RELEASE NOTICE
MONARCH
MP/M II DV1.4

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Introduction

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The 1.4 release of MP/M II is being shipped to you on two 8-inch single-sided,
single-density floppy disks. Diskette #1 is a bootable diskette. This
release of MP/M II DV1.4 replaces all prior releases of Monarch MP/M II. Here
is an overview of the material that is covered in this release notice:

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Before you begin

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1. Hardware Requirements

This release of MP/M II requires that Monarchs with a 10MB Winchester have an
IPL PROM version 2.2F or higher installed. Monarchs with a 46MB Winchester
must have an IPL PROM version 2.2G or higher installed. Appendix D of the
Monarch MP/M II User's Guide (Rev. C) tells you how to determine if your
Monarch has a correct IPL PROM installed. Appendix D also tells you how to
install a new IPL PROM.

2. Port Connections

Make sure that a console is attached to asynchronous port 00.

Rev. A   1

3. Computer Warm-up

● Always wait at least 30 minutes after turning on the computer before you format a floppy disk or the Winchester hard disk. If you format a disk while it is cold, you may find errors when you later attempt to read the disk.

● Be sure that you have read your Monarch User's Guide and properly installed your Monarch computer.

WARNING

It is very important that you do not alter the distribution disks. The steps in this section show you how to make a copy of the distribution disks. Use the copy for your work and store the originals in a safe place.

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4. Supplies

If you received MP/M II on distribution diskettes, you should have at least two new floppy disks on hand. This is because you will make a copy of each MP/M II distribution disk.

You will also need your Monarch's Bad Track List, if one was shipped with your Monarch.

Previous MP/M II Users

If You Have MP/M II DV1.3D or Earlier Installed

An enhancement to the disk parameter block in DV1.3E of MP/M II makes DV1.3E and DV1.4 totally incompatible with previous versions of MP/M II or with most versions of other Digital Research operating systems (MP/M-86, CP/M-80). MP/M II DV1.3E and DV1.4 are compatible with MP/M-86 DV1.3 because they use the same disk parameter block. If you have a version of MP/M II previous to DV1.3E installed on your Winchester hard disk, you must back up your data to floppy disk or tape and reformat the Winchester before you install MP/M II DV1.4. Once your data is backed up, follow the instructions under GETTING STARTED FOR NEW USERS to install MP/M II DV1.4 onto your Winchester hard disk.

If You Have MP/M II DV1.3E Installed

Updating the MP/M II DV1.3E system you've already installed on the Winchester hard disk is very easy. Just PIP all files from both diskettes onto the Winchester and then run DYNASYS to incorporate the enhanced XIOS1.SPR and XDOS.SPR files into the operating systems. Your Monarch MP/M II Users Guide describes how to run DYNASYS.

In most cases, your Monarch computer arrives without any software on the hard disk. We recommend that you transfer the operating system files from the Distribution Diskettes or the cartridge tape onto your hard disk system.

Depending on whether your distribution media is diskette or tape, follow the instructions in the appropriate section:

To Install From	Follow
Diskettes	The steps below
Cartridge tape	Section 1.2 in the <u>Monarch MP/M II Users Guide</u>

The steps below will show you how to:

1) make backup copies of your Distribution Diskettes,
2) transfer your MP/M II software onto your Winchester hard disk, and
3) reconfigure your system to boot from the hard disk.

The two Dynabyte MP/M II Distribution Diskettes contain the complete MP/M II operating system and utility files. You should always use your backup copies whenever you need to boot from a diskette; retain your original diskettes for safekeeping.

When MP/M II is first booted from Distribution Diskette #1, drive A is automatically assigned to the floppy drive, drives B and C are assigned to the Winchester hard disk and drive D is assigned to the memory disk.

The Dynabyte utility DYNASTAT displays your current system configuration. This is how the DYNASTAT command would display the original configuration:

```
 _____
|                        |
|     Disk Drive         |
|     Assignment         |
|------------------------|
|     A:= Fl             |
|     B:= WINI1          |
|     C:= WINI2          |
|     D:= MEM1           |
|_____|
```

To have quick and convenient access to the MP/M II operating system on the hard disk, you need to be able to boot the system directly from your hard disk. To do this, you must reassign drive A to the Winchester hard disk.

The steps described below will change the drive assignments so that you will be able to boot from the hard disk. When you are finished, your new drive assignments will look like this:

```
 _____
|    Disk Drive        |
|    Assignment        |
|----------------------|
|    A:= WINI1         |
|    B:= WINI2         |
|    C:= MEM1          |
|    D:= F1            |
|                      |
|_____|
```

You may wish to reconfigure MP/M II later in some other manner. This
procedure describes a standard first-time installation for a Monarch computer
with a 19MB or 46MB Winchester hard disk.

Overview

1. Boot MP/M II from Distribution Diskette #1.

2. Format the Winchester hard disk.

3. Copy the MP/M II operating system and utility files onto the Winchester
    hard disk.

4. Log onto the Winchester hard disk.

5. Format two diskettes.

6. Copy the MP/M II operating system onto one of the formatted diskettes.

7. Copy the MP/M II utility files from the Winchester onto the formatted
    diskettes.

8. Reconfigure your disk drives.

9. Install MP/M II onto the Winchester hard disk.

10. Reboot MP/M II from the Winchester hard disk.

STEP 1 — Boot MP/M II from Distribution Diskette #1

1. Turn on the computer and the console. The computer will run a series
   of diagnostics, and then prompt you for the boot medium:

   Boot Menu:
              F - Boot Floppy   H - Boot Hard Disk
              T - Boot Tape   R - Repeat Diagnostics

2. Insert Distribution Diskette #1 in the floppy drive and turn the lever down. The label on the distribution diskette should face up and the long open slot should point toward the computer.

3. Type F to boot from the floppy drive.

   Your Selection? F

4. You will see the MP/M II operating system prompt ØA>. Your system is ready to accept commands.

   ØA>

STEP 2 — Format the Winchester hard disk
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Formatting the Winchester will erase all files that may exist on that drive. For first time installation there should be no files on the hard disk. If there are, be sure to make a backup copy of those files by copying them to floppy disk to tape.

1. At the system prompt ØA>, type:

   ØA>FORMAT<CR>

2. The FORMAT menu will appear on the screen and you will be prompted for a selection. Type FP to format the Winchester drive.

   Your selection ? FP<CR>

3. Enter 1 when you are prompted for the number of physical drive to format.

   Enter format option or <RETURN> to exit option: 1<CR>

4. FORMAT will report the size of drive 1. FORMAT will then either tell you that it will use a previously created bad track table or that it will create a NEW bad track table. It will also remind you:

   This option will ERASE EVERYTHING on the drive
        that you have just selected.

   Press <RETURN> to start format (any other key exits to menu)<CR>

5. Formatting will take about 1Ø minutes. When completed, the screen will display a bad track table and flag all the bad sectors. The operating system automatically substitutes good tracks for any bad ones which may be flagged.

   Your next action depends on whether or not you received a Bad Track List with your Monarch computer.

If You DID NOT Receive a Bad Track List:

If your Monarch's shipping carton did not contain a Bad Track List, then type a <CR> to accept the Winchester Bad Track Table. Proceed to #6 below.

If You DID Receive a Bad Track List:

If your Monarch's shipping carton contained a Bad Track List but did not contain a notice that the Winchester was formatted at the factory (and the bad tracks entered), you must make sure that all bad tracks are listed in the screen display. To do this you will need the Bad Track List that was shipped with your Monarch. Check the values listed under its column headed LOGICAL TRACK against the values listed in the screen display. You must manually enter into the software's Winchester Bad Track Table any logical track values not already displayed in the table.

```
┌─────────────────────────────────────────────────────────────────┐
│                              NOTE                                 │
│                                                                   │
│         You must enter bad tracks in ASCENDING order,             │
│         lowest value to highest.                                  │
│                                                                   │
└─────────────────────────────────────────────────────────────────┘
```

To enter a bad track in response to the following prompt, type:

Enter one of the above options or <RETURN> to accept: **Tn**

where:

n is the logical track number. This value is found on the Bad Track List under the column headed LOGICAL TRACK.

The logical track number you enter will then appear in the Winchester Bad Track Table. Continue in this manner until you have entered all bad tracks from the Bad Track List. Then type a <CR> to exit the Winchester Bad Track Table:

Enter one of the above options or <RETURN> to accept:**<CR>**

6. The next screen will display the size of the Winchester hard disk and your choices of logical drives for your system. We recommend choosing option B for two logical drives:

    Select option or <RETURN> for option B:**B<CR>**

7. When the message below appears, press <CR>:

    Operation Complete, press <RETURN> to resume:**<CR>**

8. Select the EX option and press <CR> to return to the operating system prompt.

    EX<CR>

STEP 3 — Copy the MP/M II files onto the Winchester hard disk

Distribution Diskette #1 should still be in the floppy disk drive. Use the MP/M II PIP utility to copy the MP/M II files onto the Winchester.

1. Type:

    0A>PIP B:=A:*.*[OVR]<CR>

    The screen will display the file names as they are being copied onto the hard disk.

2. Wait until your console displays the system prompt 0A>.

3. Log onto the Winchester hard disk.

    0A>B:<CR>

    0B>

4. Take Distribution Diskette #1 out of the floppy drive.

5. Insert Distribution Diskette #2 into the floppy drive and type the following command:

    0B>DSKRESET<CR>

6. Copy the files from Distribution Diskette #2 onto the Winchester hard disk.

    0B>PIP B:=A:*.*[OVR]<CR>

7. Wait until your console displays the system prompt 0B> and then remove Distribution Diskette #2 from the floppy drive.

STEP 4 — Format two diskettes

Remember that formatting a disk erases everything that is already on it. So be sure that the diskette you format doesn't have data on it that you need. Remember also that you can write on an 8-inch diskette only if the write-protect notch is covered.

1. Make sure that your Distribution Diskette #2 is not in the floppy disk drive.

2. Insert a blank diskette into the floppy drive. Insert the diskette with its label face up. If the diskette has no label, insert it with the smooth unseamed side up. This diskette must be in the drive before you try to run the FORMAT utility.

3. Type:

   ØB>FORMAT A:SS1<CR>

   where:

   A is the floppy drive
   S designates single-sided diskette
   S designates single-density
   1 designates 64 directory entries

   Your system will confirm these values before prompting you to press
   the carriage return to start the actual formatting of the diskette.

4. Press <CR> to start the formatting. If FORMAT tells you that the
   diskette is bad, verify that it is in the drive properly and that the
   floppy drive door is closed completely. Try to format again. If
   this doesn't work, try another diskette.

5. When the format operation is complete. your console will display the
   message below. To return to the system prompt, type <CR>.

   Format Completed O.K., press <RETURN> to continue:<CR>

   You will see the system prompt again.

   ØB>

6. Repeat steps 1 through 5 to format another diskette.   Leave
   the newly formatted diskette in the drive.

STEP 5 — Copy the MP/M II operating system onto a formatted diskette
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After you have formatted the two diskettes. you will make one of them a system
diskette so that you can boot from it. This is done by using DYNASYS to copy
the MP/M II operating system onto one of the diskettes you just formatted.

1. At the system prompt, type:

   ØB>DYNASYS<CR>

2. Select the CD (Create System Disk) option of DYNASYS.

   Enter menu item ? CD<CR>

3. Select the WR option from the Create System Disk menu.

   Your selection ? WR<CR>

4. You will be asked where the system files are located and onto which
   drive they will be written.

```
(WR) System files Located on Disk Drive (A-P)   ?B<CR>
         Write System To Disk Drive (A-P) ? A<CR>
```

5. You will then be asked if you wish to accept the default parameters in GENSYS.

Do You Want To Accept All The Default Parameters In GENSYS (Y/N)? Y<CR>

6. You will be prompted to place the diskette in the drive:

Please Place Proper Disks In Drive, Then Press <RETURN> To Continue:

Press <CR> to start the process. The system displays:

Please Wait. Writing System to Floppy Drive A.

7. The screen will then rapidly scroll during the GENSYS process. When the process is completed, you will see:

Press <RETURN> to Display Menu.

8. Press <CR> to return to Create System Disk menu.

9. Select the EX option and press <CR> to exit to the main DYNASYS menu.

EX<CR>

10. Select the EX option and press <CR> to exit to the operating system.

EX<CR>

You should see:

DYNASYS COMPLETE
0B>

11. Leave the new system diskette in the floppy disk drive.

STEP 6 — Copy the MP/M II files from the Winchester hard disk to the
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formatted diskettes
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You should still be logged onto the Winchester hard disk drive, as indicated
by the 0B> prompt. Be sure also that your new diskette with the operating
system is still in the floppy disk drive. Enter the following command exactly
as shown because the spaces are very important.

1. 0B>SUBMIT COPY1 B A<CR>

    Your screen will display the file names as they are copied from the
    Winchester onto the diskette. When this is complete you will
    receive the following message:

COPY1 complete.

The system prompt will reappear:

OB>

2. Remove the diskette from the drive and label it COPY -- MP/M II Disk 1 of 2 DVn.n, where n.n is the version number on the Distribution Diskette

3. Insert the second formatted diskette into the floppy drive. Type:

   0B>DSKRESET<CR>

   0B>SUBMIT COPY2 B A<CR>

4. Your screen will display the files as they are copied from the Winchester onto the diskette. When this is complete you will receive the following message:

   COPY2 complete.

   The system prompt will reappear:

   0B>

5. Remove the diskette from the drive and label it COPY — MP/M II Disk 2 of 2 DVn.n, where n.n is the version number on the distribution diskette.

OPTIONAL — STEP 7 — Perform only if you use expanion I/O boards
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The XIOS1.SPR file in this version of MP/M II provides more memory space for Resident System Processes (RSPs) by not supporting any expansion I/O boards. The section in this notice titled AVAILABLE MEMORY FOR RSPs explains this in more detail.

If you have any expansion I/O boards in your Monarch, follow these steps:

   0B>ERA XIOS1.SPR<CR>
   0B>REN XIOS1.SPR=XIOS1.EXP<CR>

STEP 8 — Reconfigure Your Disk Drives
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You will next reconfigure your disk drives with DYNASYS so that MP/M II will boot directly from the Winchester hard disk. To do this, you must run DYNASYS to reassign the Winchester as logical drive A. You should still be logged onto the Winchester disk drive 0B>.

   1. Type:

OB>DYNASYS<CR>

2. Select the DA option from the main DYNASYS menu.

   Enter Menu Item? DA<CR>

3. Select A when it asks you which drive you want to change.

   Drive to change A-P (<RETURN> To Leave As Is)? A<CR>

4. The following prompts appear, line by line. Type the characters that
   are underlined below:

   A: = ? <RETURN> To Set To Null WINI1<CR>
   B: = ?   WINI2<CR>
   C: = ?   MEM1<CR>
   D: = ?   F1<CR>
   E: = ?   <CR>

   After you enter that last carriage return, the top part of the screen
   display should look like this:

   A: WINI1
   B: WINI2
   C: MEM1
   D: F1

   The Winchester is assigned to two logical drives -- A and B -- be-
   cause it was divided into two drives when you formatted it. The
   memory disk will now be drive C and the floppy drive on your Monarch
   will be drive D.

5. Press <CR> to confirm the new assignments. You will return to the
   main DYNASYS menu.

NOTE

These new assignments will not be in effect until
you write this configuration onto the Winchester
(using the CD option) and then reset the comput-
er.

STEP 9 — Install a new system on the Winchester
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You will now generate a new system onto the Winchester hard disk while you
are still in DYNASYS.

1. From DYNASYS, you will be prompted to select a menu item.

Enter Menu Item ? CD<CR>

2. You will be prompted to select an option from the Create System Disk
    Menu.

    Your Selection ? WR<CR>

3. You will be asked where the source files are located and then onto
    which drive to write the new system. For the current configuration,
    the source and destination drives are the same.

    (WR) Source Files Located on Disk Drive (A-P) ? B<CR>
    Write System To Disk Drive (A-P) ? B<CR>

    Do You Want To Accept All The Default Parameters In GENSYS (Y/N) ? Y<CR>

    Please Wait. Writing system to Winchester Drive B.

4. The screen will rapidly scroll during GENSYS. When the process is
    completed, you will see:

    ** GENSYS DONE **

            Press <RETURN> to Display Menu: <CR>

    Press <CR> to return to the Create System Disk menu.

5. Press EX<CR> to return to the main DYNASYS menu.

6. Press EX<CR> to return to the operating system prompt. You will see:

    DYNASYS COMPLETE
    0B>

STEP 10 — Reboot from the Winchester hard disk
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You may now boot the system from the Winchester hard disk. The new system
configuration that you entered in STEP 8 will become effective when you boot
from the hard disk.

1. Remove any diskette from the floppy disk drive.

2. Press the reset button on the rear of the computer.

3. The computer will run a series of diagnostics and prompt you for the
    boot drive. Select H to boot from the hard disk.

    Your Selection ? H

4. You are now logged onto the Winchester hard disk, logical drive A.

    0A>

Your system is now configured as a four-drive system. Drives A and B are on the Winchester hard disk, drive C is the memory disk, and drive D is the floppy disk drive. This can be seen from the following list of disk drive assignments, as it would appear using DYNASTAT.

Disk Drive Assignment
A:= WINI1
B:= WINI2
C:= MEM1
D:= F1

New Features

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1. The DV1.4 release of MP/M II has increased the available memory space for Resident System Processes (RSP). The table on page 15 of this notice shows how much space in hex bytes is available for RSPs as a function of the number of users and which XIOS1 file you use. To give you this extra space for RSPs, MP/M II DV1.4 has removed from the XIOS1.SPR file its support for expansion I/O boards. However, you may still use MP/M II DV1.4 with expansion I/O boards by following the steps under the section titled AVAILABLE MEMORY FOR RSPs. In so doing you have less memory space available for RSPs.

2. MP/M II DV1.4 provides a larger Winchester Bad Track Table (up to 48 entries) to better support 46MB Winchester hard disks.

Software Fixes

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1. This revision allows one or two-character file extensions to be used with the TAPE utility. Before, TAPE required that file extensions have three characters.

2. The TAPE utility now correctly handles .TIP files. When the end of a cartridge tape is reached, TAPE prompts you to insert a new tape and waits for you to enter a <CR>.

Unsupported Features

Currently unsupported features include: the BACKUP utility; the rear panel RS-422 and MODEM ports; and serial expansion boards (unless you use the XIOS1.EXP file as described below).

With the DV1.4 release of MP/M II, a second floppy disk (F2) is no longer supported. This streamlines the XIOS1.SPR file, improving system performance and increasing memory space for RSPs.

Known Bugs

1. Files greater than 512K in user 0 set to [SYS] attribute are invisible from other user areas.

2. Setting password protection on executable files sometimes makes them accessible only once from a drive other than the system drive. Other times such files are totally inaccessible. The problem does not exist when you are logged onto the system drive.

3. The DYNASYS and DYNASTAT screens don't display correctly on terminals set to 19,200 baud.

MP/M II DV1.4 is distributed with two XIOS1 files — XIOS1.SPR and XIOS1.EXP. MP/M II by default uses XIOS1.SPR to take advantage of the increased available memory space for Resident System Processes (RSP). The default XIOS1.SPR file gives you access to the memory space shown below but it does not support any expansion I/O boards.

On the other hand, the XIOS1.EXP file supports expansion I/O boards but gives you less memory space for RSPs. The following table shows you the trade offs. As you can see, available space is also a function of how many users the system is configured for.

| | Memory Space Available | |
No. of Users	With XIOS1.SPR	With XIOS1.EXP
1	500H	400H
2	500H	400H
3	500H	400H
4	500H	400H
5	300H	200H
6	300H	200H
7	300H	200H

Typical RSPs such as ABORT, MPMSTAT, SCHED and SPOOL each consume 100H bytes. Therefore MP/M II as a four-user system using the XIOS1.SPR file could easily accommodate five such RSPs. However, a seven-user system using the XIOS1.EXP file could have only two such RSPs.

If You Use an Expansion I/O Board

If your Monarch computer has an expansion I/O board installed, you must use the XIOS1.EXP file. Optional Step 7 in the GETTING STARTED instructions in this notice shows you how to incorporate the XIOS1.EXP file into your system configuration. The important points are:

1. Be logged onto the Winchester hard disk

2. Erase the XIOS1.SPR file.

3. Rename the XIOS1.EXP file to XIOS1.SPR.

3. Run DYNASYS to incorporate the new XIOS1.SPR file into the operating system.

This section explains in more detail what a Bad Track List is and how to use it. A Bad Track List may or may not have been included with your Monarch computer. The Bad Track List reports any bad tracks that were detected on the Winchester hard disk during surface analysis testing in the factory. If you did not receive a Bad Track List, the Winchester hard disk has no bad sectors.

If you received a Bad Track List, it lists the locations on the Winchester hard disk where bad tracks were found during factory testing. To ensure that your system performs properly, you must enter these bad tracks into MP/M II's Winchester Bad Track Table when you format your Winchester hard disk.

You don't have to enter bad tracks, however, if you received a notice reporting that the Winchester hard disk in your Monarch was already formatted at the factory. If you received such a notice, the bad tracks have already been entered for you. However, save the Bad Track List and this information in case you ever need to enter a bad track.

The MP/M II FORMAT utility performs a short surface analysis of your Winchester as it formats the drive If this surface analysis shows a track to be defective, FORMAT places that logical track number in the Winchester Bad Track Table on the disk. These tracks are not used by the operating system. When the operating system encounters one of these tracks, it uses one of the alternate tracks reserved for this purpose.

However, the FORMAT utility may not detect all of the bad tracks on the hard disk because of the limitations of the surface analysis it performs. A stringent surface analysis would take hours to complete. This is done in the factory under ideal conditions with a device specifically designed to detect bad or marginal sectors on the Winchester. The Bad Track List is enclosed with any Monarch where bad sectors were found.

How to Enter Bad Tracks

When you format a Winchester hard disk, the FORMAT utility produces a Winchester Bad Track Table. The following is an example of such a table for a 19MB Winchester hard disk.

Winchester Drive 1 Bad Track Table					
Physical 1)	2)	3)	4)	5)	6)
Drive 7)	8)	9)	10)	11)	12)
1 13)	14)	15)	16)	17)	18)
19)	20)	21)	22)	23)	24)

"T*****"   (Logical bad track number)
"D*,H*,C***"   (Drive, head, cylinder number)

Enter one of the above options or <RETURN> to accept:

You are prompted to either enter bad track(s) or accept the Winchester Bad
Track Table. At this point, you should enter in any Logical Track values from
the Bad Track List that don't already appear on the screen. Because the
logical track number is a function of the head and cylinder values. you can
ignore the HEAD, CYLINDER, and SECTOR values from the list.

```
                            NOTE

        You must enter bad tracks in ASCENDING order,
        lowest values to highest.
```

To enter a bad track, type:

    Enter one of the above options or <RETURN> to accept:Tn<CR>

    where:

    n is the logical bad track number. This value is found on the Bad Track
    List under the column headed Logical Track.

The logical track number you enter will then appear in the Winchester Bad
Track Table. You are then prompted to enter in another bad track or <CR> to
accept the Winchester Bad Track Table shown. Enter each logical track on the
Bad Track List that does not already appear in the Winchester Bad Track Table.

When you have entered all bad tracks from the Bad Track List. type a carriage
return to exit the Winchester Bad Track Table:

    Enter one of the above options or <RETURN> to accept:<CR>

You should keep the Bad Track List with your Monarch and add to it any other
bad tracks you encounter during operation. This lets you enter any and all
bad tracks if the Winchester Bad Track Table is ever erased.

Bad Tracks After Installation

MP/M II will rarely encounter an additional bad track on the hard disk.
However, if you receive a message indicating a BDOS error, bad sector, then

run the Check Drive Format option of the FORMAT utility to determine if there is a bad area on the hard disk. (See Section 2 of the Monarch MP/M II User's Guide.)

If there is a bad area on the hard disk, you must reformat your Winchester. The FORMAT utility should automatically detect the bad track and replace it with a good track. You must first back up all of the files on the hard disk. You may use the TAPE or FILESAVE utilities to do this. Then boot from a copy of the original distribution diskette and FORMAT the drive according to the instructions in the Monarch MP/M II User's Guide. The Winchester Bad Track Table should show a new entry for the added bad track. You may then restore all of your files to the hard disk to resume normal operation.