

PacRim

INSTALLATION INSTRUCTIONS for Parallel Line Floppy Disk Drives

Rev. 1.92-PLFD-1

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Thank you for purchasing the Parallel Line Floppy Disk Drive Subsystem, hereinafter referred to as PLFD. This product is designed to offer trouble-free installation and service. By simply attaching to your computer's parallel (printer) port, no internal computer connections are required. Your printer can be attached to the back of the drive subsystem, offering no loss of connector utilization.

The shipping box contains the following:

1. floppy disk drive mounted in its cabinet with attached cable
2. diskettes containing software drivers
3. user manual/installation guide
4. power supply
5. warranty registration card

System Requirements

IBM compatible desktop, portable, laptop, or notebook computer
128K memory
DOS 3.1 or higher

Hardware Installation

1. Locate your computer's parallel port connector. It is a female connector with 25 pins. (If you have more than one parallel port it does not matter which one you select.)
2. If you have a printer attached to this connector, disconnect it and attach it to the connector on the back of the PLFD.
3. Connect the PLFD cable to your computer's printer connector.

4. Plug the PLFD's power supply into a wall outlet and connect the small power jack to the back of the PLFD.
5. Turn on the computer first, then the PLFD power by pulling up on the ON/OFF switch located at the rear of the drive cabinet.

NOTE: In order to use the PLFD, the drive's power switch must be turned ON just after the computer is powered up.

Software Installation

1. Turn on your computer and boot normally.

NOTE: If you have a computer such as a Toshiba Laptop which has a connector which can be set to either a printer or floppy drive, set the function to PRINTER. In some cases this can be done by moving a switch. In other cases you may have to run the computer's "setup" routine to tell the computer that this connector should function as a printer. The computer must be re-booted after this connector's function is changed.

2. Insert the driver diskette in your computer's Drive A.
3. At the prompt, type: A: (and hit <ENTER>)
4. Type: INSTALL (and hit <ENTER>)
5. Answer the questions and your driver will be copied and installed. If you are uncertain how to answer the questions, please refer to Appendix A.
6. Remove the driver diskette from Drive A.
7. Reboot the computer by momentarily holding down the three keys labeled: CTRL-ALT-DEL

8. The software driver will load and show the available drive letter(s) assigned to the PLFD(s) and the type(s) of drive(s) expected. If you have made a mistake, you may reinstall the software by starting from number 2, above.

Using the Parallel Line Floppy Drive

If you have correctly followed the installation procedures above, your computer will know that you now have a floppy disk drive attached to your parallel port. (If you have also connected a printer, it will know that, too.)

The PLFD can be used just like any other floppy disk drive. All normal DOS commands and utilities work as they normally do, however, in order to use the DISKCOPY, and DISKCOMP utilities you must have DOS version 3.2 or higher. Remember that you can only use the DISKCOPY and DISKCOMP commands on similar diskette types. You cannot DISKCOPY a 3.5" to 5.25" or a 5.25" to a 3.5" nor can you DISKCOPY dissimilar densities.

Which Drive Is It?

When your computer is powered up and the software driver is loaded, a message will appear on the screen to tell you the drive letter which has been assigned to the Parallel Line Floppy Drive. The message will look something like the following:

Drive E: 3.5" High Density 720K/1.44MB

In this example, your PLFD is referred to as Drive E and can read and write both 720KB and 1.44MB diskettes.

Bootling Without Parallel Line Floppy Drive

At bootup, when the driver is loaded, the software will look at your parallel (printer) port(s) in an attempt to find the PLFD. If it cannot find one it will display an error message on the screen similar to the following:

Cannot detect external floppy. Check drive and power connection

but it will continue to boot normally. Maybe you forgot to turn on the power to the PLFD. An advanced feature of this product is that you can boot the computer without the drive connected and later attach the drive without rebooting the computer. This can be handy for computers "on the go" a lot. You don't have to change the computer's configuration if you don't have the PLFD connected.

Diskette Possibilities

The type of diskettes you can use will depend upon which type of PLFD you have purchased. If you are uncertain which model you have, look at the label on the bottom of the PLFD cabinet. At the end of the serial number is a model designation. Refer to the appropriate section below.

P360

This is a 5.25" 360KB disk drive and can read and write 360KB diskettes, sometimes referred to as "double sided, double density," or "DSDD." All IBM-style computers with 5.25" disk drives can read this type of diskette. This model can also read and write the "old" style single-sided 8- and 9-sector diskettes, 160KB and 180KB, respectively, as well as 8-sector double-sided, 320KB.

P1.2

This is a 5.25" 1.2MB/360KB disk drive and can read and write 1.2MB diskettes, sometimes referred to as "double sided, high density," or "DSHD," as well as all types of diskettes listed above under P360. In order to use the 1.2MB capability of the drive you must use a "high density" diskette.

CAUTION: Like IBM's original AT 1.2MB disk drive, formatting or writing to 360KB diskettes in a 1.2MB drive is unreliable. No guarantee is made that these diskettes will be usable on a 360KB drive. It is suggested that you only READ 360KB diskettes on a 1.2MB drive; don't write to them.

P1.44

This is a 3.5" 1.44MB/720KB disk drive and can read and write 1.44MB diskettes, sometimes referred to as "double sided, high density," or "DSHD," as well as "double sided, double density," or "DSDD." In order to use the 1.44MB capability of the drive you must use a "high density" diskette, i.e., one with 2 holes in its margin. A "double sided, double density," or "DSDD" 3.5" diskette yields a useful capacity of 720KB and can be used in any IBM-compatible computer which has a 3.5" disk drive. This type of diskette has one hole. The P1.44 can reliably read from and write to 1.44MB as well as 720KB 3.5" diskettes.

P4

This is a 3.5" 2.89MB/1.44MB/720KB disk drive and can read and write 1.44MB diskettes, sometimes referred to as "double sided, high density," or "DSHD," "double sided, double density," or "DSDD," and "ED" or "Extended Density" diskettes. In order to use the 2.89MB capability of the drive you must use an "extended density" or "ED" diskette. In order to use the 1.44MB capability of the drive you must use a "high density" diskette. A "double sided, double density," or "DSDD" 3.5" diskette yields a useful capacity of 720KB and can be used in any IBM-compatible computer which has a 3.5" disk drive. This type of diskette has one hole in

its margin. The P4 can reliably read from and write to all types of 3.5" diskettes listed above.

Formatting

Refer to the following chart for formatting procedures and possibilities. In all cases, "x" refers to the drive letter DOS assigned to the PLFD.

P360

format x:

P1.2

for 360KB disks:
or
(or for DOS 5.0

format x:/4
format x:/n:9/t:40
format x:/f:360)

for 1.2MB disks:
or
(or for DOS 5.0

format x:
format x:/n:15/t:80
format x:/f:1.2)

P1.44

for 720KB disks:
(or for DOS 5.0

format x:/n:9/t:80
format x:/f:720)

for 1.44MB disks:
or
(or for DOS 5.0

format x:
format x:/n:18/t:80
format x:/f:1.2)

P4

for 720KB disks:
(or for DOS 5.0

format x:/n:9/t:80
format x:/f:720)

for 1.44MB disks:
(or for DOS 5.0

format x:/n:18/t:80
format x:/f:1.44)

for 2.89MB disks:

format x:

All additional command line options supported by your DOS version are still valid, such as the following:

/S copies system files to the diskette
/V appends a volume label to the diskette

NOTES:

1. In the above examples, "x" refers to the assigned drive letter for the PLFD.
2. If you do not specify a capacity with the format command, DOS will assume the highest capacity available for your drive type.

Troubleshooting

If you have difficulty operating your PLFD check the suggestions below. Most problems we encounter are user error problems: power switch not on; cable not securely connected; printer port not selected for printer, etc. If you cannot resolve your trouble, call for technical support at the number listed on the cover of this manual. Please have the following information ready:

1. Drive serial number and model number (from bottom of drive cabinet);
2. Contents of C:\CONFIG.SYS and C:\AUTOEXEC.BAT;
3. Exact error messages and what operation caused them.

When you try to use the PLFD the error message “invalid drive specification” appears.

You are not using the correct drive letter to access the PLFD or the software has not been installed. Go back in this manual to the section called Which Drive Is It? If that doesn't help go back to the section on software installation. With the banner enabled you should see, at bootup, the drive letter assigned to the PLFD.

The printer doesn't work or the error message “LPT1: not found” appears.

If the printer is connected to the PLFD make certain that the Parallel Line Floppy Drive's power is ON, even if you are only using the printer. **A printer connected to the PLFD will only work if the power to the PLFD is ON.** Turn on the PLFD power.

NOTE: Since the software driver is a true device driver, DOS automatically assigns the next available drive letter to the PLFD.

Appendix A

During the install procedure, you will need to know how to respond to several questions. Please refer to the following:

Source: you may insert the PLFD software driver diskette into either drive A or drive B. Select the appropriate response.

Target: this refers to the destination drive and directory where the PLFD software will reside. We recommend that you just hit <ENTER> in response to this question so that the software will be installed into the root directory of your hard disk drive. If you specify a different directory, it must already exist. INSTALL will not create a new directory.

Port: If you have more than one parallel printer port (and know to which one you are attaching) select that port. Oth-

erwise just select "auto" and let the PLFD software find your port.

Disk Type: select the type of drive you are installing. If you are uncertain of the type, look at the end of the serial number on the bottom of the drive case for the model designation. This refers to the type of disk drive, which is not necessarily the same as the diskette type you intend to read. For example, if you have purchased a PLFD 3.5 Inch 1.44MB drive, select 3.5", 1.44M, even if you only intend to use 720KB diskettes.

NOTE: the software installation supports up to four drives for future expansion, but the hardware presently supports only two drives. If you are only installing one drive, you will select that type then select "none" for the other three types.

If you have purchased the Parallel Line Double Drive, the first drive is 5.25" 1.2MB and the second drive is 3.5" 1.44MB.

Banner: select "enabled" so you can be certain that the software has loaded when you boot.

The "install" procedure then tells you that it is going to update your CONFIG.SYS file. Check your replies on the screen and hit "Y" when ready to proceed. The software will update your CONFIG.SYS file and you will need to re-boot in order to effect the changes. The line added to your CONFIG.SYS file will look similar to the following:

```
DEVICE = C:\PRSPF.SYS /P=2 /T1=3H
```

In the above example, /P=2 shows that you have selected LPT2. If you selected "auto" for your port, this parameter may not appear at all. T1 refers to "type 1," the first type of drive attached. In the above example only one drive is attached and it is a "3H," 3.5" High density.

FCC Statement of Compliance

This equipment generates and uses radio frequency energy and if not installed and used properly in strict accordance with the manufacturer's instructions, it may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference to radio or television reception, which can be determined by turning the equipment on and off, will not occur. The user is encouraged to try to correct the interference by one or more of the following measures:

- ▣ **re-orient the receiving antenna;**
- ▣ **relocate the computer with respect to the receiver;**
- ▣ **move the computer away from the receiver;**
- ▣ **plug the computer into a different outlet so that the computer and receiver are on different branch circuits;**

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful:

"How to Identify and Resolve Radio-TV Interference Problems"

This booklet is available from:

**U.S. Government Printing Office
Washington, D.C. 20402
Stock No. 004-000-00345-4**

To meet FCC requirements, shielded cables and power cords are required to connect the device to a personal computer or other Class B certified device.

Statement of Limited Warranty

This product is warranted by Pacific Rim Systems, Inc. (PRS) to the original purchaser to be free from defects in material and workmanship under normal use for a period of one year from the date of manufacture. During the warranty period and upon proof of purchase, the product will be repaired or replaced (with the same or similar model) at our option, without charge for parts or labor at PRS' facility. The purchaser shall bear all shipping, packing, and insurance costs to PRS. Upon completion of the repair, the unit will be returned to the customer freight prepaid. The warranty will not apply if the product has been misused, abused, or altered. Without limiting the foregoing, bending or dropping of the unit is presumed to be a defect resulting from misuse or abuse.

All express and implied warranties for the product, including the implied warranties of merchantability and fitness for a particular purpose, are limited in duration to the warranty period, and no warranties, whether express or implied, will apply after this period. Some states do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

Your sole remedy under this Limited Warranty shall be Pacific Rim Systems' performance of warranty service. For any claim concerning performance or nonperformance, or for any other claim directly related to this product, you shall be entitled to recover actual damages up to the following limits. PRS' liability for damages to you for any cause whatsoever shall be limited to the greater of \$500 or the amount paid for this product at the time of original purchase. In no event will PRS be liable for any damages caused by lost profits, lost savings, or other incidental or consequential damages, even if PRS has been advised of the possibility of such damages, or for any claim by you based on any third party claim. Some states do not allow the exclusion or

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NOTICE

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