)uit:
```

To download the contents of the message:

```
Mail? (i)ndex (u)nread (w)rite (c)apture (d)elete (s)ave (h)elp (q)uit: c <RETURN>
Do you want to (d)ownload message or switch (p)aging On/Off? d <RETURN>
```

```
1109 bytes to download.
```

```
Protocol: (a)scii-text (k)ermit (x)modem (y)modem (z)modem (f)tp(? for help):z <RETURN>
```

You will usually be asked for the name of a file, into which the message will be deposited. Always give it a name with no spaces, if you use an Apple Mac you can rename it to a longer name later. Don't worry if the order in which you are given the prompts changes when you use different protocols. The order may differ slightly, but they are asking you for the same information.

Occasionally (for example with Apple Macs), you might find that your communication software ignores the filename you give and instead uses the filename that the file was originally given by its sender. This is confusing because since the message arrives in binary format (and you can't read the contents of a binary file online), you won't know what that original filename is until you find the file. To find it, check in the directory or folder where the software lives first - it may well have put it there. If you still can't find it, and you've looked in all the sensible places, call us. We'll start suggesting the not-so-sensible places.

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I hope you've already set your parameters to 8 bits, no parity.  
Please start your Zmodem download soon. Hit <RETURN> when done.

The message about setting your parameters is just a reminder; it's probable that these are your settings already. Even if you logged on using 'space' parity and 7 data bits most software will automatically change to 'no' Parity and 8 data bits for binary file transfers. Kermit can work with only 7 bits, but Zmodem transfers require 8 bits. You may also see a message like `do NOT use CRC`. This applies only to users of Sprintnet (previously called Telenet) in the USA, everyone else should ignore it.

If you chose Zmodem and are using ZTerm, or some other software that supports Zmodem your software will probably start to receive the file automatically without you having to tell it. Otherwise, instruct your communications software to eg `RECEIVE FILE — KERMIT`, `RECEIVE FILE — XMODEM`, `RECEIVE FILE`, or `DOWNLOAD KERMIT` as appropriate. Again, use your pull-down menus if you're on a Mac; and the "Page-down" key if you are using ProComm on an IBM-PC (refer to your software manual for specific instructions). Your communications software may ask you now for the name of the file where the received data will be put.

Your screen will look much like it did during the upload, only the process is happening in reverse.

When the transfer is complete, your communications software will alert you and you can press **<RETURN>** to complete the process.

Your screen will look something like this:

```
26517 bytes received.  
Do you want to delete the original file? (y/n/q) ?
```

We recommend that you not delete the original message until you have confirmed that the download was successful by opening it with the appropriate software offline.

**Note:** GreenNet's process for downloading binary files is the same on Macintosh computers as it is on IBM-PC compatibles. Just remember, though, that if the original file was created on a Macintosh chances are that you cannot open it using a PC, and vice versa. (There are some programs that allow conversion or will convert file types for you; consult your computer manual or software for more details.)

## Downloading using ftp over an Internet connection

If you connect to GreenNet directly over the Internet from a system that lets you run more than one session at once (for example many university systems) and your software has no references to protocols like zmodem or xmodem, then you will probably need to use ftp (file transfer protocol) to do your uploads and downloads. This does not apply to users who connect via the EUnet Internet dialup points since they are accessed using modems and ordinary communications software; Zmodem should work over that link.

Here is an example from user 'jbloggs' using ftp to download one message (number 13) from her mail.

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```
Mail: (i)ndex (u)nread (w)rite (c)apture (d)elete (s)ave (h)elp (q)uit: c <RETURN>
Do you want to (d)ownload message or switch (p)aging On/Off? d <RETURN>
Enter message number: 13 <RETURN>

268 bytes to download.
Protocol: (a)scii-text (k)ermit (x)modem (y)modem (z)modem (f)tp (? for help): f <RETURN>
OK. Now log in to 'gn.apc.org' with anonymous ftp, and get
the file 'download/jbloggs'. The file will remain in the anonymous FTP area
until it has not been accessed by anyone for more than 10 minutes.

Delete original message(s) (y/n)? n <RETURN>

Mail: (i)ndex (u)nread (w)rite (c)apture (d)elete (s)ave (h)elp (q)uit:
```

Now you need to switch to another session on your local computer and use 'ftp' to log into GreenNet using the username 'anonymous' to get the file with your message in it.

If this is sounding way too confusing or difficult, don't panic. There is another way to get your messages that avoids using ftp:

## Mailing Your Messages Home

If your local system gives you access to the Internet directly, most likely you also have email on that system. If so, you can just email yourself copies of whatever you want to 'download'. You can do this with conference postings too, and collect all your chosen information without doing anything more complicated than sending email, and without waiting for any file transfers to take place (your mail will arrive a little later, you can do other things meantime.)

Refer to the section in Mail about (w)rite (s)end copy and in Conferences about (w)rite (f)orward a copy for how to do this.

If you want all your mail to come to your local system automatically, then you can set "mail forwarding" on your GreenNet account. Refer to Chapter 6 on Personal Preferences for how to do this.

## Burst for multiple messages to one conference

If you have many messages that you need to upload into one conference (like a newsletter for example) then you can use 'burst' to do this in a single upload. First you have to format the file in a special way to tell GreenNet where the different messages start and end, and what topic titles you want. Over the page is a sample session where jbloggs uploads a small burst file to the conference gn.test to try it out and make sure the file is formatted correctly. You may want to do a similar test yourself before attempting to do a big upload. The instructions for how to format the file are shown as part of the session.

Note that the brief menus are shown in this example. The burst command is run from the main GreenNet command menu even though it is not visible as one of the options in the longer menus, since it isn't one of the common commands that many users need every day.

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GreenNet Commands: (c)onf (d)ata (h)elp (i)nternet (m)ail (s)etup (u)sers (bye)  
? **burst** <RETURN>

Welcome to burst, a program that will help you batch uploads  
of stories to any conference that you are permitted to use.

Would you like help now (y/n/q) ? **y** <RETURN>

Very soon, you will be given the opportunity to upload a batch  
of conference postings, as a single file (making it  
easier for you to go do something else while uploading).

Please recall that the posting must be formatted in a special  
way. At the top of each topic must be a line that says only  
'**.TOPIC**'. The following line must be the topic name, as it  
should appear in the (i)ndex of the conference. Following the  
topic name, should appear the word '**.TEXT**' alone on a line.  
After the '**.TEXT**' line, you may insert your story, exactly as you  
would like it to appear in the conference. After the text for the  
topic, place a '**.TOPIC**' line for the following topic.

If the current **.TOPIC** matches a previous one, the current **.TOPIC**  
will be posted as a response to the previous one. In the future,  
there will be a separate **.RESPONSE** line.

Load material into which conference ? **gn.test** <RETURN>

Are you ready to upload the batch (y/n/q) ? **y**

Protocol: (a)scii-text (k)ermit (x)modem (y)modem (z)modem (f)tp (? for help):**a**  
<RETURN>

Start ascii transfer. End transfer with <RETURN>.<RETURN> or ^Z or ^D

**.TOPIC**

**This is a very small burst test!**

**.TEXT**

**This is the text for topic 1**

**.TOPIC**

**This is a very small burst test!**

**.TEXT**

**This is the text for the first response to topic 1**

**.TOPIC**

**This is the next topic title**

**.TEXT**

**This is the text for the next topic.**

**. <RETURN>**

252 characters received.

Thank you...

Proceed with posting the material to gn.test (y/n/q) ?**y** <RETURN>

gn.test: This is a very small burst test!... (control-C to abort)

gn.test: This is a very small burst test!... (control-C to abort)

gn.test: This is the next topic title... (control-C to abort)

Archiving the batch...

OK. All done. Please go and inspect gn.test.

GreenNet Commands: (c)onf (d)ata (h)elp (i)nternet (m)ail (s)etup (u)sers (bye)  
? **c** <RETURN>

Conf (? for help): **gn.test** <RETURN>

Visiting gn.test...203 unread topics, 175 unread responses

Conf (? for help): **i** <RETURN>

gn.test -- Wot a silly conference title

10/04/93 201\*test lgmb

1 lgmb

10/31/93 202\*This is a very small burst test!

1 jbloggs

203\*This is the next topic title

jbloggs

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\*\*\*\* End of Topics \*\*\*\*

Conf (? for help):