Micronet 800

2004 OCRed by Wilko Schröter

Instruction Manual

Link into Micronet 800 with the Sinclair ZX Spectrum Microcomputer

Software by Scicon Limited © Scicon 1983

When you receive your Micronet "networking interface" package ...

It will contain all the hardware and software you need to connect to Micronet 800.These are your instructions for using the service.

Remember to take great care of the unique identity (supplied to you by Prestel). Anyone who has your number can use your system and incur charges. If you lose the number or have problems with unauthorised use – call Prestel.

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1 Introduction

This powerful package gives you access to thousands of pages of information by turning your Spectrum into a complete Micronet terminal.

But it also gives you access to an ever increasing number of computer programs for your amusement and education, as well as for help with your household records, your profession and your hobbies.

You can "download" programs over the telephone lines and save most of them on your own tape.

To use the package, you need to join Micronet 800 who supply you with an adaptor between your Spectrum and your telephone circuit.

You can connect to Micronet as easily as making a phone call. You connect to a huge database of information, and you can then use your microcomputer as an intelligent Prestel terminal.

The normal alphabetic keyboard can be used to complete message and response frames.

Interesting frames can be saved on your tape filing system for subsequent reviewing, and can also be printed out if you have a printer.

Included in Micronet's database are telesoftware pages – microcomputer programs which can be read automatically into your machine's memory. Once downloaded, a program is run immediately.

The following chapters tell you how to set up and use the Micronet Telesoftware Terminal in detail, assuming a basic knowledge of the Sinclair ZX Spectrum Microcomputer operation.

2 Setting-up

This chapter tells you how to set-up your Spectrum system in order to use the Micronet Telesoftware Terminal package.

Make sure you are familiar with at least the theory of operation of your Spectrum, of Micronet and of your adaptor, by studying the User Guide and manuals supplied.

2.1 Initial set-up of the Computer

You should plug the Spectrum Micronet adaptor into the expansion connector of your computer. The mode switch should be set to M/NET. If you have a printer this can also be connected.

2.2 Connecting to the Telephone

Your Micronet adaptor is supplied with a suitable lead to connect it to the telephone socket. You can then plug your telephone into the socket on the Micronet adaptor.

Make sure your telephone is within easy reach.

Always make sure that nobody else is using the telephone before attempting to call Micronet.

2.3 Sign-On Display

When you power-on the Spectrum with the Micronet module attached, the display shown in figure 1 will be seen. Press any key on the Spectrum to start the Micronet software.
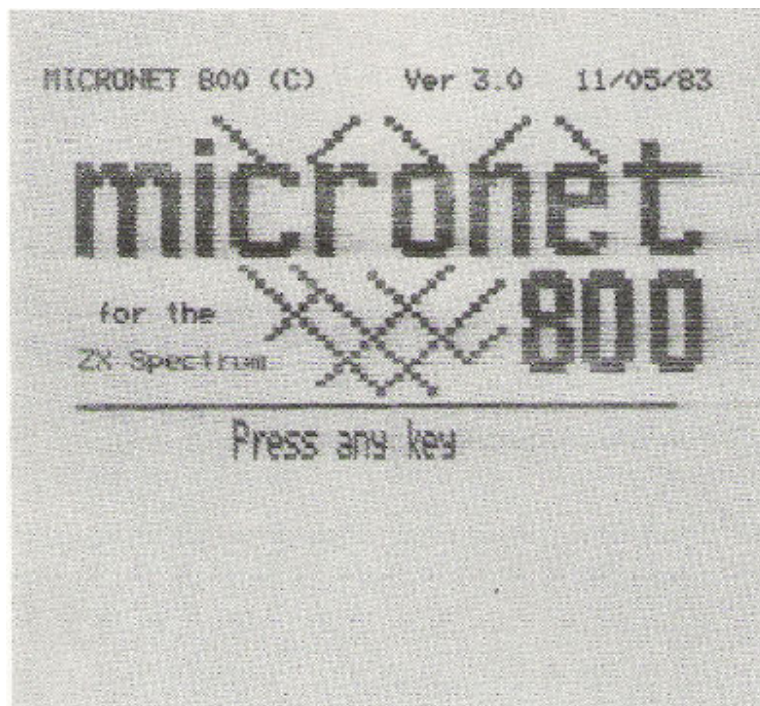

fig 1

3 Micronet Support System: The Main Features

3.1 The Main Menu

The Micronet support program is a software package to support the many attractive features of the Micronet system.

The support program is easy to use because it's "menu driven". This means that possible options are listed on the screen. To select any option you just type in the number shown beside it. The function you have selected will then either take place or another menu of options will be displayed. With a menu driven system you do not need to remember how to drive the system: the menus are a constant reminder.

All your choices begin at the "Main Menu". While any function is in progress you can press the <CAPS SHIFT><ENTER> keys on your keyboard to have main menu displayed. Other functions may then be selected if you wish.

The format of the main menu can be seen in figure 2(a). Any error messages will be displayed on the bottom line. Typing 0 will select the "LOGON MENU" seen in figure 2(b). Typing 0 again will then select the "AUTOMATIC LOGON OPTION".

The options available from the main menu are:

OPTION 0.   Log on or off
This option will allow you to log on or off the Micronet computer.

OPTION 1.   Normal Micronet operation
Once logged on, you can display Micronet frames on your screen and move around the Micronet database.

OPTION 2.   Save Micronet frames
Any displayed frames may then be saved on cassette.

OPTION 3.   View Micronet frames
This option will fetch saved frames from cassette to be viewed when required.

OPTION 4.   Print Micronet frames
Once displayed any Micronet frame may be printed on your ZX Printer using this option.

OPTION 5.   Download a program
As the name suggests this option will download a telesoftware program from Micronet and store it in the computer's memory. It may then be saved on cassette using the normal Spectrum SAVE command.

OPTION 6.   Send Message
This option gives support to the mailbox facilities on Micronet. Messages may be prepared at anytime and sent when required.

OPTION 7.   Exit program
This option will end the Micronet program, and return you to BASIC.

fig 2(a)

fig 2(b)

3.2 **Calling Micronet – Logging on**

Before accessing Micronet information you must first log on. During the logging on procedure, the screen will request you to enter your customer identity which will have been supplied to you by Prestel. The Micronet support program retains your customer identity number while the power to the computer is on and can automatically send this number to the Micronet Computer at logon time.

Pick up your telephone receiver and check for a dialling tone. If you do not hear this tone, replace the receiver and try again.

When you can dial, use one of the telephone numbers supplied to you by Prestel, and wait for a continuous high-pitched tone. If you do not hear this tone, but hear a "ringing", "engaged" or "unobtainable" signal, then replace the receiver before calling again, this time using an alternative Prestel number.

If you hear the high-pitched tone, known as the "carrier", then switch on the adaptor and replace the receiver within 5 seconds. If your call is successful and your personal identity has been correctly received by the system, the Micronet Welcome frame is displayed.

Should the system fail to recognise you as a known user, a message to this effect is displayed, and your connection is broken. If this happens more than twice, switch off-line and press <CAPS SHIFT><ENTER>. You should then contact Prestel via the telephone, and check that your identity number is correct.

If, when signing on to your system, you experience "scrambling" of the display, or difficulty in entering your passwords correctly, then you are suffering from "line noise", or interference on the telephone network. If this is very noticeable, it is usually worth logging off.

There are two methods of logging on to Micronet using the support program. The first method, known as "Automatic", sends the identity number stored within the computer. This is the "default" number. If you wish to use an alternative number for any reason, a second method is provided. This method is known as "manual logon", when selected via the logon menu you are requested to type in the new identity number. In both cases the identification number is sent automatically to the Micronet computer.

If you want to logon without your identity number appearing on the screen, use the following technique: choose the "Automatic" logon option but when asked to type your identity number, enter 10 '*' characters and ENTER. When you logon, Micronet will ask you to type in your identity number but it will not appear on the screen.

3.3 **Logging off Micronet**

Logging off Micronet involves disconnecting the telephone line between the Micronet adaptor and the Micronet computer. This is best achieved automatically using the support program, but you can also switch the adaptor off-line.

Automatic Logoff is a two-stage procedure. When you select the logoff option from the logon menu, the program sends *90# to Micronet to request the sign-off page. If there are no new messages for you to view, the Micronet sign-off page will be displayed. If there are messages you can then view them if you wish. Press the <CAPS SHIFT><ENTER> keys to return to the main menu, then questions will be displayed asking if you really wish to log off. Typing "y" will ensure you are logged off, then the main menu will be displayed after a few seconds.

3.4 **Communicating with Micronet**

To access the Micronet database you must first logon to Micronet. This procedure is covered in sections 3.2 and 4.1. Once logged on your Spectrum becomes a Micronet terminal. Any key pressed will result in the corresponding character being sent to Micronet. The character will either be echoed back and displayed on the bottom line of the screen, or the Micronet command represented by that character will be carried out.

With only the numbers 0 to 9, and the characters * (star) and # (hash) available, it is possible to access much of the information on Micronet. When on-line to Micronet, the ENTER key acts as the # symbol, and the SYMBOL SHIFT key acts as *.

Generally, each Micronet frame offers you a number of choices, indicated by the numbers 0 to 9 and/or the character #. You select from the options available by pressing the appropriate key.

If you know the number of a particular page, you can go straight to it by keying * followed by the page number followed by # for example, *600#. If you want to go back to

the last frame you viewed (up to a maximum of three steps back) you can simply key *#. If you make a mistake, when entering a page number for example, you can cancel the instruction by keying **.

3.5 **Saving, Viewing and Printing Micronet Frames**

Once a Micronet frame has been displayed on the Spectrum screen, it may be saved on tape. The procedure for saving frames is given in Section 4.4.

Saved frames may be retrieved from cassette and displayed on the screen. Retrieving frames in this manner is handled by the "View Frames" function.

Any displayed frame may also be printed. Micronet frames will be printed on the ZX Printer exactly as displayed on the screen, including Mosaic graphics.

When using the above functions the term "current frame" refers to the last frame displayed. When normal Micronet operation is resumed, the current frame is re-displayed free of charge.

3.6 **Downloading Telesoftware**

Programs stored on Micronet may be downloaded to your computer using the downloading function. The program you want must be selected using the normal Micronet operation function via the main menu. Figure 4 shows a typical Spectrum program in the telesoftware format. Only the first four frames of page 70067 are shown. The first frame has the subscript letter "a" i. e. the page number is 70067a the next is 70067b and the next 70067c etc. These first few frames are used to give information on the program to be downloaded.
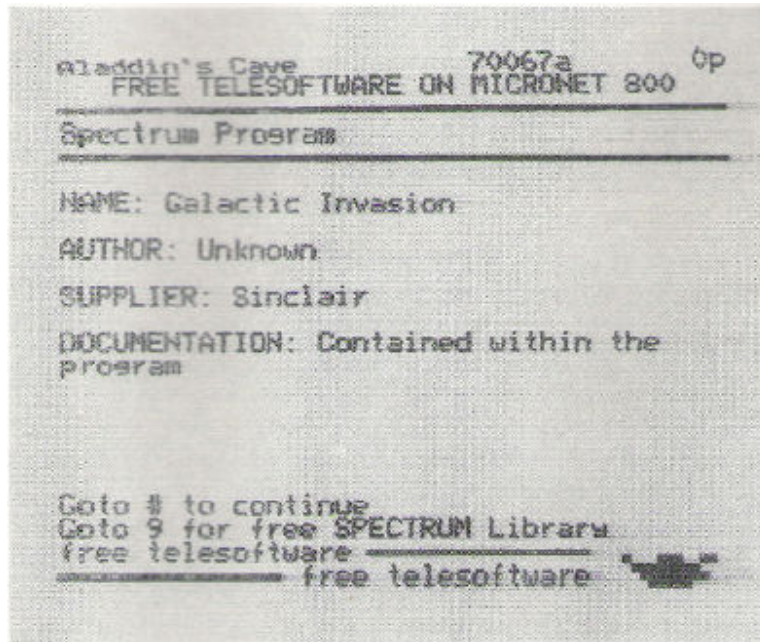

fig 4(a)

In the example given, the "c" frame (70067c) contains a "header block", this is shown at the bottom of the frame. The header block is used by your downloading software to determine the program name, the number of frames the program uses, and a "checksum" figure which enables the support software to check that the frame is downloaded correctly. The header block is usually contained within the "c" frame and so the downloading software assumes this. Should the header not be contained in the "c" frame, you must inform the downloading software. For more information see section 4.7.

Frame number 70067d in the example is the first frame of the actual program code.

Do not attempt to down load programs if you have a noisy environment, or a crackling telephone line as this will cause errors. The system will make up to 5 attempts to download each frame. If a frame fails to download successfully within 5 attempts the system returns to the main menu and a "Download Failure" message is displayed.
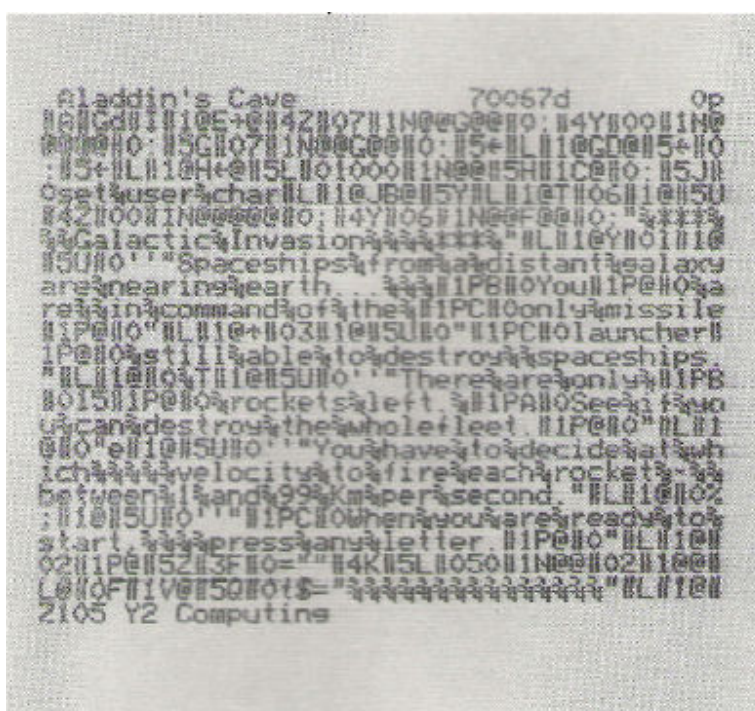
fig 4(b)

fig 4(c)

fig 4(d)

3.7 Sending Messages via Micronet*

You can send messages on the Micronet system to other Micronet subscribers. This is called "Mailbox". Special frames known as "response frames" are available. Once a Mailbox response frame is displayed, you may type in your message. The infomation is then stored in the frame and the whole frame can be sent to the subscriber of your choice.

Messages may be prepared when off-line from Micronet, so saving telephone connect charges and stored on cassette for later use. Messages may, of course, be prepared at anytime whilst on-line and sent as required. The Support program will send the message automatically when you wish.

*At launch date, March 1983, Mailbox is only available on the Enterprise computer.

4 User Instructions

4.1 How to Logon

Step 1: Press <CAPS SHIFT><ENTER> to display main menu.
Step 2: Press key 0 to display logon menu (see figure 2b).
Step 3: If manual logon required press key 1 then type in your identity number.
If automatic logon required press key 0.
Note that the first time after power-on you will have to type in your identity number. Until the computer is powered off your ID number will be stored and will be automatically sent during logon.
Step 4: Phone the computer using one of the telephone numbers given to you when you joined Micronet. When the computer answers and your hear the "carrier" tone, flip the line switch on the Micronet Adaptor to ON Line and replace the receiver on your phone within 20 seconds.
Step 5: When Micronet sign-on page is displayed, type in your personal password.

Notes   At any time, pressing the <CAPS SHIFT><ENTER> key will return you to the main menu. If your logon attempt is unsuccessful, press <CAPS SHIFT><ENTER> to return to the main menu and go through the routine of logging off. You may then attempt to logon again. Failure to logon may result from a noisy telephone line.

4.2. How to log off

Step 1: Press <CAPS SHIFT><ENTER> to display main menu.
Step 2: Press key 0 to display logon menu (figure 2b).
Step 3: Press key 2 to log off, the system will then request the sign-off page (page 90).
Step 4A: If there are no new mailbox messages for you, the main menu will reappear when the line to Micronet disconnects.
Step 4B: If you read any new messages, then log off is not automatic. You will be asked if you really wish to log off when you press the <CAPS SHIFT><ENTER> keys.
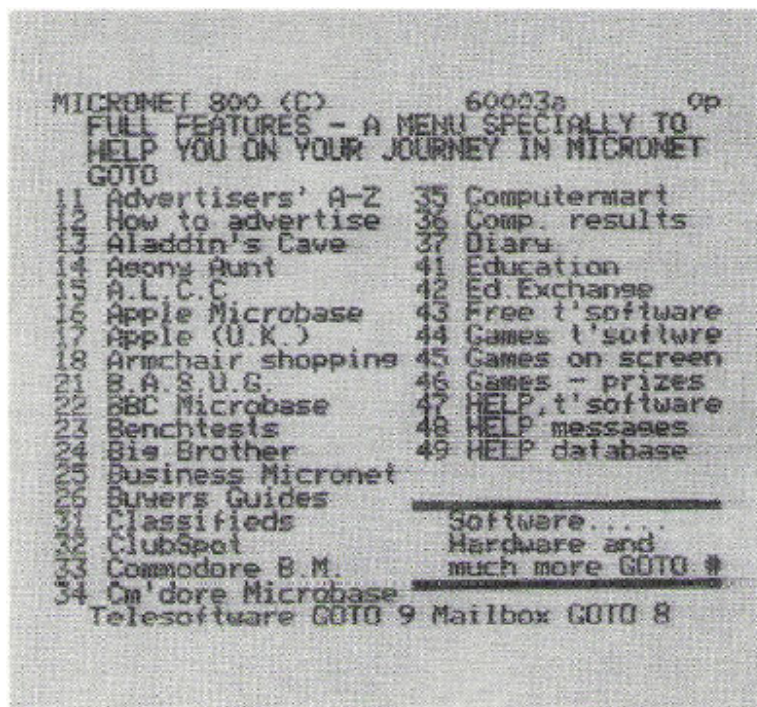

fig 5

4.3 **Normal Micronet Operation**

Step 1:   Press <CAPS SHIFT><ENTER> to display main menu.
Step 2:   Press key 1 to start normal Micronet operation.
              A typical Micronet frame is shown in figure 5.
Step 3:   Use keyboard to send characters to Micronet.

Notes   The <SYMBOL SHIFT> key is used to send a * to Micronet.

The <ENTER> key is used to send a # to Micronet.

Pressing <CAPS SHIFT> and <ENTER> together returns you to the Main Menu. In Mailbox or Response frames the normal Spectrum cursor keys may be used to format text. <CAPS SHIFT><2> will toggle between UPPER case only and UPPER/LOWER case modes. <CAPS SHIFT><1> can be used to toggle between CONCEAL and REVEAL modes on Micronet frames.

Additionally, the punctuation symbols can be sent to Micronet by pressing <CAPS SHIFT><SYMBOL SHIFT> followed by <SYMBOL SHIFT> and the key required.

4.4 **Saving Micronet Frames**

Step 1:   Press <CAPS SHIFT><ENTER> to display main menu.
Step 2:   Press key 2 to save the current Micronet frame.
Step 3:   Type in the file name in response to the prompt displayed on the screen followed by the ENTER key. Follow the instructions to save the frame on cassette using the normal Spectrum SAVE function.

4.5 **Viewing Micronet Frames**

Step 1:   Press <CAPS SHIFT><ENTER> to display main menu.
Step 2:   Press key 3 to display "View Frames" menu (see figure 6).

To View Current Frame:
Step 3:   Press key 0 to display current frame. Press <CAPS SHIFT><ENTER> to return to the main menu.

To View Stored Frame:
Step 3:   Press key 1 to load the required file containing the frame saved by the Save Frame function.
              Type in the file name followed by the ENTER key.
              A message will inform you that the system is searching for the frame. After a few seconds the frame will be displayed.
              Press <CAPS SHIFT><ENTER> to return to the Main Micronet Menu.
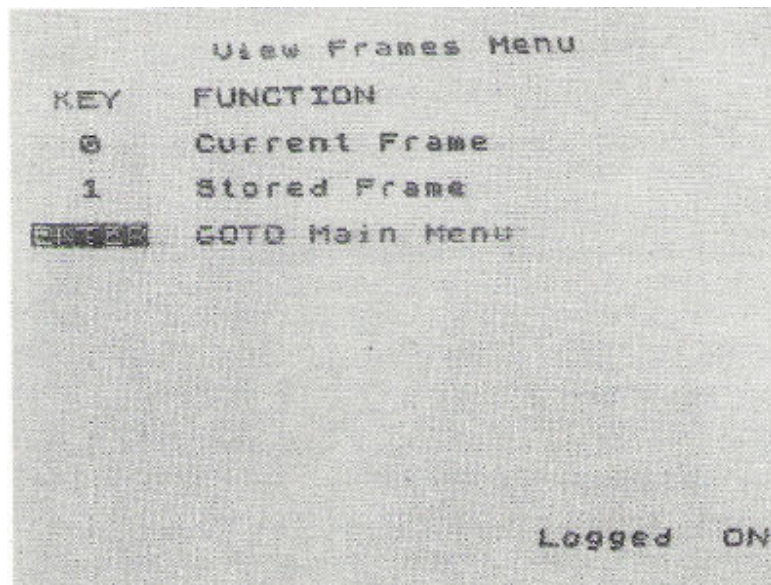   This procedure may be repeated until all frames on the cassette have been viewed.

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fig 6

4.6 Printing Micronet Frames

Step 1:   Make sure your printer is connected.
Step 2:   Press<CAPS SHIFT><ENTER> to display main menu.
Step 3:   Press key 0 to print current frame.
          When frame is printed, the main menu will be displayed.

4.7 Downloading Programs

Note   Before attempting to down load a program stored on Micronet frames, first select the program to be downloaded using normal Micronet operation. When the program has been selected, find the frame containing the header block (see section 3.6). When displayed, make a note of the frame subscript letter. If this letter is not the same as the default – i. e. "c" then use the Change Start Frame function via the downloader menu (key 3).

Using the Downloader Functions
Step 1:   Press <CAPS SHIFT><ENTER> to display the main menu.
Step 2:   Press key 5 to display downloader menu (see figure 7).

To Change Start Frame
Step 3:   Press key 3, press the required subscript letter's key.
          This value becomes the new default until changed again or you exit the program.

To Download a Program
Several options exist in the way that you download a program from Micronet into your computer. When a program is downloaded it is stored in the memory of the Spectrum as if it had been loaded from cassette.

The program runs immediately after it has finished downloading. If it is permitted by the downloaded program, the Spectrum SAVE function may be used to save a copy of the program to tape in the normal way.

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Options for downloading are selected as follows:

Key 0   to download, automatically log off Micronet and run the downloaded program.

Key 1   to download and run the program without logging off.
Note that you are still logged ON after using this option – you must remember to log off separately. This option will be used to enable interactive operation of programs running on your Spectrum and the Micronet system.

After downloading, the Micronet support software will be overwritten by the downloaded program. To restore Micronet support it is necessary to reload the software from the ROM inside the Micronet adaptor. This is done by typing:

RANDOMIZE USR 65507 for a 48K Spectrum

or   RANDOMIZE USR 32739 for a 16K Spectrum

If you use the download option with Key 1 you will still be logged on to Micronet and can then download another program or access any other Micronet facility.
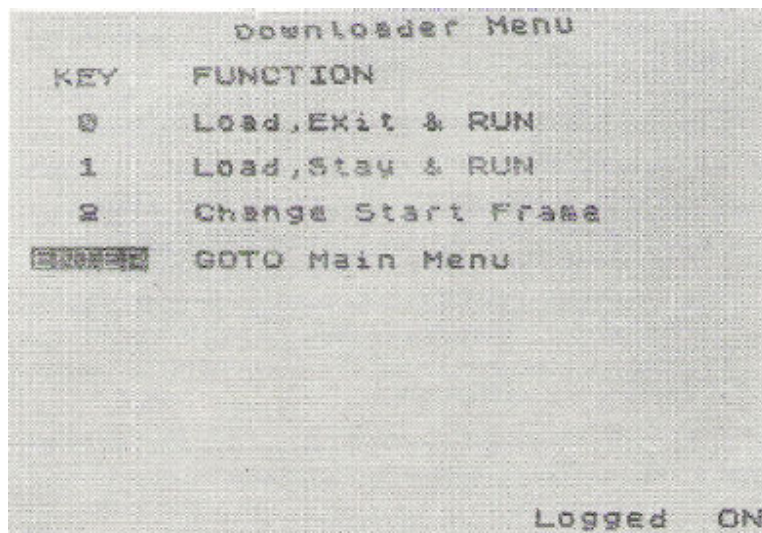

fig 7

4.8 Sending Messages

Step 1:   Press <CAPS SHIFT><ENTER> to display main menu.

Step 2:   Press key 6 to display "mailbox menu" (see figure 8).

To Prepare Mailbox Message

Step 3:   Press key 1.

Step 4:   Enter message text as though you were filing a message response frame interactively.
Lines may not be longer than 40 characters.

Step 5:   Enter an empty line to redisplay the mailbox menu.
The message will remain intact until it is changed by you or you exit the program.

To Save the Message

Step 6:   With mailbox menu displayed – press key 2.

Step 7:   Type in the name of the file where you will hold the message, followed by the ENTER key start your cassette in "RECORD" mode. The message will then be saved for later use.

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To Fetch a Pre-saved Message
Follow Steps 1 and 2.
Step 3:   Press key 3.
Step 4:   Type in the name of the file containing the message, followed by the ENTER
          key.
          Start your cassette in PLAY mode.
          The message will be displayed on the screen.

To Display the Current Message
At any time that the mailbox menu is displayed press key 4. The message will then be
displayed on the screen.

To Send Current Message
Display a suitable mailbox response frame using normal Micronet operation.
Follow steps 1 and 2 above.
Press key 0.
The message will then be sent.

Note   When sending a mailbox message via option 0, make sure that you allow time for
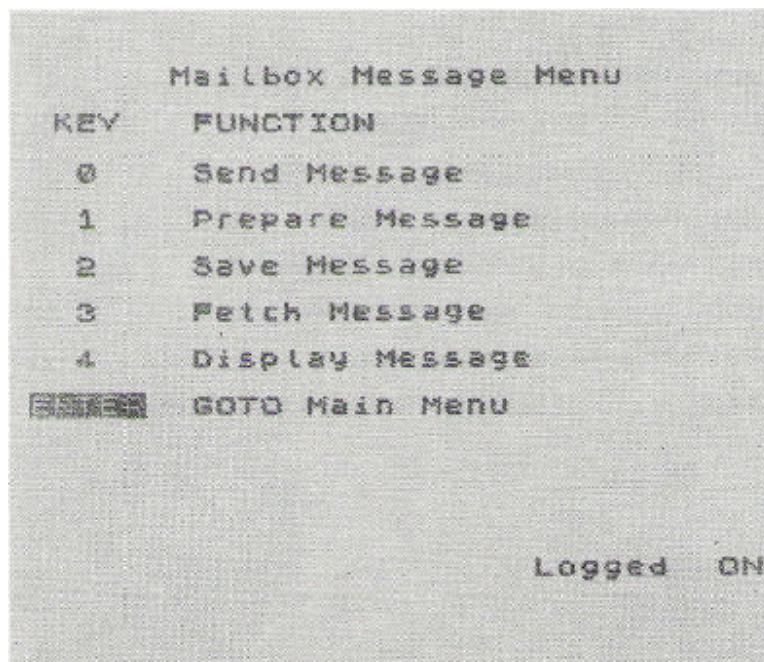the whole mailbox frame to be displayed prior to pressing the <CAPS SHIFT><ENTER>
key.

fig 8