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Viewing This Document on a Terminal

This document includes overstrikes for printing on a printer. To read this document on-line, extract the program NOVRSTRK from the UUPC/extended optional programs archive, uupc11vd.zip, and issue the following command:

```
NOVRSTRK INSTALL.PRN INSTALL.TXT
```

You can then browse the terminal ready version of the document, INSTALL.TXT.

Revision

This is the 60th revision of this document and applies to version 1.11v of UUPC/extended. This document was last updated on September 4, 1992 by Katherine E. Williams. Portions of this documentation are Copyright (c) Andrew H. Derbyshire 1989 and Copyright (c) Kendra Electronic Wonderworks 1990-1992. Full copyright information for UUPC/extended appears in the file README.DOC.

Overview

This document provides installation instructions for UUPC/extended. Questions or suggestions on this document should be directed to the UUPC/extended documentation group, docs@kew.com.

Installing or Upgrading UUPC/extended

The following assumes that you have never installed UUPC/extended before. If you are upgrading an existing UUPC/extended installation, skip to "Upgrading an existing UUPC/extended installation" beginning on page 17.

New UUPC/extended installations

Many thanks to Dave Watt for assistance with this section and for providing the examples, and to Snuffles for reminding us to change the system names to protect the guilty.

To start sending and receiving mail on your system you'll need the following equipment and knowledge:

Equipment:

- * A computer running MS-DOS or OS/2. Under DOS, you will need at least 512 KB of RAM and 2 MB of hard disk space (for executables, configuration files, documentation, and

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mail received). For OS/2 you need the minimum OS/2 system configuration plus 2 MB free hard disk space.

- * A modem.
- * The manual for the modem.
- * A text editor. The MS-DOS editor, Windows Notepad, or OS/2 editor will work fine. However, we don't recommend attempting to configure a new UUPC/extended installation under Windows. Get it working under DOS or OS/2 first.
- * A friend with a machine that does UUCP. This can be a UNIX system, another UUPC/extended or other UUCP clone running on a PC, or a VMS system running DECUS UUCP.
- * A copy of PKUNZIP.EXE, version 1.1 or later. PKUNZIP is a shareware utility and can be found at almost all archive sites. Consult your local BBS, or get it from wuarchive.wustl.edu.

Knowledge:

- * How to copy files using MS-DOS or OS/2.
- * How to edit a text file.

Once you've got all of that, follow these steps to install and configure the program. Each step is discussed in detail below.

1. Read these instructions.
2. Backup your system.
3. Name your system.
4. Find a UUCP neighbor.
5. Unzip the UUPC/extended files on your system.
6. Choose your user name.
7. Find your modem among the .MDM files.
8. Configure several files (the hard part):

UUPC.RC	SYSTEMS	PASSWD	PERMISSN
HOSTPATH	[username].RC	[modem].MDM	
AUTOEXEC.BAT.			
9. Generate the program's help files.
10. Write a signature file.

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11. Reboot your system.
12. Check your configuration.
13. Send mail to yourself.
14. Check the PC <--> modem connection
15. Check the PC <--> modem <--> modem <--> mail server connection
16. Try sending remote UUCP mail.

Then, with a little debugging, you'll be up and running! Each of the steps is discussed in more detail below.

Preliminaries

1. Read everything before doing anything. Trust us, you'll be glad you did.
2. Backup your system. If you do not currently backup your system, this is an excellent time to start. Again, trust us.
3. Your machine needs a name. The name should be all lowercase, since many operating systems are not case-sensitive. If you plan to connect to the outside world, the first six characters of the name need to be unique over all of Usenet. This isn't precisely true, but it's close enough, and the truth is more complicated -- if you're interested in the details, buy a copy of *Managing UUCP and Usenet*, published by O'Reilly and Associates. Actually, go buy it anyway, and please read it before asking questions.

Example: Dave chose the name "toscis" for his machine, in honor of Snuffles' favorite ice cream.

4. Find a friend who has a machine which supports sending and receiving UUCP news and mail. Your friend must also be pals with the sys-op of the machine, or someone else who has the power to add accounts to the remote system. They will have to add an account for your system to acknowledge its existence and permit your system to log in and exchange mail.

Example: Dave uses a feed from Kendra Electronic Wonderworks, which is known in the UUCP world as kewgate. We assigned toscis an account on the system called "Utoscis". The name is conventional -- Ukewgate, Udigilab, and Uzzyzyx are several accounts on Dave's machine, for some of his neighbors to log onto his system.

5. Next, you have to install UUPC/extended on your system. UUPC/extended runs under both MS-DOS and OS/2, so be sure you

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have the files you need to install UUPC/extended on your target operating system. You may want to install the DOS files for the OS/2 DOS box, but this is optional.

UUPC/extended includes a total of 15 executable files for each environment. It is suggested that these files be placed in their own directory, and this directory then be added to your MS-DOS or OS/2 PATH variable.

Example: kewgate has both OS/2 and DOS versions of UUPC/extended installed. The DOS files are in C:\UUPC\BIN and the OS/2 files are in C:\UUPC\OS2BIN.

For MS-DOS, you should have the following files:

uupc11vr.zip uupc11vo.zip uupc11vn.zip uupc11vd.zip

For OS/2, you should get these files:

uupc11v2.zip uupc11v3.zip uupc11v4.zip uupc11vd.zip

Make directories for UUPC/extended, copy the zip files, and unzip them. (Type "pkunzip" at the DOS prompt for instructions on how to unzip files.) Then add your UUPC/extended directory to the default path. When you're done, you should have the following files in your UUPC/extended directory:

MAIL.EXE, UUCICO.EXE, UUXQT.EXE and RMAIL.COM are required.

SU.BAT, UIIO.BAT, WAITING.BAT, FMT.COM, GENSIG.COM, NOVRSTRK.COM, UUPOLL.COM, UUSUB.COM, UUSTAT.COM, UUX.COM, and UUCP.COM are optional but recommended.

Note: Under OS/2, the SU, UIIO, and WAITING files have .CMD extensions. Also under OS/2, there are no .COM files; all modules have an extension of ".EXE".

Example: Toscis runs the MS-DOS operating system. Dave put the UUPC/extended executables in C:\UUPC\BIN and the documentation in C:\UUPC. To uncompress them, here's what he did:

```
C:\> mkdir uupc
C:\> pkunzip uupc11vd.zip \uupc\*.
C:\> mkdir \uupc\bin
C:\> pkunzip uupc11vr.zip \uupc\bin\*.
C:\> pkunzip uupc11vo.zip \uupc\bin\*.
C:\> pkunzip uupc11vn.zip \uupc\bin\*.

```

Note: We recommend that you put OS/2 files in a directory called \uupc\os2bin to avoid confusion between DOS and OS/2 files. Especially if, as we do, you tend to run both operating systems on your machine.

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6. Now you need to choose a user name for yourself. This name doesn't have to be unique or anything, but you'll need it for some of the configuration of UUPC/extended yet to come. It should be composed only of valid DOS characters and should have eight characters or less.

Example: Dave's user name on toscis is dmwatt. Our resident Plush Programming Polar Bear's user name on kewgate is snuffles.

Configuration

7. Next you need to decide which modem configuration file (.MDM file) best describes your modem. Some of the .MDM files available are:

HAYES12.MDM	Generic Hayes-compatible 1200 baud
HAYES24.MDM	Generic Hayes-compatible 2400 baud
TB1000.MDM	Telebit T1000
TB2500.MDM	Telebit T2500
V42BIS.MDM	Zoom 2400 with V.42bis
ZOOM2400.MDM	Zoom 2400 with V.42bis disabled
ZOOMTV32.MDM	Zoom 9600 with V.42bis
INSATFAX.MDM	Intel SatisFAXtion board (2400/MNP5)
DIR.MDM	Direct serial line

If none of these is appropriate, then you will have to start with one of them, or with the sample modem configuration file (SAMPLE.MDM), and customize it for your modem. We explain how to customize modem files in "The Fine Art of Chat Scripts" and "Modem Files", below.

8. Once you've chosen a user name, you need to edit several configuration files, and set some environment variables in your autoexec.bat file. Most of the sample configuration files have documentation in the files themselves. Also, the format of the SYSTEMS, and PERMISSN files are discussed in Managing UUCP and Usenet.

a) UUPC.RC -- UUPC/extended system configuration file

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This file tells UUPC/extended about your modem and system configuration. Put it in the same directory as your UUPC executable files. You will have to fill in about a dozen of the fields in this file in order for UUPC/extended to work properly. The fields you must edit are listed below. The directory (Dir) fields won't normally need to be edited (except for a drive letter), but you should check them anyway.

```
NodeName=          ConfDir=
Domain=            MailDir=
Postmaster=        NewsDir=
MailServ=          SpoolDir=
InModem=           PubDir=
Path=              TempDir=
ArchiveDir=
```

The interpretations of these fields are described in the UUPC.RC file itself. Their uses are summarized below, along with the settings for toscis.

NodeName: The name you chose for your machine. Dave's machine's name is toscis.

Domain: The fully qualified domain name for your machine. If you are just starting out, this will be your machine name, with the suffix ".UUCP". Later, you can register with other domains if you are interested -- see the file UUNETDOM.INF, which is compressed in uupc11vd.zip, for more information about this.

Dave's machine's Domain is toscis.cambridge.ma.us. It is registered with the .US domain mapping project, which is also discussed in UUNETDOM.INF.

Postmaster: The user name of the person to whom mail gets sent if any problems occur. Put your user name here for a single user machine. Otherwise, use "postmast". On toscis, the postmaster is dmwatt.

MailServ: This is the name of the machine to which your outbound mail gets sent. This will be the name of the machine belonging to the friend you found up in step 2. The mail server for toscis is kewgate.

InModem: This is the name of the .MDM file your machine will use when it is waiting for incoming phone calls. Use the name of one of the default .MDM files in step 5, or invent a name for the .MDM file you're going to customize

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further down. On toscis, InModem is set to TB2500, since Dave uses a Telebit T2500.

Path: If specified, this overrides the DOS or OS/2 PATH variable for the lists of directories searched by UUXQT for RNEWS, RMAIL, and other external commands you allow remote systems to execute on your system. If specified, this variable should include the path you copied the UUPC/extended executable files into in step 3. On toscis, Path=c:/uupc/bin.

Note: The PATH variable is for security purposes, not for convenience, and is **only** used by UUXQT. You must still add the directory with your UUPC/extended executable files to your path variable in your AUTOEXEC.BAT or CONFIG.SYS.

ConfDir, MailDir, NewsDir, SpoolDir, PubDir, TempDir, and ArchiveDir: ConfDir is the directory in which your UUPC/extended configuration files are located. As you may have guessed, the other directories refer to the directories to which mail and news get delivered (MailDir and NewsDir), the public directory (PubDir) from which any machine with standard permissions (as defined in your PERMISSN file, below) can read or write, a temporary directory on a disk for writing temporary files (TempDir), and a directory for storing archived news (ArchiveDir). TempDir can be on a RAM drive, but the others cannot. If TempDir is not specified, UUPC/extended uses the DOS environment variables TEMP or TMP, in that order.

Here is toscis's completed UUPC.RC file, provided as an example.

```
NodeName=toscis
Domain=toscis.cambridge.ma.us
postmaster=dmwatt
MailServ=kewgate
ConfDir=c:/uupc
MailDir=c:/uupc/mail
NewsDir=c:/uupc/news
SpoolDir=c:/uupc/spool
PubDir=c:/uupc/public
TempDir=c:/tmp
ArchiveDir=c:/uupc/archive
InModem=TB2500
Path=c:/uupc
options=nobang nodirectory multiqueue dot
```

b) [username].RC

The [username].RC files are used to configure UUPC/extended for individual users. To configure your own [username].RC file, do the following:

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- (1) Extract the file PERSONAL.RC out of uupc11sd.zip using PKUNZIP. Put the file in the directory called ConfDir in your UUPC.RC file.
- (2) Copy the file PERSONAL.RC to [username].RC, where [username] is your user name.

Example: Dave's personal configuration file is called DMWATT.RC, and is located in C:/UUPC on toscis.

- (3) Edit the following fields in the [username].RC file:

Mailbox=

Name=

Home=

FileSent=

Signature=

Editor=

Aliases=

The descriptions in the sample PERSONAL.RC file explain these fields. If you include a Signature (highly recommended) and an Alias file, you will need to create these files as well. See step 10 for information on creating a signature file.

If multiple users are to share the same system, create multiple customized copies of the PERSONAL.RC in the 'ConfDir' directory defined in UUPC.RC, each with a unique name such as "TOM.RC", "DICK.RC" or "HARRY.RC".

If you are just starting out, you don't need to bother with an alias file just yet. When you're ready (usually when you start sending multiple pieces of mail to the same person), customize the ALIASES.TXT file and copy it to the directory defined in the PERSONAL.RC file as your Home directory. This file defines short nicknames for longer e-mail addresses and lists of addresses. If this file is not installed, then the line in the PERSONAL.RC file describing it must be commented out with a pound sign (#) in column 1.

Note: The addresses supplied in the ALIASES.TXT file, are valid addresses; they are provided as examples and to assist you in getting more information about UUPC/extended, communications software in general, USENET, and the Internet. However, they are not for random testing; abuses such as a recent user who sent mail to all the addresses in the file as a "hello

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world" test will force discarding of the live information in the file for future releases.

Example: Dave's completed DMWATT.RC file looks like this:

```
editor=emacs %s
filesent=outgoing
Home=c:/dmwatt
Mailbox=dmwatt
name=David M. Watt
options=autoedit
signature=dmwatt.sig
```

c) SYSTEMS

The SYSTEMS file has a standard format, explained in Managing UUCP and Usenet. It must be located in the directory called ConfDir in your UUPC.RC file. A typical entry in toscis's SYSTEMS file looks like this:

```
kewgate Any TB2500 19200 1-617-641-4817 Gg gin:--gin: Utoscis
ssword:--ssword AppleJuice
```

Copy this line into your SYSTEMS file, and do the following:

- (1) Replace "kewgate" with the name of your mail server.
- (2) Replace "TB2500" with the name of the modem configuration file (.MDM file) you plan to use.
- (3) Replace "1-617-641-4817" with the phone number of your mail server.
- (4) Replace "Gg" with the letter(s) of the UUCP protocols your mail server supports. If you don't know what these are, then replace "Gg" with "g" if your mail server does not run UUPC/extended, or "G" if it does. The "g" protocol is widely supported.
- (5) Replace "Utoscis" with the name your friend in step 2 gave you for use on their system. Replace "AppleJuice" with whatever password your friend gave you.

For simple connections, these should be all of the changes you need to make to this file. For more complex connections, refer to "The Fine Art of Chat Scripts", below.

d) PASSWD

The PASSWD file is nearly identical in format to the /etc/passwd file used on UNIX systems. It must be located in the directory called ConfDir in your UUPC.RC file.

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The PASSWD file serves two purposes. If you have several people reading mail on your system, it is used to assign them default directories and mail files. Entries in the PASSWD file also control whether remote machines can log in to your system to send and receive mail themselves.

Note: The default directories in the PASSWD file must match the Home= entries in the [username].RC files.

Customize the PASSWD file, copy it to the 'ConfDir' directory defined in UUPC.RC, and add each user to the PASSWD file. This file defines the name and home directory of each local user, and the user id and password for remote users (systems) logging in using the following format:

```
userid:password:special:group:name:directory:shell
```

More specifically:

- (1) `userid`--from 1 to 8 valid DOS characters. This should be the same as the name of the [user].RC file.
- (2) `password`--Self explanatory. A * in this field means that no logins are allowed for that user. For instance, a local user does not need to be able to login via phone lines. A blank means that no password is needed, as in the case of anonymous logins.
- (3) `special`--This field contains the user id number on UNIX systems. UUPC/extended uses it to play music or otherwise make noise to announce incoming mail, if desired (very useful on multitasking systems). The format of the field is `tone1, length1, tone2, length2, and so on`, where "tone" is the frequency in hertz and "length" is the time the tone is to sound in milliseconds. If the final length is omitted, the final tone will sound for 500 milliseconds. A special tone is 0, for silence. See the sample PASSWD file for an example.
- (4) `group`--This field contains the group id number on UNIX systems. UUPC/extended does not use it.
- (5) `name`--The real (human) name of the user.
- (6) `directory`--Directories accessible to this user. Defaults to the public directory set by the PubDir variable.
- (7) `shell`--UUCICO is the default.

At first, you should need only two lines in your PASSWD file. The following can serve as models.

```
dmwatt:*:::David Watt:c:/dmwatt
```


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```
postmast:*:::Postmaster:
```

Replace `dmwatt` with your user name, and "David Watt" with your name. Replace "`c:/dmwatt`" with the Home directory given in your `[username].RC` file.

e) PERMISSN

The PERMISSN file is identical in format to a file called Permissions available on some UNIX UUCP systems. The file format is explained in detail in Managing UUCP and Usenet. The PERMISSN file should be located in the directory called ConfDir in the UUPC.RC file.

The PERMISSN file is used to control where remote systems are permitted to read and write files on your system. For a simple configuration where you call a mailserver and no machines call your system, your PERMISSN file should look like this:

```
MACHINE=kewgate SENDFILES=yes REQUEST=yes
```

Replace "kewgate" with the name of your mail server, managed by your friend in step 2.

For more complex configurations, especially those where another system needs to be able to call you, refer to the section "Permissions (PERMISSN) Files", below.

f) HOSTPATH

The HOSTPATH file is used to provide aliases for your machine and your neighbors, and to explicitly route mail from your machine to them without going through your mail server. On a machine with just a mail server, the HOSTPATH file should be empty or omitted entirely:

```
# Nothing here!
```

If special routing is required for hosts, customize the HOSTPATH file, and copy it to the 'ConfDir' directory defined in UUPC.RC. This file is not usually needed, but can be used to:

```
Gateway mail from UUPC/extended to another mail program
Alias the local host to another name
Alias a remote host to another name
Prevent improperly addressed mail from leaving the local
domain
Route mail via a non-default path
```

Consult the sample HOSTPATH file for more details on HOSTPATH settings.

g) [modem].MDM

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The [modem].MDM files are used to describe your modem to UUPC/extended. They should be located in the directory called ConfDir in your UUPC.RC file. If your modem is identical to one of those included in the list in section (5) above, you're in luck -- the configuration of this modem file will be comparatively simple. If your modem is one of the brands listed in section (5), then do the following:

- (1) Replace the port listed on the "Device=" with the communications port to which you connected your modem.
- (2) Double check that the entry in your SYSTEMS file specifies this modem configuration file, and that the "InModem=" line in your UUPC.RC file also specifies this file.

If your modem is not among those supplied in the samples, then you will have to write a .MDM file describing your modem. The easiest way to do this is by copying one of the other .MDM files, and making the necessary changes. Usually one of the .MDM files will describe a modem similar to your own -- see below ("Modem Files") for more suggestions.

h) AUTOEXEC.BAT/CONFIG.SYS

AUTOEXEC.BAT is executed by MS-DOS whenever you reboot your system. UUPC/extended needs three environment variables set, which is best done by adding some commands to your AUTOEXEC.BAT file. At the bottom of your AUTOEXEC.BAT file, add the following lines. If you are running OS/2, add the same lines to your CONFIG.SYS file.

```
set UUPCSYSRC=c:\uupc\uupc.rc

set UUPCUSRRC=c:\uupc\[username].rc
```

But instead of writing [username] on the second line, use your user name, the same as in the [username].RC file you wrote in part f). You'll also need to set TZ, your local time zone. Sample TZ variable SET commands are as follows:

```
SET TZ=EST5EDT           (Eastern US Time, 5 hours
behind GMT)
SET TZ=EST5             (Eastern US Time, but no
daylight savings change)
SET TZ=CST6CDT
SET TZ=MST7MDT         (Mountain Standard Time (US),
with daylight savings)
SET TZ=PST8PDT         (Pacific Time, 8 hours behind
GMT)
SET TZ=GMT0            (GMT, no offset, no daylight
savings)
SET TZ=MST-3           (Moscow Standard Time, no
daylight savings)
```


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Your mileage and time zone may vary. Note that time zones ahead of GMT use a minus sign in front of the hours offset.

You'll also need to edit your path variable. Dave, who put his UUPC/extended files in C:\UUPC\BIN, added the line

```
PATH=%path%;C:\UUPC\BIN
```

at the bottom of the file. In DOS, you must make sure the path does not exceed 128 characters. Under OS/2, the file you need to edit is CONFIG.SYS and there is no path size limit, but the path must be on one line and cannot use variables. Under OS/2, Dave would simply append ";C:\UUPC\OS2BIN" to his existing path.

Note: Several of the programs, including UUCICO and UUXQT, change directories as required to search for spool files. Because of this, programs such as RMAIL and (if used) RNEWS must be in your path. Having them in the current directory is not sufficient.

Under MS-DOS, add the following line to your CONFIG.SYS, or create a CONFIG.SYS in the root directory of your boot disk or diskette if you currently do not have one:

```
FILES=20
```

Note: If you already have a FILES= line in your CONFIG.SYS, it should read at least 10 and should be raised to 20. If the number is greater than 20, then do not lower it.

9. Generate the UUPC/extended online help files. Generate MAIL.HLP and TILDE.HLP in the 'ConfDir' directory defined in UUPC.RC via the NOVRSTRK program as follows:

```
NOVRSTRK MAIL.PRN C:\UUPC\MAIL.HLP
NOVRSTRK TILDE.PRN C:\UUPC\TILDE.HLP
```

Where 'C:\UUPC' is replaced by the actual configuration directory name. These files provide on-line help to the MAIL command.

10. Write a signature file.

For each user, customize the PERSONAL.SIG file, and copy it to the 'Home' directory defined in [username].RC for that user. This file is appended to all outgoing mail for the user to provide a boiler-plate signature with the user's reply address. If this file is not installed, then the line in the [username].RC file describing it must be commented out with a pound sign (#) in column 1.

Note: Especially for users of new systems, it is strongly advised that you do create a signature file and include in it your name, electronic mail address,

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snail mail address, and telephone number. This extra information is needed for a person to contact you if your electronic mail address cannot be replied to.1

Example: Here's a typical (boring) signature:

```
Dave Watt -- N1HMB Home: 617-
555-9956
dmwatt@toscis.cambridge.ma.us Work: 617-555-
4330 x159
```

11. Reboot your system to allow your changes to your AUTOEXEC.BAT/CONFIG.SYS to take effect.

Congratulations! If you've done all of these things, you're ready to start testing your UUPC/extended configuration.

12. Run UUNAME (just type uuname at a DOS prompt) to prove your configuration is valid. This will a) die gloriously or b) display a list of known systems. If it dies, the error message you get should provide some clues. Check the necessary configuration files and try again.

Testing

13. Send mail to yourself. Perform this test to convince yourself that UUPC/extended can send mail. At the MS-DOS prompt, type:

```
C:\> mail -s "Test message" postmaster
```

```
? Test
```

```
? .
```

```
Abort, Continue, Edit, List, or Send? Send
```

The "." only works as a message terminator if the "dot" option is set in your UUPC.RC file. Otherwise, use Ctrl-Z.

You should then receive the message:

```
Delivering mail from [username] to postmaster
```

1Recently, help@kew.com was sent the same query multiple times by a user with an invalid return address. He failed to include his telephone number or other address in his note. Thus, both his original query and the follow-up letters asking why the original query was not answered could not be replied to.

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If you don't, the error messages should provide some clues as to why UUPC/extended was unable to deliver the message. Correct the necessary configuration files and try again.

14. Test the PC <-> modem connection. Perform this test to convince yourself that your modem responds to commands. Using a telecommunications program such as kermit, send some commands to the modem. Just sending AT (attention) to the modem, and getting "OK" back, is good enough.

15. Test the PC <-> modem <-> modem <-> mail server connection. Perform this test to convince yourself that your computer can talk to your mail server, and that you can log in to the mail server using the user name and password your friend back in step (2) gave you. Using a telecommunications program like Kermit, dial up the remote system and try to log in. The remote system should give you a message like "Shere=username". If you succeed, hang up and go on to the final step. If the remote system does not recognize your account for some reason, talk to the friend who gave you the account and find out why.

16. Try sending remote UUCP mail. If you succeed at this, your system is able to properly receive and send electronic mail. At the MS-DOS prompt, type the following:

```
C:\> mail -s "Test message" postmaster@[mailserv]
```

```
? This is my first message. When you receive it, please  
reply.
```

```
? .
```

```
Abort, Continue, Edit, List, or Send? Send
```

```
Delivering mail from [username] to postmaster via [mailserv]
```

but instead of typing "[mailserv]," on the first line, substitute the name of your mail server, exactly as you entered it on the "MailServ=" line in your UUPC.RC file.

If all goes well, you should be able to enter a message and send it off, with the UUPC/extended mail program giving you messages like those above.

Then, dial out to the remote system:

```
C:\> uuio -s all
```

And watch the connection. With luck, you will have just sent your first UUCP mail message. Welcome!

Note: For full instructions on using the mail reader, see the file MAIL.PRN.

Upgrading an existing UUPC/extended installation

First, uncompress the new executables and documents. Be careful not to overwrite your customized configuration and batch files with the supplied sample files.

Second, read the CHANGES.PRN file for changes related to the newest release. In many cases, CHANGES.PRN includes documentation of new options and configuration file variables before any other documents.

Earlier versions of UUPC/extended have different user-customizable variables. Type "uname -x 2" to see a list of missing or obsolete variables in your configuration files. Update as needed. Look at CHANGES.PRN to see what the new variables do.

If you are upgrading from a release of UUPC/extended previous to 1.11s, delete the old version of UUPOLL, UUPOLL.COM. This has been replaced by UUPOLL.EXE.

If you are upgrading from a release of UUPC/extended previous to 1.11p, delete the old version of UUXQT, UUXQT.COM. This has been replaced by UUXQT.EXE.

If upgrading from a release of UUPC/extended prior to 1.11a, you must clear your spool directories of files before installing the new release. In general, this is done by invoking UUIO for the previous release to deliver any queued files to other sites.

If you are upgrading from a release of UUPC/extended previous to 1.10a, delete the old communications module, UUIO.EXE; this has been replaced by UUIO.BAT, UUCICO.EXE and UUXQT.EXE.

Note: If you are converting from a release previous to 1.10a, you must update the SYSTEMS file to the newer format. See the sample SYSTEMS file for details.

The Fine Art of Chat Scripts

Setting up the chat scripts used in the SYSTEMS and modem [*].MDM files is the hardest part of setting up UUPC/extended. The easiest way to think of chat scripts is as a dialogue between the local system running UUPC/extended and a modem or remote system. The script consists of a series of strings sent to the modem/remote system alternating with the expected response to those strings.

For example, a modem file needs to contain an initialization sequence, which will look something like this:

```
" " " ATZ OK \dATX4&D2 OK
```


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Since that line looks awfully intimidating at first, we'll break it down into its component parts.

"" An empty string. The first one is a flag marking the start of the script and showing that nothing is expected from the modem.

"" The second empty string sends nothing followed by an automatically appended carriage return so that the following statements will start on a new line.

"" The third empty string indicates that no response to the second one is expected.

ATZ This command resets a Hayes-compatible modem to its stored profile. Again the carriage return is appended.

OK The response from the modem showing that it has been reset.

\d An escape sequence which produces a two second delay to give the modem time to recover from the previous input.

ATX4&D2 A modem initialization string. Contents of this string depend on your modem and desired options. As always, a carriage return is appended.

OK The modem responds that it has been initialized and is ready to dial.

The complete list of escape sequences supported by UUPC/extended follows. The empty string ("") is used on input. All other strings are recognized on output only. Quotation marks may be used on input or output to enclose a string which includes whitespace. The list includes:

"" Expect a NULL string. May also enclose a string which includes whitespace.

BREAK Send BREAK

\b Insert Backspace
\B

\d Delay two seconds.
\D

\c Omit carriage return at end of string
\C

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```
\m      Insert carriage return
\M
\r
\R

\n      Insert newline

\p      Delay four tenths of a second
\P

\t      Insert tab character
\T

\s      Insert space character
\S

\Znnnn  Set serial port speed to nnnn in the range 300 to
        19200

\nnn    Convert the numeric octal string nnn to a single
        character and transmit it

\\      Insert a backslash (\)
```

One other special syntax exists. To allow for alternate output when an expected string is not received, hyphens in an expect string delimit alternate output to be sent, such as:

```
" " ogin:--ogin:--ogin:
```

If a login prompt (ogin:) is not received by the standard timeout period (generally, 30 seconds, but configurable in the modem file), the string between the hyphens (nothing, followed by the appended carriage return) is sent; if no response is received, the sequence is repeated one more time.

If your chat script doesn't work, check and make sure that you have allowed delays between transmissions to allow the modem to recover. Failure to include needed delays can cause dropped characters and is one of the most common mistakes made by new chat script writers.

Modem Files

Modem files (.MDM) are configuration files which define the strings used to command a modem for dialing out; this allows commands always used with a particular modem to be written once rather than being placed everywhere they are used, and also allows different modems to be used with the system by only changing the modem file (or changing the reference to the modem file in the SYSTEMS or UUPC.RC files).

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All strings defined in a modem file are standard scripts as described above with the exception of the dial prefix and dial suffix strings. These are combined with the phone number listed in the SYSTEMS file for a host and sent as one string to the modem when dialing out. Sample files are included for several common modems. Check to see if the current UUPC/extended distribution includes a file for your modem. Most modems have behavior similar to one of the sample modems, so minor changes to one of these files should get you up and running.

Note: If you make changes to a modem file, copy it to a new name to avoid confusion with the distributed version.

By the way, once you've done a configuration file for your modem, please mail a copy of the file to docs@kew.com. The more modems we have configuration files for, the easier this setup procedure will become for other new users.

Permissions (PERMISSN) Files

Each system you contact must be defined in a PERMISSN file located in the UUPC/extended configuration directory. In the permissions file, systems can be classified by whether they are called out to, dial in to the local system, or both. Permissions files are discussed in more detail in Managing UUCP and USENET. Briefly, they define which directories and commands are accessible to the remote system.

For your own protection, think carefully before giving a remote system read or write access outside of the default (\uupc\public, \uupc\spool) directories. Think very carefully before giving write access to anonymous logins.

Systems you call out to must have a MACHINE entry, such as

```
MACHINE=system
```

This defines the existence of the machine "system", and default permissions are granted to the system. These permissions include the ability to execute RMAIL and RNEWS, and the ability to send files to the spool directory. If the additional keyword REQUEST=YES is added to the MACHINE statement, then the remote system may also read and write files in your public directory, which is the directory defined by the variable PubDir in the UUPC.RC file.

Systems which dial into you must have a LOGNAME entry, such as:

```
LOGNAME=userid VALIDATE=system SENDFILES=YES
```


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Note: If you allow anonymous logins, an entry should also be placed in the PERMISSN file for the system
"*anonymous".

This allows host "system" to login as user id "userid" with the same default permissions as described above. It further allows your system to transmit files to the other system even though it called you (SENDFILES=YES)². However, to run UUXQT they must also have a MACHINE entry, because UUXQT does not look at LOGIN entries.³ Thus, to handle the general case, both of the above entries must exist in the permissions file, but they can be combined:

```
LOGNAME=userid VALIDATE=system MACHINE=system SENDFILES=YES
```

The remote system can be granted access to additional directories and programs through the use of additional parameters on the LOGNAME and MACHINE statements; these are documented in Managing UUCP and Usenet.

Note: One difference between the PERMISSIONS file as defined in the Nutshell Handbooks and as implemented in UUPC/extended is that only one user id may be specified per LOGNAME entry in UUPC/extended. This restriction is a security "feature"; it prevents one system from logging in as another.

Forward Files

UUPC/extended has the ability to forward mail destined for a single user or entire system or domain. Routing mail for an entire system or domain is performed via an entry in the HOSTPATH file, which is documented in the supplied sample HOSTPATH file. Forwarding mail for a single user is performed by placing a file named FORWARD in the user's home directory as defined in the PASSWD file, and contains one or more destinations, one per line as follows:

address Simple address, subject to normal forwarding rules on the local system

²The default, carried over from UNIX, is that files are only transmitted when you are the calling system. This means that SENDFILES=YES is not needed on a MACHINE statement.

³This is because UUXQT runs and processes eXecute files after UUCICO has terminated. As UUCICO has terminated, there is no way to tell if the file were delivered by an outbound or inbound telephone call, so UUXQT treats the file as if it were from an outbound call.

- \address** An address prefixed by a backslash; remote addresses are delivered normally, but if a local address it will be delivered without being subject to user id verification or forwarding.
- |command** An MS-DOS command prefixed by an or bar (|). The mail is piped into the specified command.
- pathname** The absolute path name of a file. To be recognized as a file, the file must begin with a slash (/), a tilde (~), or a driver letter/colon sequence (x:). The mail is appended at the end of the specified file normally, with a line of binary ones separating mail items just as if it were a mailbox. For file names beginning with tilde (~), the file name is expanded as described in MAIL.HLP.

As an example, the following file, if saved in the user's home directory under the name FORWARD, would cause the mail to be formatted to the console via the UUPC/extended FMT program, to be forwarded to the postmaster normally, to be saved in the mailbox for user BOGUS without checking if such a user exists or has forwarding enabled, and finally to be saved in the user's home directory in the file BKUPMAIL.TXT:

```
|FMT
postmaster
\bogus
~/BKUPMAIL.TXT
```

When Things Go Wrong

If you have difficulty getting a connection to your mail feed working the first time, don't worry. Almost everyone has to spend a bit of time ironing out the crinkles in a new connection. You may wind up spending time on the phone with your mail server system operator trying to get things to work. Don't worry. UUCP is just like that sometimes. There are several places in UUPC/extended where problems can crop up.

Here is a general list of the symptoms you might see, and where to look for solutions:

Problem	Solution
---------	----------

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When you start a UUPC/extended application, it displays a message like "environment variable UUPCSYSRC must be specified," or "User configuration parameter "mailbox" must be set," then exits.

You need to set the UUPCSYSRC and UUPCUSRRC environment variables. See part 8H in the installation section, above.

When you start up UUCICO, it displays a message like: "Invalid host id in c:/uupc/permi ssn, MACHINE=[name]; Unable to initialize security," then exits.

The PERMISSN file and your SYSTEMS file are inconsistent. There is an entry in your PERMISSN file which does not match a corresponding system in the SYSTEMS file, a userid which does not appear in PASSWD, or a directory does not exist. See parts 8C, 8D, and 8E.

When you start up UUCICO, it displays a message like: wanted "OK" got ??? "ERROR?????" then exits.

You have a problem with your .MDM file. Check your UUPC.RC file to make sure you're using the .MDM file you think you are, then check the lines in the file to find the one that gives your modem problems. Try "uucico -x 4" to see more information as uucico processes the script.

When you try to connect to the remote machine, it refuses the connection, even though you were able to dial in with another telecommunications program.

This could be one of several things, most of which could be due to errors in the entry in your SYSTEMS file for your mail server. See part 8C. Or, you could have given your system a different name in your UUPC.RC file than the mail server expected. See part 8A.

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UUPC/extended will connect but will not exchange data with another system; what's wrong?

Any number of things, which is why you should seek additional information from either a UNIX guru or the Nutshell Handbooks. However, one hint is that any programs communicating via the UUCP "g" protocol must have a clean eight bit connection; a seven bit even parity connection or connection with flow control will ruin your whole day. If you can login as a normal user to the remote system, you can use the STTY command to determine the parity and flow control settings.

After UUPC/extended picks up my mail, UUXQT tries to deliver it and fails with a message "PERMISSION DENIED". What's wrong?

A good chance is that UUXQT cannot find RMAIL. Any program invoked by UUXQT must be a .COM or .EXE file and must be in the path. Placing a command in the directory UUXQT is invoked from is not enough, because UUXQT changes directories as it runs.

When UUPC/extended logs in the remote system, the remote delivers **Shere** as the first message and then **RLOGIN** as the second message. Why doesn't UUPC/extended like this second message?

The full answer (or at least the full list of the possible error responses to the second message sent to the remote host) is listed in Managing UUCP and USENET. Suffice to say here the **RLOGIN** means that the remote system does not know your system; this is caused by your system missing from the remote's **USERFILE**, **L.sys**, **Systems**, or **Permissions4** files.

4A single system will not have all these files. For example, a UUPC/extended system or a system running the BNU version of UUCP will have **Permissions** and **Systems**.

