THE NETWORK

DESKTOP MANAGER & GRAPHIC USER INTERACE

FOR THE AMSTRAD PCW SERIES COMPUTERS

USER MANUAL

CREATIVE TECHNOLOGY (MICRODESIGN) LTD

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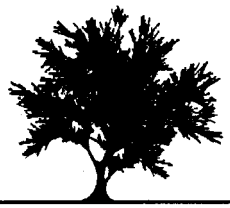

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OVERVIEW: WHAT IS THE NETWORK?

The Network is a memory and program management system for the PCW's CP/M operating system. It requires a PCW computer fitted with at least 512K of memory, and can be controlled using the PCW keyboard, or a computer mouse such as the Creative Technology KeyMouse.

How to use this Manual

Using this Manual

This manual has four chapters. This **Introduction** provides some background information on the Network, notes on compatibility with CP/M versions and other programs, and covers the Installation process by which you make a working copy of the Network programs. The second chapter is called **Installing and Using Programs on the Desktop**: it provides a walk-through guide to configuring the Network for your own programs. We recommend that you work through the first two chapters as a kind of Network tutorial.

The third chapter is a **Reference** guide, giving detailed explanations of all the commands and options in the Network menus, in the order in which they appear on the screen. The fourth chapter discusses different ways in which the Network might be configured for different situations and requirements.

MANAGING PROGRAMS AND MEMORY

Program & Memory Management

The Network runs on your PCW like any CP/M program, but once running, it allows you to "install" other CP/M programs within its operating environment, and to switch between them via the Network's Desktop screen. Programs can be installed on the Desktop in two ways: they can either be run from disc as normal when you need them, or they can be "Resident" in the computer's memory, so that they run instantly when selected. Up to sixteen programs can be installed in separate "program slots" on the Desktop screen (though the number of these programs which can be Resident may depend on the amount of memory fitted to your PCW).

You can launch any program from the Desktop by clicking over its slot with a mouse, or by pressing a key-letter which you assign to it. Once a Resident program has been launched, its slot displays a small picture, called an Icon, to show that the program is stored in memory and can be used instantly without inserting its disc.

When you Quit from a program, the system returns to the Desktop screen instead of the usual CP/M A) Prompt, so that you can select another program just by clicking over another slot.

Screen Saver

THE SCREEN SAVER

When the Network is installed, it detects all mouse and keyboard activity, even when other programs are running. If there is no such activity for a given period time (you can set the delay time in the Network Options screen), the Network can initiate a Screen Saver program which blanks out the display. The display is switched on again as soon as you press a key or move the mouse. The Screen Saver prevents the "screen burn-in" effect, which can permanently mark a computer screen with any picture which is displayed constantly for long periods. Instead of just blanking the screen, the Screen Saver can also display simple animated graphic sequences, which (as well as being more amusing than a blank screen) serve to remind you that your computer is still switched on!

Network Programs & MicroDesign3

NETWORK PROGRAMS & THE MICRODESIGN3 FAMILY

Most CP/M programs can be installed on the Desktop, but some programs are specifically designed to take advantage of the Network's more advanced features. MicroDesign3, Tweak3, and the Font & Shade Designer are all examples of this special category, called "Network programs". A Network program includes a "Network" entry in its main menu. This avoids the need ever to Quit from the program or run it again. When you select Network from the menu in a Network program, you return to the Desktop, but the program remains active in the computer's memory, so that you can return to it at any time by selecting it from the Desktop. When you do select it, the program returns exactly as you left it.

Network programs which are running simultaneously can also share information. Some, such as MicroDesign3 and the Font & Shade Designer, share a common "Page": changes made to the Page in FSD will be retained when you see the Page in MD3. The Tweak3 program, when it is installed on the Desktop, automatically appears as an operation in the MD3 and FSD menus. A full description of the special facilities used by MD3, FSD, and Tweak3 is given in chapter 2, but new Network programs are being developed all the time: the latest information available is always included in the "README.TXT" file on the Network master disc, but for full information about how a program uses the Network's facilities, see that program's manual.

IMPORTANT NOTES ON COMPATIBILITY

Compatibility:

CP/M Versions

CP/M Versions

The Network facilities are not supported by the earliest PCW CP/M versions: if you are using a CP/M version lower than 1.8 (for the 8256/8512/9256) or 2.10 (for the 9512), you will need to upgrade your CP/M master disc: contact Creative Technology for more information.

Locoscript and Flipper3

Locoscript & Flipper

The Network is a CP/M program, and only works with other CP/M programs. **You cannot install or use Locoscript within the Network.** However, the Network is fully compatible with Flipper3, so you can run the Network as a CP/M environment under Flipper3.

If you do run the Network under Flipper3, you must never Flip out of the Network while a program is running: you should always return to the desktop before Flipping. You should also ensure that you allocate a minimum of 32 blocks (512Kb) of memory to the Network, or at least 47 blocks (752Kb) if you want to run MD3 under the Network with Flipper.

MicroDesign3 and Tweak

MicroDesign3 & Tweak

Any MicroDesign3 version earlier than 3.30, or Tweak version before Tweak3 v3.0, cannot be run under the Network. If you have an earlier version of MicroDesign3 or Tweak, please contact Creative Technology for information about upgrading.

Diskit, MicroDesign2 and other CP/M Programs

MicroDesign2, Diskit etc

Although every effort has been made to make the Network compatible with as many programs as possible, there are a small number of CP/M programs (including Diskit, MicroDesign2, and ProSCAN) which will not work properly within the Network environment. See the the README.TXT file on the Network master disc for a summary of compatibility problems.

Programs Which Cannot Quit

Programs which won't Quit

Some CP/M programs, especially games, have no facility to Quit back to CP/M. This also means that there is no way to return to the Desktop after running one of these programs, so they are not properly compatible with the Network. However, they can be launched normally from the Desktop, so the Network can still provide a menu system for selecting one program, even though you will have to re-start the computer to escape from the game as normal.

MAKING A WORKING NETWORK DISC

Start Here: Making a Network Disc

The first thing you must do is make a Working Copy of the Network program. As with MicroDesign, the Network Master Program disc is copy-protected: this means that you cannot copy or verify it using the normal Locoscript or Diskkit copying programs. It can only be copied using a program called NETMAKE, which is supplied on the disc itself. Before running NETMAKE, you must have a spare disc handy to use as your Working Disc: it does not need to be formatted, but **any data on it will be destroyed during the copying process.**

COPYRIGHT WARNING

Please note that the working disc you make will be copy-protected like the master disc, *and cannot be copied or verified. We allow you, as a legitimate user, to make a Working Copy of Network for your own use: please do not abuse this by making extra copies for your friends. If everyone who wants to use the program buys it legally, everyone (including you) will receive better after-sales support and better programs in the long run.* ***Please note that any copies made from your program disc will bear your serial number, and can be traced back to you: software piracy is THEFT.***

Starting up

Before running NETMAKE, you must "Boot-Up" your PCW using a copy of your CP/M Plus disc (one of the Master discs which was supplied with the PCW). Switch on the power, then insert the CP/M Plus disc: after a few moments, you should see the "A-prompt" appear on the screen.

```
A>
```

You are now "in CP/M", and you can run programs from here.

Running NETMAKE

To run NETMAKE, insert the Network Master program disc drive A, and type:

```
NETMAKE↵
```

NETMAKE will ask you a series of questions about your computer and any peripherals which are attached to it, such as a mouse. The answers to these questions will be used to create an initial configuration for the Network program.

NETMAKE will also ask you whether you want to include the Tutorial files on your Network disc. If you are using the Network for the first time, we recommend that you include these files, and follow the short "walk-through" tutorial in the next chapter.

Disc Drives

Disc Drives

After you have answered the questions about peripherals, NETMAKE asks you which disc drive you want to use for making your Working disc. You can make your Working disc in any drive, but if you do not have a Hard Disc, we recommend that you use drive A, so that the Working Disc can be made into a "Start-Of-Day" disc.

Start-of-Day Discs

Start-of-Day Discs

To run the Network using a Start-of-Day Disc, you simply switch on your computer and insert the disc: CP/M will be installed and the Network will be run automatically. Note that you can only make a Start-of-Day disc in floppy drive A, not in any other drive.

Hard Disc Drives

Hard Discs

The Network is a powerful tool for the hard disc user. On a self-booting hard drive (such as those made by Cirtech), the Network can be run automatically when you start up CP/M, with up to 16 programs instantly available on the Desktop.

If you have a hard disc, you should still use NETMAKE to install the Network, but you must also make a floppy disc copy to use as a "Key-Disc". Whenever you start up the Network from a hard disc, you must also insert a Network Working Disc in one of the floppy drives: the program always checks that there is a proper Network Working disc in one of the floppy drives before it runs, for copyright reasons. (Note that other Creative Technology programs which require key-discs, such as Micro-Design3 and Tweak3, will accept a Network key-disc instead, so you can use the Network key-disc for all your programs.)

When you install the Network on a Hard Disc, the NETMAKE program asks you to select which User Group you want to use for the Network. We recommend that you select Group 0, unless you have a specific reason for using a different Group.

To start up the Network automatically at switch-on, add the line...

```
NETWORK↵
```

...to the end of your PROFILE.SUB file. For a full explanation of PROFILE.SUB, see your CP/M manual.

Gem & Insyder 'Manager'

Note: if you are using a 'Gem' or 'Insyder' hard drive, you may be using the 'MANAGER.COM' program which is supplied with it. **You cannot use the Manager in conjunction with the Network.** If the Manager appears automatically when you switch on your PCW, you must Quit from it before running the Network. If you add the Network to the end of your PROFILE.SUB file, as described above, you must also remove any line which says...

```
MANAGER↵
```

...otherwise the Network will not run.

Chapter 2: USING PROGRAMS ON THE DESKTOP

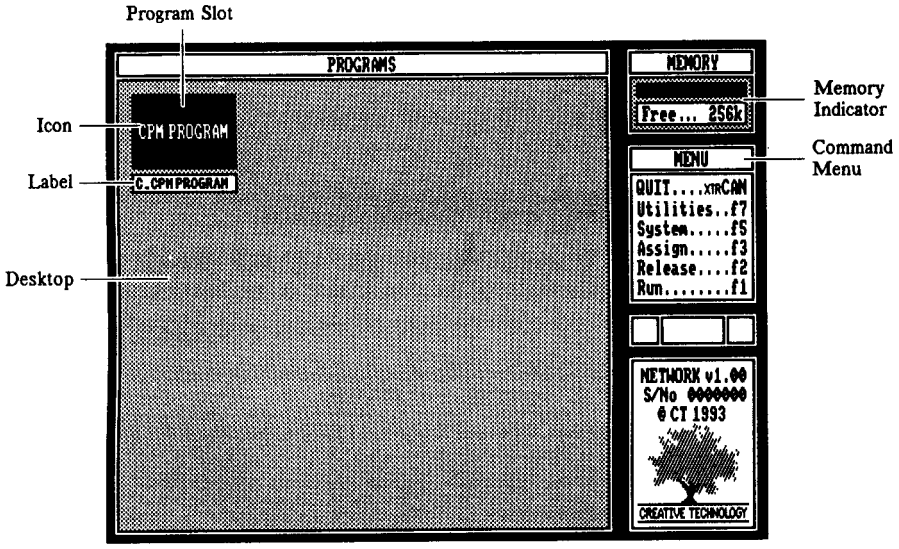
This section assumes that you have made a start-of-day Network disc in drive A, or that you have installed the Network on a self-booting hard drive, and that you chose to include the Tutorial files during the copying sequence. To run the Network, simply switch on your PCW, and insert the Network Working disc in drive A. With a self-booting hard disc, insert your key-disc in a floppy drive, and at the A> prompt, type...

NETWORK↵

THE DESKTOP SCREEN

Using the Desktop

When you run the Network, the screen displays a "Desktop", and a menu of commands:



The Desktop contains sixteen "Slots", which you can "Assign" to your programs: on the Tutorial desktop, the top left slot is automatically assigned to an example program, called "CPM PROGRAM". Slots which have not yet been assigned are blank.

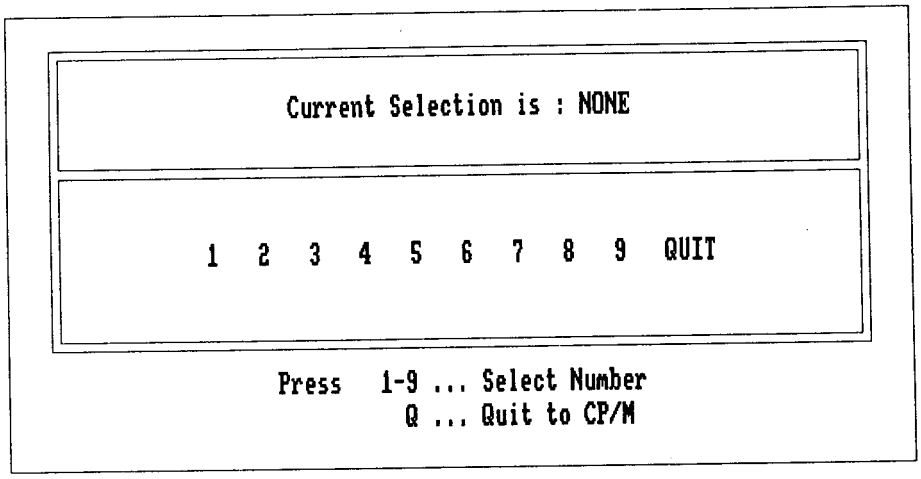
Running a Program

Running and Quitting from a CP/M Program

When you "Assign" a program to a desktop slot, you give the slot a name, which appears in the "label" just below it. You can then run the program by clicking over the slot with the mouse left button, or by selecting the Run command from the menu by pressing [f1], and selecting the slot you want using [↑↓←→] then [Enter]: try running the example "CPM PROGRAM".

Running Progams from the Desktop (cont)

When you choose "Run" and select a program slot, the program is loaded from disc and run. The Network makes no difference to the way ordinary CP/M programs actually work: they behave just as if they were running under normal CP/M. To illustrate this, you can run the CPM PROGRAM program outside the Network, from the CP/M A) prompt, if you wish.



The example program asks you to type any number between 1 and 9, and highlights the number you choose. It also tells you that you have to type [Q] to return to the Desktop: when you use a CP/M program, you must use the program's own version of the Quit command to return to the Desktop. In this example program, press [Q] to Quit. When the desktop is displayed, you will see that the icon for the CPM PROGRAM remains visible, indicating that the program is Resident - this will be explained later.

MEMORY

Using Memory

In addition to controlling the desktop and running programs, the Network's other main function is to manage the PCW's memory, and use it to run programs and store files. The amount of "free" memory (*ie* the amount which is currently available for use by the Network and its programs), is shown by the Memory Indicator at the top right of the Desktop. Some of this memory is used for "drive M": whenever you save a new file in drive M, the amount of "free" memory will decrease.

Note how the "Free" figure also drops whenever you activate a new slot. This is because the slot requires a memory allocation in which to run its program. Most programs, including the CP/M example program you have already used, require 64K of memory to run. To see how this affects the memory indicator, try running CPM PROGRAM again, and watching the memory indicator as you do so: you should see that it drops by 64K when the program runs, but that it has returned to its original value when you return to the desktop.

A few special programs, such as MicroDesign3, require more than 64K memory. A program's memory requirement is stored as part of the slot's "Assignment". **You cannot run a program from the desktop if its Program Memory allocation exceeds the amount of free memory.**

Freeing Memory: "Releasing" a Slot

Freeing Memory: the 'Release' Command

The Network uses free memory in two ways: for running programs, and for storing files. Whenever a program slot is active, it occupies some of the computer's memory, so the amount of free memory is reduced: if you have lots of programs active at the same time on a computer which does not have much memory, you will eventually find that there is insufficient free memory to run any programs at all. The memory used by an active slot can be freed using the Release command: Releasing an active slot makes the program's icon disappear, and removes the program itself from memory, leaving that memory free for use by another program.

You can see how this works by Releasing the CPM PROGRAM slot. The slot's icon is displayed on the desktop, showing that it is currently active. To Release it, select the Release command by clicking over the word "Release" in the menu, then click over the slot you want to release. (With the keyboard, select Release from the menu by pressing [f2] then use [←→↑↓] then [Enter] to select the CPM PROGRAM slot on the desktop.) The program displays a message asking you to confirm that you want to Release CPM PROGRAM: type [Y], or click on the ☑ symbol with the left button, to confirm. The program's icon disappears, and the memory indicator shows an increase in the amount of free memory. The increase is small because the example program is small: Releasing a larger program will free more memory.

COMMANDS

Network Commands

The Network has a menu of five commands, which are used to control and configure the desktop and the programs installed on it: the Release command you just used is one of them. To use any command, press the key listed beside the command name in the menu, or click over the name with the mouse left button.

Briefly, the commands are divided into two groups: Run, Release and Assign are used for controlling programs and slots, while System and Utilities are special commands which select and control the Network's own internal features and settings.

'Run'

RUN is used to run a program by selecting its slot on the desktop. You can also run a program by clicking over its slot with the mouse.

'Release'

RELEASE is used to remove a program from memory, in order to make more memory available for another program to use.

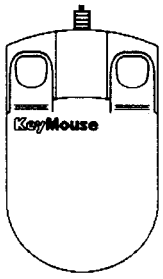
'Assign'

ASSIGN is used to install a new program on the desktop, by allocating it to one of the slots, or to alter the settings of an existing slot assignment. The Assign command displays a menu showing the current assignment settings for the slot you selected: for a detailed explanation of these settings and their meanings, see chapter 3.

When you select one of these three program commands, a rectangular frame appears around one of the desktop slots. This frame indicates the slot on which you want the command to operate: select a slot with the mouse left button, or using the cursor keys [↑↓←→], then press [Enter], as you did to Release the CP/M example program earlier.

'System' & 'Utilities'

The other two commands are SYSTEM, which is used to control some of the desktop's internal options including the Screen-Saver, and UTILITIES, which displays a menu of small utility programs which "pop up" on the desktop. For more information about the System and Utilities commands, see chapter 3.



Using a Mouse - Short-Cuts for Run and Release

If you have a mouse, you can Run or Release a slot simply by clicking over it on the desktop. Use the left button to Run the program, and the right button to Release it. The Release command always has a confirm stage.

ADDING A PROGRAM TO YOUR DESKTOP:

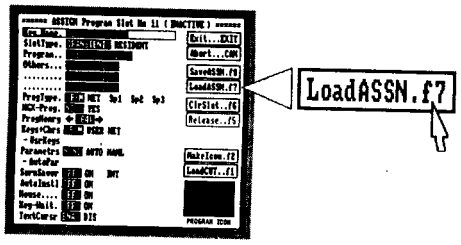
LOADING AN ASSIGNMENT FILE

Installing Programs on the Desktop:

The usual way to install a program on the desktop is to load the program's assignment file. The Network needs to know some technical information about a program before it can use it: you can enter this information "by hand" using the Assign menu, but Assignment files are much easier to deal with. The Network master disc includes Assignment files for almost all popular CP/M programs, including the one for the CPM PROGRAM example, which was installed automatically when you made your Network disc. Assignment files have the suffix **.NAS**.

Loading an 'Assignment' File

We will now add a second example program to your desktop. The program is called **NETPROG.COM**, and we will install it by loading its assignment file: the assignment file is called **NETPROG.NAS**. The first thing you must decide is which desktop slot you want to use for the new program: select the Assign command, then select one of the empty slots using the mouse or [↑↓←→] followed by [Enter]. The screen now displays the Assign menu for the slot you have chosen, but all the entries are blank because the slot is not yet assigned.



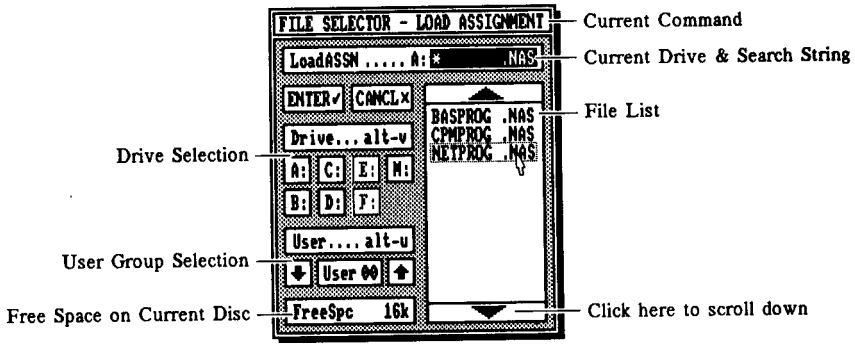
On the left of this menu are a number of options, most of which you will never have to worry about. On the right, there are several "Command Buttons". Most Network menus contain command buttons, which appear as rectangles containing a command and a key-name. You can always select a command by clicking over the rectangle with the mouse left button, or by pressing the named key. In this case, we want to use the LoadASSN command, so press [f7], or click on the LoadASSN button.

Loading an Assignment (cont)

THE NETWORK FILE SELECTOR

The File Selector

Now the screen displays the Network's "File Selector" window. The File Selector is used by all the Network's Load and Save commands, and by some Network programs: it provides a standard way of listing the files on a particular disc, and of selecting a file from the list.



Search Strings

The particular load or save command you are using is shown in the top line of the Selector window. Below is the current disc drive and search string. The search string is the standard CP/M method of specifying a file or group of files, using the wild-card characters * (any name) and ? (any character): in the illustration, the search string ***.NAS** means 'any file-name ending in the suffix **.NAS**'. If you are unfamiliar with search strings, see your CP/M or MicroDesign3 manual for a full explanation.

File Types & the File-Suffix

All Assignment files have the suffix **.NAS**, so the suffix in the Selector window is locked to this suffix. Now insert your Assignment files disc: the Assignment files are supplied on the Network master disc (side B of the 3" version). Use the Drive buttons in the Selector window to change to the appropriate drive if necessary: with the keyboard, hold down the [Alt] key and press the drive-letter you want (*eg* [Alt]+[B] to select drive B). Next, press [Enter] or click over the ENTER✓ button (or the search string itself) to list the files.

Drives

Selecting a File

You can select a file from the Selector list by clicking over it with the left button, or using [↑↓] then [Enter]. In this case, you want to load the file called **NETPROG.NAS**: the files are listed in alphabetical order, so you may need to scroll down the list using the [↓] key, or by clicking on the arrow below the list.

When the Assignment file has been loaded, you can see that the "Program" option is set up to look for the program on drive A: this is because the program was copied onto your Network start-of-day disc, and you must make sure that this disc is in drive A before you try to run NETWORK PROG.

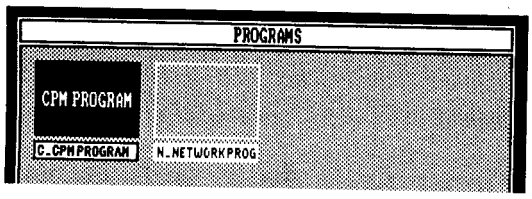
Now choose EXIT to return to the desktop. You should see the that the slot you selected displays the name NETWORK PROG in its label, indicating that you have successfully installed the program on 'your desktop. Note, however, that there is no icon displayed in the slot. This is because the slot has not yet been activated: a program has been assigned to it, but the program has not yet been used.

Exit...EXIT

TRANSIENT AND RESIDENT PROGRAMS

Changing an Assignment: 'Transient' & 'Resident' Programs

Before proceeding with this section, put your Network start-of-day disc back in drive A, and run the CPM PROGRAM example as described earlier, then Quit back to the desktop. Your desktop should look something like the illustration below, though the NETWORK PROG slot will appear wherever you assigned it on the desktop.



Resident

When you Quit from a program, you return to the Desktop. In the case of the example CP/M program you have just used, the program icon remained visible, showing that the slot is still active. If a slot remains active even after you have returned to the desktop, the slot is assigned as Resident: this means that its program remains in memory, and can be used again at any time without having to be re-loaded from disc.

Transient

As we have already seen, you can use Release to remove the program from memory, but you can also assign the slot so that the program is never stored in memory at all. This type of assignment is called "**Transient**".

The icon for a Transient slot disappears as soon as you Quit from the program, and the slot is de-activated. This means that the program is not being stored in drive M for later use, so every time you run it, the Network has to re-load it from disc.

To demonstrate the difference between Transient and Resident slots, try running the other example program, called NETWORK PROG, using the usual method: click on its slot with the mouse left button, or press the key-letter assigned to the slot, which in this case is [N]. The second program has the same basic functions as the first, and looks quite similar, but there are some important differences which we shall discuss later. For now, just switch back to the Network by pressing [N], or by clicking over the **Network..N** button with the mouse.