backpack

diskette drive

User's Guide

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FEDERAL COMMUNICATIONS COMMISSION
RADIO FREQUENCY INTERFERENCE STATEMENT

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by using one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

MODIFICATIONS

Changes or modifications not expressly approved by Micro Solutions could void the user's authority to operate this equipment.

SHIELDED CABLES

Table of Contents

1.   Introduction

Congratulations on your decision to purchase backpack, the easy-to-install diskette drive for PCs, XTs, ATs, PS/1s, PS/2s, laptops, notebooks and compatibles. This manual provides information regarding the installation and use of backpack.

1.1. System Requirements

- Check the system requirements listed here to make sure you have everything needed for proper operation of backpack

- IBM   PC,   XT,   AT,   PS/1,   PS/2,   laptop,   notebook,   or   compatible computer with:

    - 100% IBM compatible parallel printer port.

    - 512K memory or above.

    - DOS version 3.0 or above or
      Windows 95.

2.   Installation

The backpack drive and software must be installed before you can use the backpack drive. The step-

by-step instructions in Sections 2.1 and 2.2 will help you perform the installation.

2.1. Drive Installation

Installing the backpack drive is a straightforward process. It consists of plugging the drive into your computer's parallel printer port. The instructions in this section will guide you step by step through the installation procedure. Perform the following steps to install the backpack drive:

1) Locate the parallel printer port connector on your computer. If you have more than one parallel printer port, it doesn't matter which one you use for backpack.

2) If you have a printer connected to the parallel printer port, disconnect it and attach that printer cable to the connector labeled "Printer" on the backpack drive.

3) Connect the cable supplied with the backpack to the connector labeled "Computer" on the back of the backpack drive.

4) Connect the backpack cable to the printer port on the computer.

5) Plug the backpack power unit into a wall outlet and attach the power cable to the power connector on the backpack drive.

6) Set the backpack power switch to the ON position.

2.2. Software Installation

The SETUP program on your backpack SETUP diskette will install the software for you automatically. This procedure assumes your diskette drive letter is "A". If you use a different drive letter, substitute it in the procedure. Use the following procedure to run SETUP:

DOS Installation Procedure:

1) Start your computer as you normally would.

2) Place your backpack SETUP diskette into drive A:.

3) Run the SETUP program with the following command at the DOS prompt:

```
A:\SETUP (Press Enter)
```

Windows Installation Procedure:

1) Turn on the computer and start Windows as you normally would.

2) Place your backpack SETUP diskette in A:

3) In Windows File Manager Choose: File, Run …, or from the Windows 95 desktop choose Start-Run and type in

```
A:\SETUP
```

4) Click OK.

The backpack diskette includes a file called README.TXT that contains information gathered since this guide was written. You can view or print this text file using NOTEPAD under Windows. Under DOS, you can use the DOS EDIT utility to view or print this file.

The software should now be installed on your system. Remove the backpack **SETUP diskette and put it in a safe place. Restart the computer before using the** backpack **drive. Either power the computer off and then back on or hold down CTRL, ALT, and DEL on the keyboard. Under Windows 95, make sure to "Shut Down" the system before rebooting.**

You have now completed the installation, and the backpack drive is ready to use. The remaining chapters in this guide can be referred to when needed.

2.3. Uninstalling BACKPACK

If you run the SETUP program from Windows a second time you will be given the choice to

- Re-install the sofware. The installation may be repeated, perhaps to install a newer version, or
- Un-install the software, and remove backpack from the system, or
- Cancel and make no changes.

If you run SETUP a second time from MS-DOS the installation will be repeated. To remove backpack when running MS-DOS only:

1. Using a text editor such as EDIT open the file C:\CONFIG.SYS.
2. Locate the line referencing the backpack driver BACKPACK.SYS. It will be similar to:

```
device=c:\backpack\backpack.sys
```

3. Delete the line or place the word REM at the beginning.
4. Save the modified CONFIG.SYS.
5. Delete the backpack files from your system:

```
        BACKPACK.SYS
        BPDRIVES.EXE
        BACKFMT.COM
        BPFORMAT.EXE
```

3.   Using Backpack

Backpack is used just like any other disk drive. It has its own drive letter. You can access either from your programs by referring to the drive letter.

3.1. Backpack's Drive Letters

Just as your existing disk drives are referred to by letters (A:, B:, etc.), backpack has a drive letter associated with it. The letter to be used is assigned by DOS and is determined by which letters are already in use on your system. Backpack will get the next available letter in alphabetical order. For example, if you have two floppy drives, using letters A: and B:, the backpack will be drive C. In a typical hard disk system where the floppy drives are A: and B: and the hard disk is C:, the backpack will be drive D:.

When your computer is powered up, the backpack software driver will display a message on the screen to tell you the drive letter. The message will look like this:

```
The following BACKPACK drive is available:
Drive D:
```

In this case, you will refer to the backpack as drive D: when you are accessing it through any software packages.

You can check the backpack drive letter at any time by one of three methods:

A) Insert the SETUP diskette in drive A and type:

A:bpdrives

B) From the hard drive in DOS, or in a DOS window in Windows, type:

c:\backpack\bpdrives

(This example assumes that the **backpack** software was installed in the default subdirectory C:\ BACKPACK.)

C   Under Windows File Manager or Windows 95 My Computer and Explorer the backpack will have an icon and drive letter.

The BPDRIVES command will cause the drive letter message to be displayed on the screen.

3.2. The NONSTOP Option

When the computer loads the software driver for the backpack drive, the driver will scan the parallel printer ports looking for backpack drives. If the driver does not find a backpack it will issue an error message and wait for you to press the ESC key to acknowledge the message. This could become annoying if the backpack drive isn't always connected to the computer.

The NONSTOP software option can be used to suppress the error message that is displayed if no backpack drive is found when the system starts. Perform the following steps to specify the NONSTOP option:

1) Using a suitable text editor or word processor (such as DOS EDIT or Windows NOTEPAD), bring up the CONFIG.SYS file from your hard drive for editing. Typically CONFIG.SYS will be found in the C:\ directory.
2) Locate the line that references BACKPACK.SYS and add NONSTOP to the end of it as shown below:

```
device=c:\backpack\backpack.sys nonstop
```

Be sure to type a space before NONSTOP.

3) Save the modified CONFIG.SYS file.
4) Restart the computer by exiting or shutting down Windows and holding down CTRL, ALT, and DEL.

NOTE: If backpack is connected and powered on, but still reports the error "A backpack … drive was not found..." during boot, refer to the Troubleshooting section (Appendix A) of this User's Guide. Do not install this NONSTOP option, since it will only suppress the error message and will not correct the problem.

3.3. Changing the Internal Drive ID

This section is relevant only if you are connecting more than one backpack to your computer.

Each backpack drive is assigned an internal drive ID when it is manufactured. The ID is a number between 0 and 99 and initially is the last two digits of the backpack's serial number. When more than one backpack is connected to a computer, the backpack driver software assigns DOS drive letters in ascending drive ID order. The lower the drive ID number, the lower the DOS drive letter.

For example, assume that you have a computer with two floppy drives (A: and B:) and a hard drive (C:). Assume also that you are connecting the following two backpack drives: Serial number xxxxxx35 and Serial number xxxxxx17.

Drive letter D: will be assigned to the drive with serial number 17 and drive letter E: will be assigned to the drive with serial number 35.

There are two situations in which you may need to alter a backpack drive ID number:

1) If you are connecting two backpack drives to one computer and they happen to have the same last two digits in the serial number. In this case the backpack software will locate only one of the drives and assign it a drive letter. The other drive will not be recognized. Assigning a new drive ID to one of the drives will allow both drives to be recognized.
2) If you are connecting two backpack drives to one computer and you would like to reverse the drive letters. Since drive letters are assigned according to drive ID numbers, the order of the drives can be reversed by assigning new drive ID numbers.

Drive ID numbers are used only for establishing the order of drive letters; they serve no other purpose. Perform the following steps to alter a drive ID number:

1) Connect the backpack drive whose ID number you will be altering to a parallel printer port. Disconnect all other backpack drives from the computer.
2) Place your backpack SETUP diskette into drive A:. Make sure that you have your DOS system prompt A:\> before you proceed to the next step.

3) Run the SETID program with the following command:

```
A:\>setid↵
```

The program will ask you to select a new drive ID.

4) After you exit the program, remove the backpack SETUP diskette from drive A:.

5) Move the backpack power switch to the OFF position for a few seconds, then move it back to the ON position.

6) Attach all the backpack units to the computer.

Restart the computer by holding down CTRL, ALT, and DEL

Appendix A Appendix A Troubleshooting

Backpack should not affect the operation of your existing computer software and hardware. If there seems to be a problem using the computer or backpack after installation, read the following problem descriptions to see if they match the problems you are experiencing. Review the README.TXT file included on the software diskette (see Section 2.2) and see if your problem is discussed there. If you can't resolve the problem, review Appendix B, Technical Support.

When you are trying to access the drive, an "Invalid drive specification" message appears on the screen.

This can occur if you are not using the correct drive letter to access backpack. Be sure the letter you use is the one indicated on the screen when the computer starts. Review Section 3.1 for information on drive letters.

This can also occur if you have not run SETUP to install the backpack software or if you have not restarted the computer after running SETUP. Review Section 2.2 for information on software installation.

The backpack drive doesn't work. The message "A backpack drive was not found" appears when the computer starts.

This will occur if the power to the backpack drive is not on when DOS is loaded. Make sure the backpack power switch is in the ON position and that the power unit is plugged in securely.

This can also occur if a hardware conflict exists. Make sure you don't have two printer ports set to the same address, and make sure you have a completely IBM compatible printer port.

After you install the backpack, the printer doesn't work properly.

This can occur if the power to the backpack is not on. In some cases, the printer will appear to work even though the power switch is off. For reliable operation, make sure the backpack power switch is in the ON position and the power unit is plugged in securely.

Specific printer compatibility information is available and updated regularly on Micro Solutions' WebSite (See Appendix B).

After you have connected two backpacks, only one of them is assigned a drive letter. Either drive works properly if connected by itself.

This can occur if two or more backpacks are set to the same internal drive ID number. When more than one backpack is installed on the same computer, they must all have distinct internal drive ID numbers. Drive ID numbers are assigned at the time of manufacture but can be changed with the SETID program. Refer to Section 3.3 for information on changing ID numbers.

The message "LPT1: not found" appears when you are trying to use the printer.

This can occur if the power to the backpack is not on when DOS is loaded. Make sure the backpack power switch is in the ON position and that the power unit is plugged in securely. Restart the computer using CTRL-ALT- DEL.

The message "BACKPACK.SYS Error: Unrecognized parameter in CONFIG.SYS" appears when the computer starts.

In the CONFIG.SYS line where BACKPACK.SYS is loaded, an invalid parameter was specified. The invalid parameter will be displayed, and you will have to press the ESC key to continue.

Troubleshooting Notes

- The backpack Diskette Drive is supported in DOS and Windows/Windows 95 environments only. No support is available for OS/2, Windows NT or other operating systems.

- The backpack Diskette Drive is a non-bootable device. If your computer does not have a built-in diskette drive, transfer the supplied backpack device driver software onto your computer's hard drive via serial communications (such as Laplink®). You can also download the backpack Floppy Drive software via modem from our Technical Support Bulletin Board service (BBS) at 815.756.9100 (8 N 1), or via internet at: **http://www.micro-solutions.com**

- backpack Diskette Drive should be connected directly to the parallel port of your computer, or to the pass-through port of another Backpack. The use of extension cables, printer sharing devices, or software security keys between the backpack and the parallel port could produce unreliable results. Security Keys (dongles) should be connected to the pass-through "printer" port on the back of the backpack.

- The backpack Diskette Drive's device driver (BACKPACK.SYS) is installed in the CONFIG.SYS by default and will be assigned the next available drive letter by DOS. As an alternative, you can load the Backpack device driver from the AUTOEXE.BAT or the command line by using the DEVICE.COM program found on the installation diskette. Complete usage instructions are included in the file DEVICE.TXT.

- If you run SETUP from MS-DOS the program will ask "Do you want the first backpack drive to be drive B: [Y/N]". Windows 95 does not allow for the backpack Diskette Drive to operate under the B: drive assignment and that option will not be available.

Compatible Power Supplies for Backpack Diskette Drives

- All backpack 5.25" Diskette Drives (Models 1231, 3631, and 012525) use a 12VAC or 13.7VAC power supply. Connecting a lower voltage power supply could cause a "Not Ready Error" or similar error message.

- All backpack 3.5" Diskette Drives (Models 1430, 2830, and 014350) use a 9VAC power supply, although some were manufactured with, and are compatible with the 13.7VAC power supply.

Appendix B Appendix B Technical Support

Most questions about backpack and its operation are answered in this guide. To solve most problems:

- Check the solutions and procedures in this User's Guide.

- Check the README.TXT file on the backpack setup diskette.

- Visit Micro Solutions' WebSite:

    http://www.micro-solutions.com

- Contact Micro Solutions' Automated Fax Response service at 815.754.4600. Automated Fax Response is available 24-hours daily. A complete catalog of faxes and information is available. If you are calling from outside the United States prefix the digits 011 when you are asked to enter your country code and FAX number.

- Contact Micro Solutions' Bulletin Board Service (BBS) at 815.756.9100 for bulletins and driver updates.

If your problem remains unsolved, contact Micro Solutions' Technical Support department at 815.754.4500. Technical Support is available during normal business hours, Monday through Friday, Central Time. Before calling, be sure to have the following information ready:

The version numbers of your backpack software and your operating system (DOS or Windows).

The name and model of the computer, and the eight-digit serial number found on the bottom of your backpack drive.

The exact wording of any error message(s) from the backpack program, DOS, Windows or any other application producing the error message.

The exact model of printer installed, and the revision of printer driver software, if available

If possible, be at your computer when calling.

Appendix C Appendix C Hardware Warranty

1 Year Limited Warranty

Micro Solutions, Inc. (MSI), warrants backpack to be free from hardware defects in workmanship and material under normal use for a period of one (1) year from the date of purchase by the original consumer purchaser. During this warranty period, MSI will repair or replace, at its option, any component parts that in its opinion prove to be defective. This warranty does not extend and shall not apply to products that have been subjected to misuse, neglect, accident, or improper installation.

THIS LIMITED WARRANTY AND REMEDY ARE EXCLUSIVE AND EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL MICRO SOLUTIONS, INC., BE LIABLE FOR LOST PROFITS, LOSS OF GOODWILL, OR ANY OTHER INCIDENTAL OR CONSEQUENTIAL DAMAGES. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights, based upon the point of sale.

If your drive is defective, you should return it to the point of purchase for service. If you are unable to do so, contact MSI at one of the phone numbers below to receive the address of an authorized distributor in your country who can perform warranty service. If you live in the United States you may return your drive directly to MSI. If you live outside the United States you may return your drive directly to MSI, but freight cost and duties may be excessive on single item shipments. A Return Material Authorization (RMA) number must be obtained from MSI prior to the return of defective material. Contact MSI with the serial number of your drive by telephone at USA 815.756.3411, Ext. 325, or FAX 815.756.4986 for an RMA number. MSI is not responsible for material returned without the RMA number clearly printed on the outside of the shipping container. Products to be returned to MSI must be returned, shipping and insurance prepaid, by the original purchaser to the address below.

Micro Solutions, Inc.
Attn: RMA# _____
300 East Harvestore Drive
DeKalb, Illinois 60115

Appendix D Appendix D Software License Agreement

Terms and Conditions

Micro Solutions, Inc. (MSI), licenses the enclosed software ("the software") for your personal use. You assume all responsibility for the operation and results. MSI may from time to time revise this software. In doing so, it shall incur no obligation to furnish such revisions to you. Furthermore, MSI may elect to charge an update fee for such revisions.

Software Warranty Information

MSI warrants that the diskette containing the software is free from defects and will replace a defective diskette within thirty (30) days from the date of purchase by the original consumer.

MSI makes no warranties, either express or implied, with respect to this software, its quality, performance, merchantability, or fitness for any particular purpose. The entire risk as to the performance of this software is with you.

IN NO EVENT WILL MICRO SOLUTIONS, INC., BE LIABLE TO YOU FOR ANY DAMAGES, INCLUDING ANY LOST PROFITS, LOST SAVINGS, OR OTHER INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THIS SOFTWARE.

This agreement shall be interpreted in accordance with the laws of the State of Illinois, USA