UniForm

User's Guide

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U n i F o r m

User's Guide

Kaypro II, 4 & 10 version

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1.0 Introduction

It's become obvious that there isn't going to be a "standard" disk format for computers that use 5 inch disks. This has become a real problem for users who wish to exchange or buy new software for their machine. In most cases you can't take the disk out of one computer and put it into another brand computer and expect to read it.

One approach to this problem has been to link two different computers together and send the data between the computers over the link. But there are several disadvantages with this approach. If high speed data transfer is desired, the computers usually have to be pretty close to each other. If the two computers can't be located close to each other, then a lower speed transfer can be done over a phone line.

Another approach is to use UniForm. UniForm was developed to give you the ability to directly read and write CP/M disks in several popular formats, all on your Kaypro computer!

1.1 Conventions used in this manual

To make reading this manual a little easier, certain conventions and phrases should be clarified.

- "<cr>" means hit the RETURN key.
- "<ctrl>" in front of a character means that you should hold the "control" key down while pressing the character specified.
- When a command to the computer is shown, your responses will be shown boldfaced.
- In general, the word "format" has been used in a couple of different ways which leads to confusion for some users.

  In this manual the word "format" is used to describe the layout of the data on a disk. Different computers lay out the data on the disk differently, and therefore use different disk formats.

  In some computer manuals the word "format" is also used to refer to the process of initializing a disk to a particular format. They will often refer to this process as "formatting a disk". To eliminate confusion we will refer to this process as "initializing a disk to a particular format".

2.0 Making a Working Copy

Before using UniForm on your Kaypro, you must make a working copy. Use the instructions below that correspond to the Kaypro model that you have. Be sure that the version of UniForm that appears on the diskette label matches the Kaypro model that you have.

Kaypro II or Kaypro 4

Use the following proceedure to create a working copy of UniForm on your CP/M working disk.

1) Put the CP/M system disk into drive A and press the reset button on the back of your Kaypro. After a few seconds you should get the CP/M signon message and "A>" prompt.

2) Place your UniForm master disk into drive B.

3) Now we'll copy the UniForm programs to the CP/M working disk with the following command:

   A>pip a:=b:*.*[v] <cr>

   If you received a DISK WRITE ERROR message while you were copying UniForm, then the disk that you were copying to is full. In this case, you must either erase some files from your CP/M working disk using the ERA command or you should try using another disk and repeating the above steps until you are successful.

4) UniForm should now be on your CP/M working disk. You may remove the UniForm master disk from drive B and put it in a safe place along with your other master disks.

Kaypro 10

Use the following proceedure to move UniForm to your hard disk.

1) Press the reset button on the back of your Kaypro 10. If after a few seconds you get a menu of programs to select from, you should press the ESC key to exit to CP/M. Now you should have the CP/M "A0>" prompt.

2) Place your UniForm master disk into your floppy drive.

3) Now we'll copy the UniForm programs to the hard disk with the following command:

   A0>**pip a:=c:*.*[v] <cr>**

   If you received a **DISK WRITE ERROR** message while you were copying UniForm, then the hard disk that you were copying to is full. In this case, you must erase some files by using the ERA command. Repeat the above steps until you are successful.

4) UniForm should now be on your hard disk. You may remove the UniForm master disk from your floppy drive and put it in a safe place along with your other master disks.

3.0 Getting Started with UniForm

UniForm consists of two programs. The first program, called INITDISK, enables you to initialize a disk to any of the supported formats. This program plays an important role in the Uniform package because it enables you to generate an initialized disk which you can use on a different brand of machine.

The second program, called SETDISK, is used to select the desired disk format for drive B (Drive C for Kaypro 10) on the Kaypro. Once you use SETDISK to select a disk format, you can use that drive just as you normally would, the only difference is that drive B (Drive C for Kaypro 10) should contain a disk which has been initialized to the selected disk format.

One important feature of UniForm is it's simplicity. Once you SETDISK to a given format, simply use familiar commands to manipulate the data. Files are easily copied between Kaypro disk format and the selected format by using the CP/M "PIP" command. A directory can be displayed by using the CP/M DIR command, the amount of space left can be displayed with the STAT command, etc.

3.1 Using INITDISK to Initialize Disks

INITDISK is used to initialize a disk to a particular format. You have a program that was included with your Kaypro computer to initialize disks. INITDISK performs the same type of function but with the following addition:

1) INITDISK allows you to select not only the Kaypro disk format, but has a whole menu of other disk formats to choose from. For example, if you want the disk to operate in an Osborne 1 computer, just select it from the menu. When INITDISK finishes initializing the disk, it will be in the format used by the Osborne 1 computer!

2) INITDISK checks the integrity of each track on the disk immediately after it has been initialized. If an error is detected, INITDISK will automatically try to initialize that track nine more times before deciding that the disk has a bad spot there. At the end of the initializing procedure, INITDISK will report if there were any permanent errors encountered while initializing the disk.

Now let's use INITDISK to initialize a disk in the Osborne 1 format. Remember that INITDISK always uses drive B for the initialization process (Drive C for Kaypro 10). Use the following instructions:

1) Turn on your Kaypro computer and insert the CP/M working disk containing UniForm into drive A. At this point you should have the CP/M system prompt "A>".

   If you are using a Kaypro 10 you won't have to insert a disk but you may have to press the ESC key to get to the CP/M system prompt "A0>".

2) Type the command:

   A>uniform <cr>

   At this point you should have the UniForm program menu.

3) Now type 2 to select program number 2 which is INITDISK.

4) You should now see a menu of supported disk formats. If the line above the table indicates that that there are more than one menu, you may access the other menues by typing a single digit. For example, if the menu on your screen is number 1, you can access menu number 2 by simply typing a 2. This arrangement exists on versions of UniForm that support more formats than could be displayed on one screen.

   For our example, we are using the Osborne 1 disk format which is disk format B.

5) At the bottom of the screen you will see a prompt line asking you which disk format number you want to use. To select the Osborne 1 format, simply respond with the the letter B.

6) At this point the menu has been erased and at the bottom of the screen is a message telling you to place the disk to be initialized to Osborne 1 format into drive B (Drive C for Kaypro 10). Below this message is a prompt line telling you to hit the RETURN key if you want to start initializing the disk, or any other key to abort and you will be returned to the previous menu.

   To continue with our example you should put a blank disk to be initialized to Osborne 1 format into drive B (Drive C for Kaypro 10) and then press the RETURN key.

7) Now in the middle of the screen you should see a message alternating between "Initializing" and "Verifying". This will continue until all the tracks are initialized. On occasion you may notice a "Retry" followed by a number flash on the screen. This is to tell you that INITDISK has detected an error while verifying the current track and is in the process of reinitializing that track. If the error persists and the retry count reaches 9, INITDISK will consider that track to be permanently bad and will continue with the next track.

8) When INITDISK is finished initializing the disk, the number of permanent errors detected will be given. If there were no permanent errors, then the disk is ready for use. Occasionally you will turn up a disk which has a permanent error. You shouldn't use this disk because it will only cause problems later.

   After you have read the message reporting the number of permanent errors, you should notice a message at the bottom of the screen telling you to hit any key to continue. At this point you should hit a key and you will be returned to the menu of disk formats.

9) When you are finished initializing disks, simply hit the RETURN key by itself when asked for the desired disk format number. At this point you should be back to the CP/M system prompt.

You should now have a disk that is ready to be used in an Osborne 1 computer (or a Kaypro computer using UniForm). We will use this disk later on in our examples.

Even though we created a disk to be used on the Osborne 1 computer, it should be obvious that we can select any of the disk formats in the table. This makes your Kaypro along with UniForm a very powerful combination!

3.2 Using SETDISK to Select a Disk Format

SETDISK allows drive B (Drive C for Kaypro 10) to work with a disk format other than the standard Kaypro format. After selecting the desired disk format using the SETDISK program, drive B (Drive C for Kaypro 10) acts just as before except that it is now operating with a different format. After running the SETDISK program, a disk which has been initialized to the selected disk format should then be placed into drive B (Drive C for Kaypro 10).

For our example, we will assume that you have a file on a Kaypro disk named "SAMPLE.TXT". The Kaypro disk should also contain "PIP.COM" and must be a bootable CP/M disk. We want to place the file "SAMPLE.TXT" on an Osborne 1 format disk (the one that we initialized in section 3.1). Use the following steps to perform the transfer:

1) Turn on your Kaypro computer and insert the CP/M working disk containing UniForm into drive A. At this point you should have the CP/M system prompt "A>".

   If you are using a Kaypro 10 you won't have to insert a disk but you may have to press the ESC key to get to the CP/M system prompt "A0>".

2) Type the command:

   A>uniform <cr>

   At this point you should have the UniForm program menu.

3) Now type **1** to select program number 1 which is SETDISK.

4) You should now see a menu of supported disk formats. For our example, we are using the Osborne 1 disk format which is disk format B. Type **B** to select Osborne 1 format.

   This command indicated that you want drive B (Drive C for Kaypro 10) on the Kaypro to be set to format B which is Osborne 1 format. You should also notice the message:

   Drive x set to: Osborne 1 (SD)

   where x indicates the drive letter that has been altered.

   This message is printed every time a "warm boot" is performed. The purpose of this message is to remind you that the drive has been altered to accept the displayed format.

This message will continue to be displayed at each warm start until one of the following conditions occur:

1) The Kaypro's power is turned off.
2) The reset button of the Kaypro is pushed.
3) The SETDISK program is used to select the Kaypro disk format.

5) We will now use PIP to copy the file to the Osborne 1 format disk. Since the CP/M disk in drive A should contain the PIP program, type the command:

A>pip b:=a:sample.txt <cr> (for Kaypro II/4)
A0>pip c:=a:sample.txt <cr> (for Kaypro 10)

The file will now be copied from drive A (Kaypro format) to the Osborne 1 format disk. It's just that easy! After PIP is finished copying the file, it will return to the CP/M prompt "A>".

Now that you can see how easy it is to copy a file from Kaypro to another format, you are probably wondering how to go in the opposite direction. In the above example, if the file "SAMPLE.TXT" was on the Osborne 1 disk and you wanted to copy it to the Kaypro disk, follow steps 1 thru 4 as described above. In step 5 use the following PIP command:

A>pip a:=b:sample.txt <cr> (for Kaypro II/4)
A0>pip a:=c:sample.txt <cr> (for Kaypro 10)

This will simply tell PIP to copy the file "SAMPLE.TXT" from the Osborne 1 format disk to the disk in drive A (Kaypro format). If you receive a "BDOS ERROR ON A: R/O" message, then you should type a **<ctrl> C** before issuing the PIP command.

4.0 UniForm File Copy Programs

File copy programs are included with the UniForm package to ease the burden of moving files between some non-CP/M computers and CP/M on your Kaypro.

The UniForm file copy programs were designed to be very easy to learn and use. You should become comfortable operating these programs after just a few minutes of use. The use of menues, prompt lines and easy to understand error messages will lead you thru every operation.

4.1 Common Features of the File Copy Programs

The file copy programs included in the UniForm package were written to be very similiar to each other in both appearance and operation. We will discuss the similiarities next before actually describing the operation of the programs.

4.1.1 Displaying Disk Directories

In the file copy program's menu, you will notice that you can display the directories of your disks. If you choose one of the directory options, you will always be prompted to put the appropriate disk into the disk drive and to press RETURN when ready. You may change disks any time you see that message.

After inserting the disk and pressing RETURN, the directory of the disk should be displayed on your screen. You should notice that every file name displayed in the directory has a number to the left of it followed by a colon. We will refer to this number as a file number. File numbers will be explained in section 4.1.2 of the manual.

The directory of a disk sometimes has more files in it than can be displayed on the screen. Your screen will display 60 file names. If you display a directory of a disk which has 123 files on it, it would take three screen images to display them. The first two screens would contain 60 file names each and the third screen would contain the remaining 3 file names. When you first display the directory, the first screen will appear containing 60 file names and the phrase "(screen 1 of 3)" will be displayed just above the first line of the directory. If there is more than one screen, you should also notice an instruction line just below the last line of file names. This instruction line will remind you that you may use the cursor up key to display the previous screen and the cursor down key to view the next screen of file names.

When you are done viewing a directory, hit the RETURN key to return to the menu.

4.1.2 Specifying File Ranges

When using the file copy programs, you will need to specify one or perhaps several files at the same time. Instead of typing all the file names or trying to find a pattern in these names, we will use a file range. A file range is a way of specifying one or more file names to be used in an operation.

To specify a file range we simply use the file numbers which are to the left of the file names when the directory is displayed (see section 4.1.1). To make things easier, a file directory is always displayed when you are asked for a file range. If the directory needs more than one screen, you may use the cursor up and cursor down keys to change directory screens while entering a range.

A simple range could consist of just a single file number or several file numbers seperated by blanks. Consecutive file numbers may be specified in an easier manner. The range '5-10' would specify file numbers 5 thru 10. To make your job of specifying ranges even easier, if you omit the starting file number, 1 will be assumed. Similiarly, if you omit the ending file number, the highest file number in the directory will be assumed.

Below are some examples of valid ranges:

2 5 7 11 <cr>	This range will specify file numbers 2, 5, 7 and 11.
-5 10-13 15 <cr>	This range will include 1 thru 5, 10 thru 13 and 15.
5 9- <cr>	The file numbers 5 and from 9 thru the last file in the directory will be included.
- <cr>	This simple but valid range will include all the files in the directory.

For your convenience, you may use '/' or ':' instead of the '-' shown in the above examples. There is no functional difference between those characters when specifying a range, the choice is yours.

4.1.3 Interrupting an Operation in Progress

It is often necessary to terminate an operation before the entire range of files specified are processed. An operation may be easily interrupted by pressing any key. You will then be asked if you want to stop this operation. If you really want to terminate it, press "y". If you changed your mind or pressed a key by accident, press "n" and the operation will continue.

4.1.4 Changing the CP/M user number

The file copy programs allow the user to select the CP/M user number to be used for file transfers. This option is provided mainly for use with the Kaypro 10 version where segmentation of the directory using user numbers is important, but it will work with floppy disks as well. If you are not familiar with user numbers, consult your CP/M user's guide or your dealer.

You will find this option listed under the "Misc. Functions" heading on the file copy program's main menu. The current user number is displayed in parenthesis directly after the "change CP/M user number" option.

Invoking this option will prompt you for a new user number to use. Valid user numbers are from 0 to 15.

4.1.5 Changing the CP/M disk drive

The file copy programs allow the user to select the CP/M disk drive to be used for file transfers. This option will only appear on your menu if the file copy program detects that you have more than one choice for this drive. Kaypro II or Kaypro 4 versions normally should not display this option because only two disk drives are provided and one drive must be used for the non-CP/M disk. On the Kaypro 10 version this option will appear because the hard disk is split into two CP/M drives and the floppy disk drive is used for the non-CP/M disk.

You will find this option listed under the "Misc. Functions" heading on the file copy program's main menu. The current disk drive is displayed in parenthesis directly after the "change CP/M disk drive" option.

Invoking this option will prompt you for a new disk drive to use.

4.2 MS-DOS/PC-DOS <-> CP/M File Copy Program

The MS-DOS/PC-DOS file copy program will allow you to copy files between a CP/M disk and an MS-DOS/PC-DOS disk.

Operation of this program is very simple as long as you understand the features described in section 4.1 above. To enter this program, simply select the MS-DOS/PC-DOS file copy program from the UniForm main menu. At this point, just select the operation you want from the menu and the program will do the rest.

If you need to initialize blank diskettes in the MS-DOS/PC-DOS format, you will find these formats supported in the INITDISK menu. To use INITDISK, see section 3.1.

IMPORTANT NOTES

This file copy program will copy any file between CP/M and MS-DOS/PC-DOS regardless of what type of file it is. But this doesn't mean that programs will work after they are copied. CP/M programs will not work under MS-DOS/PC-DOS and vice versa. If you have any questions about this please ask your dealer.

4.3 TRSDOS/LDOS to CP/M File Copy Program

The TRSDOS/LDOS to CP/M file copy program will allow you to copy files from a TRSDOS/LDOS disk to a CP/M disk. You should note that this file copy program only copies in one direction.

Operation of this program is also simple as long as you understand the features described in section 4.1 above. To enter this program, select the TRSDOS/LDOS file copy program from the UniForm main menu. At this point, just select the operation you want from the menu and the program will do the rest.

IMPORTANT NOTES

TRSDOS/LDOS programs will not work on a CP/M computer. This program will only copy ASCII text files properly. If you wish to copy Basic programs from TRSDOS/LDOS, they must be ASCII text files. To create ASCII text files from BASIC you must use the ",A" option of the SAVE command while in BASIC. Consult your BASIC manual for further details on the SAVE command. You should also be ready for extensive modification of the BASIC program to make it operate with the BASIC supplied with your Kaypro computer.

LDOS NOTES

The LDOS disks used with this program are assumed to have 40 tracks and the directory must be on track 20. Other LDOS formats will not work.

5.0 Limitations of UniForm and things to watch for

SETDISK works only with disks that were created by the CP/M operating system. If you have disk from a computer listed in the SETDISK menu and it was not created under CP/M, it will not work!

If you get an error message which looks something like:

BDOS err on A: R/O
or
BDOS err on B: R/O

Make sure that you type a **<ctrl> C** before issuing the PIP command.

The purpose of UniForm is simply to allow files to be copied from one disk format to another. UniForm doesn't know anything about what is being copied. Uniform will not alter the file or program being copied in any way.

Many programs need to be installed for the particular hardware that you are running on. When running the program, if the screen has garbage on it or if it doesn't look like it should according to the manual, then it probably needs installation. Consult your manual for the proper installation instructions.