FOCUS HARD DISK CARD

USER / INSTALLATION MANUAL

Apple IIgs & //e
(][/][Plus With ProDOS Compatibility, /// with SOS Driver)

Revision 1.5

16 Sector Focus Drive for the Apple][

16 Sector Focus Drive for the Apple][

TABLE OF CONTENTS

1.0 Getting Started

1.1 Please Read Before Starting 1

2.0 Installation

2.1 Apple IIe 2
2.2 Apple IIgs 4

3.0 Getting the Most From Your FOCUS Drive

3.1 Copying Software to Your FOCUS Drive. 5
3.2 Booting From Floppies 6
3.3 Parking the Heads. 6
3.4 The Need for Backup 7

4.0 FOCUS Drive Utility Software

4.1 FOCUS CDEV 9
4.2 FOCUS Driver 9
4.3 FOCUS Format. 10

5.0 Formatting Your FOCUS Drive

5.1 Apple IIe 11
5.2 Apple IIgs 11
5.3 FOCUS Format Utility 11
5.4 Partition Decisions 13
5.5 Changing Partitions 14
5.6 Low Level FOCUS Drive Formatting 14

6.0 Problems ?

6.1 Read before you panic 16

1.0 GETTING STARTED

1.1 PLEASE READ BEFORE STARTING

Congratulations on your selection of the FOCUS drive for your Apple II needs. It's easy to install, fast, reliable, and it's compatible with all Apple II hardware and software. It comes pre-formatted with the system software already installed, so there's hardly any work for you to do. The FOCUS Drive installation is a "Plug n Go" operation, specially designed to make your life as easy as possible while upgrading your Apple II system.

Just follow the simple installation instructions on the pages that follow. This installation will take about 5 minutes. When you turn on your system and FOCUS drive will then boot up your operating system. No Apple II drive is easier to set up !

This manual contains more than just installation instructions. In fact, the installation instructions take up only a few pages. The rest on the manual provides information you will find useful for normal drive operation and if you have any problems.

Reading manuals is about the most boring task that anyone is faced with when buying a new product, so here is the information you need to get up and running as soon as possible. Finish reading this chapter and read the appropriate sections of Chapter 2 before doing anything inside of the computer.

One of the most frequently asked questions about installing the FOCUS Drive is about the floppy disk that is included with the unit. You do not need this disk ("FOCUS Drive Utility Software") to get started. This disk is included to allow you to re-install the software after reformatting or repartitioning the drive. They contain the same specialized software that is already loaded onto the FOCUS Drive (Chapter 4).

Your FOCUS Drive has a much greater capacity than floppy disks and it operates differently. If you have not used a hard disk before it is STRONGLY recommended that you read Chapter 3 in its entirety. It will give information on how to get the most from your FOCUS Drive.

As was mentioned before, reading manuals is boring. And you can, of course, read this entire manual in order - in fact we recommended you do - but if you don't have time (or desire) to read everything, at least hit the high points.

2.0 INSTALLATION

The FOCUS Drive works with both the Apple IIgs and IIe. The FOCUS Drive is a full length interface card that is installed into slots on the computer's main circuit board. To access these slots, refer to system's users manual on how to remove the cover to your system.

Before you install the FOCUS Drive in one of the slots in the Apple computer, you should know what slot to use. The following information will help you with this selection depending on what computer type you own.

NOTE: Before installing the FOCUS Drive, with the computer lid removed, touch the top of the Apple power supply while holding the wrapped FOCUS Drive. This will discharge any static electricity. Remove the FOCUS Drive from the anti-static bag and install in the computer.

2.1 APPLE IIe

Your FOCUS Drive's Controller card must reside in one of your computer's slots at all times. Slots 1,2,4,5,6, or 7 may be used. However, due to certain standards established over the years with Apple IIe software, you will probably be limited in your slot selection. The typical uses of the slots in the Apple IIe are:

SLOT	FUNCTION
1	Super Serial Card
2	Modem Card
3	Clock Card* (Not all cards can function in Slot 3)
4	Mouse Card
5	3.5" Floppy Controller Card
6	5-1/4" Disk II Controller Card
7	Storage Devices, Networking, etc.

We recommend the use of Slot 7. Using slot 7 gives you the advantage of automatically booting your FOCUS Drive at power up. If you are using an AppleTalk network card, check the user's manual for operation in slots other than Slot 7.

Under normal circumstances, your Disk II (5-1/4" floppy) controller will be located in slot 6. If you Place the FOCUS Drive Controller card in slots 1,2,4, or 5, it will function normally, but you will not be able to use it to power-up your computer. This is because the Apple IIe starts "looking" for a start-up device at slot 7 and works its way down the slots. The 5-1/4" floppy in slot 6 will be found first. Therefore, if at all possible, use FOCUS Drive in Slot 7.

NOTE: If you decide to use slot 1 or 2 of the computer for your FOCUS Drive Controller slot, be aware that many software packages assume these slots have a printer or modem connected. If the software tries to perform print or modem operations to the FOCUS Drive (thinking it is a printer/modem card), the computer will either hang or not operate correctly. Make sure you disable or change the printer and/or modem selections within such software.

To use the Focus hard card on a IIe machine it must not contain GS/OS (Used by the IIgs) if it is expected to boot up your system (and 99% of the time it is intended for that purpose). If Your focus drive comes to you with a "-E" at the end of the serial number, or there is a "IIe" sticker on the hard card itself, no changes need to be made. The drive is already set up for Apple IIe operation. This drive will also operate just fine in both the IIe and IIgs environment as long as the GS/OS files do not reside on the hard card, You may skip this section.

When the FOCUS hard card has had the GS/OS operating system installed on it, it will not work correctly in an Apple IIe environment. This system can be installed by the factory or it can be done by users in the field. If you have GS/OS on your drive and you want to install it into an Apple IIe, you must either remove the GS/OS files using an Apple IIgs system or high level reformat the hard card.

Reformatting the hard card will erase all of the data that already exists on the drive. To reformat the hard card, follow the FORMAT procedures below:

A. This section will erase all of the existing data on the FOCUS hard card. It will clear off GS/OS and format you hard disk for use in a Apple IIe system.

B. First install the FOCUS hard card in the Apple IIe. Put the 5.25" disk in the floppy drive and start (boot) the system up the floppy disk drive.

C. The system screen should ask if you would like to use the system utilities. Enter "Y".

D. Select the DISK FORMAT item on the menu. Enter the slot the FOCUS drive is installed in (Usually slot 7), and the disk number (Disk 1).

E. The next prompt will ask you to select an operating system (Usually ProDOS).

F. The next prompt will ask you for your volume name. (Usually FocusHD).

G. Hit enter and allow the drive to start formatting. This format process should only take a few seconds.

H. Next select the COPY FILES item on the menu.

I. Select "Slot and Drive" menu item as the source disk.

J. Set Slot 5 Disk 1 as the source disk (Floppy drive).

K. Select "Slot and Drive" menu item as the destination disk.

L. Enter the slot the FOCUS drive is installed in (Usually slot 7), and the disk number (Disk 1).

M. The next prompt will ask to transfer ALL or SOME of the files. Select SOME and press enter.

N. Using the arrow and spacebar keys to select the files, select all of the files except STARTUP.

O. Press "Enter" to start the file transfer.

P. FINISHED. The drive will now startup and operate in an Apple IIe.

Q. NOTE: If the BASIC "]" prompt shows up, type in "BYE" to get to the ProDOS system.

This high level formatting will erase all traces of GS/OS, but it will no change the existing partitioning. Currently the only user software available that will re-partition the FOCUS drive is for the Apple IIgs. It is included on the 3.5" utilities disk.

2.2 APPLE IIgs

Your FOCUS Drive's Controller card must reside in one of your computer's slots at all times. Slots 1,2,4,5,6,or 7 may be used. However, due to the Apple IIgs's built-in ports and their associated slot assignments, you will probably be limited in your slot selection. The standard Apple IIgs slots are assigned as follows:

Slot	Function
1	Printer Port (If you use AppleTalk, put your FOCUS card here)
2	Modem Port
3	Not Usable (with FOCUS Drive)
4	Mouse Port (Usable in a ROM 3 unless you use the mouse in ProDOS 8 programs, (Timeout/AppleWorks)
5	3.5" Floppy SmartPort
6	5-1/4" Disk Controller Port (Usable if you do not have a 5.25" drive)
7	AppleTalk (In ROM 1), Storage Devices, etc. **Recommended.**

We recommend the use of Slot 7 if you are not connected to an AppleTalk network. Using slot 7 gives you the advantage of booting your FOCUS Drive with either the SCAN or 7 selection in the Control Panel's "Start Up Slot" menu.

If you are using AppleTalk, your selection is more limited. For all practical purposes, slot 4 (Mouse Port) and slot 5 (3.5" floppy port) cannot be used. If you do not have a 5-1/4" floppy drive, slot 6 may be used, or slot 1 or 2 if you do not have a modem or printer. As a last resort, you can use a slot simultaneously. This requires that you choose "Your Card" in the Control Panel when you want to use your FOCUS Drive, and power-down your computer for 10 seconds in order for the slot change to take effect. This method can safely be used for slots 1,2, and 6.

NOTE: Regardless of which slot you choose for your
FOCUS Drive Controller card, make sure that the Control Panel's "Slot" menu indicates "Your Card" for that slot. Not doing so will make the FOCUS Drive inoperative.

3.0 GETTING THE MOST FROM YOUR FOCUS DRIVE

If you've followed the installation chapter, your FOCUS Drive is now installed and ready to go. However, before you begin copying files from all your floppies to your FOCUS Drive, we suggest you read the following sections which will provide additional tips and techniques in getting the most out of your new Hard Disk Drive.

3.1 COPYING SOFTWARE TO YOUR FOCUS DRIVE

With the increased storage capacity now at your fingertips, you will probably want to copy most if not all of your software from your floppies to the FOCUS Drive. However, before you do so, we suggest some careful planning and organization of your data on the FOCUS Drive. This will give you the maximum benefits and efficiency from your drive.

If you think of your hard disk as one very large, very fast floppy, you'll find that using your newly copied programs will become a confusing, unorganized ordeal. The fact is, your hard disk is not just a big floppy. It is a data warehouse with so much capacity that every piece of information stored on it must be organized or you will experience difficulty in finding and running your applications.

If you are used to a floppy-only based system, you have probably not used folders or subdirectories very often. As a first step, create several folders on your hard drive and copy individual floppies or applications to separate folders. Name them appropriately to reflect their contents. Copy your floppies in steps rather than one long session. Try running your applications from their new folders on the FOCUS Drive to make sure they operate properly and you are satisfied with the organization of the data up to this point.

On the Apple IIe, you do not need to copy the file PRODOS from every floppy to every folder. This file is only used to make a device bootable, be it a floppy or a hard disk. Only one copy is necessary, and the FOCUS Drive has been shipped with PRODOS already there. If AppleSoft BASIC programs are placed in individual folders, you may have to place a copy of the file BASIC.SYSTEM in those folders. Otherwise, you won't need this file either. Experiment by running your application programs one at a time and see what happens. You won't damage your hard disk or the application in the process.

On the Apple IIgs the same holds true for the SYSTEM folder, as well as the ICONS folder and BASIC.SYSTEM. Only one copy needs to be present. If you want to copy additional fonts, desk accessories, and other programs which reside in the SYSTEM folder, copy them directly to the one (and only) SYSTEM folder on the FOCUS Drive.

Here are some other considerations to know about while copying your files:

In the Root Directory or base volume, the maximum number of files allowed by ProDOS is 51. If you organize your data into folders (or folders within other folders), you will avoid approaching this 51 file limit. Within other folders or subdirectories there is no maximum number of files, but for speed and ease of use, 100 files or less is a workable limit.

Most programs that are copy-protected cannot by copied onto a hard disk. Check the manual that came with the software or call the manufacturer for hard disk installation pro-cedures. Many newer programs use copy-protection schemes that allow hard disk installation, but still require you to insert the original diskette while the program is loading.

You cannot copy DOS 3.3, Pascal, or CP/M programs to your FOCUS Drive. Check with the manufacturer of these programs for availability of a ProDOS version.

Many applications consist of multiple files. Make sure you copy all of the files associated with the application. If a particular application uses a folder, you should copy the entire folder and its contents into the folder that holds the application.

Even though you can successfully copy a program and all its files to your FOCUS Drive without error, the program still may not run properly. This is because some programs are designed to run from floppy only, or be run from volumes with particular names. Again, check the manual or call the manufacturer about hard disk installation procedures.

3.2 BOOTING FROM FLOPPIES

Whenever you want to boot your system from a floppy instead of the FOCUS Drive, simply set the Start Up Slot selection in the Control Panel to the slot of the floppy and press Open-Apple, Control, and Reset keys.

If you want to boot from a 3.5 inch floppy, set the Start Up slot to 5. Similarly, setting the Start Up Slot to 6 will allow you to boot from a 5-1/4 inch floppy.

If you set the Start Up Slot to "Scan", your Apple IIgs will start at Slot 7 and work its way down looking for a bootable device. It your FOCUS Drive's controller card is in slot 7, setting the Start Up Slot to "Scan" or "7" will do the same thing. That is, force the FOCUS Drive to be the boot device.

NOTE: If you want to temporarily disable access to
your FOCUS Drive, set the Controller card's slot in the Control Panel so it displays the port setting rather than the "Your Card" setting.

3.3 PARKING THE HEADS

If you are using a CF/Flash based storage device on your Focus card you do not have to park anything. Ever. This section applies to hard drive units only.

Unlike a floppy or cassette tape player, the recording / playback heads of your FOCUS Drive do not actually make contact with the surface of the disks. They float on a cushion of air a few millionths of an inch above the spinning disks during normal reads and writes. When you turn the power off, the heads gently "land" on the disk surface without damage. When you turn power back on, the spinning disks build up enough velocity for the heads to "take off" and float again above the disk surface.

Under normal use, the contact of the heads with the disk surfaces during normal power-on power-off cycling causes no ill effects. But due to the precision mechanism of the heads, physically moving the FOCUS Drive (or computer with FOCUS Drive installed) can cause the heads to repeatedly bump or bounce against the disk surface while power is off. Data read errors or even loss of data can result.

NOTE: NEVER move your FOCUS Drive while it is powered-on under any circumstances. Or ANY cards.

To prevent the possibility of loss of data, the recording / playback heads must be moved to a position where data is not stored. This is called Head Parking. Head Parking physically moves the recording heads over an unused area of the disk, so if any stress is put on the unit by bumping or jarring, the heads will not damage the recorded data.

The FOCUS Drive normally automatically parks its heads for you when power is shut down, but it a good idea to force them to park them anyway. This is accomplished by using the "Shut Down System" option from the "QUIT" option on the menu bar before turning the power off. After running this program, you will see a message indicating that you may safely turn off the power.

3.4 THE NEED FOR BACKUP

Once most of your software is copied and running on your FOCUS Drive, you will probably be changing and creating a lot more data files than you ever did on floppies.

You'll also change the way you think about older revisions of your data. For example, if you've created a word processor file, you may keep older revisions around longer just in case you need to refer to the data or salvage a previous copy. On a floppy, you probably deleted older revisions immediately to allow more room on the diskette. Similarly, many programs that you may have used infrequently will wind up somewhere on your FOCUS Drive. You'll be creating other data files there, but you may use them so infrequently that you'll forget about them. Most users of floppy-only based systems keep their data files on separate floppies. With your FOCUS Drive, all files, both program and data, will be kept together. After a short period of time, you'll create many modifications to many files on your FOCUS Drive.

For Backup, simply making copies of your data files doesn't always work. For one thing, your data files are now spread out in many different folders and even in folders within other folders. This makes it difficult to manually find and backup each and every data file. More importantly, many applications actually modify themselves or their associated files when you change configuration data. For example, when you give AppleWorks information about your printer, changes are made to AppleWorks' own files and not your data files. Many programs do the same. You really don't know which programs modify themselves or their associated files. Finally, if you have to restore all the data on your hard disk from even a file-by-file backup, recreating all the folders and putting every file back the way you had them would be a major task.

Does the need for Backup mean that Hard drives are unreliable? No. In fact, based on failure statistics gathered over the years, a hard disk drive compared to a floppy is about 10 times more reliable in data recovery. The key to understanding why backups are needed is an understanding of how data is stored on the drive.

Under the ProDOS operating system (and most others for that matter), the allocation, organization, and structure of disk space is controlled by just a few sectors of information. Called the Directory and Block-Usage Map, these two areas of the disk keep track of every file that is created, deleted, copied, or renamed. Aside from holding the actual name of the file, other information is kept concerning the location of each and every area of the disk the file occupies. The system must also know which areas are free so the file can be expanded. Similarly, when you delete the file, previously used space must be made free so you can use it again.

Amazingly, all this control information occupies less than 10K of disk space on your hard drive. The control information area on a floppy is about the same size as that of the hard disk.

This control information area is read from and written to more often than any other section of the disk. Statistically, a read or write error will occur here first. When it does, NONE of your data will be readable, because the control information needed to find the data is unreadable.

Here's an example. It's late at night and your rushing to finish a report for a meeting tomorrow. As your hard drive is saving your final document, the lights flicker for a split second. Your computer hangs with no response. You reboot, only to find your hard-disk won't boot the system. You boot from another disk, and find that you cannot read any files from the hard drive.

Is all your data still on the drive? Yes, but you can't retrieve any of it because the control information was damaged by the power line spike.

Besides power-line noise and spikes, damage to a hard disk's data areas can occur from bumping or dropping the unit, connecting or disconnecting cables or cards with the computer's power switch on, a software bug or intentional virus, faulty memory chips, or failure of the drive mechanism itself. There are just too many causes to take a chance with your valuable data. And needless to say, the more data you have, the more you can't afford to lose it.

How frequently you need to perform a full backup is up to you. Most users find every two to three weeks are sufficient. Some users prefer to save a few important files on floppies as they work on them in addition to saving them on the hard drive. Regardless of which method you develop, discipline yourself to do backups regularly.

Remember: If you can't afford to lose it,

_____ Back it up! _____

4.0 FOCUS DRIVE UTILITY SOFTWARE

One of the most frequently asked questions about the FOCUS Drive is about the floppy disk that is included with the unit. You do not need this disk ("FOCUS Drive Utility Software") to get started. This disk is included to allow you to reinstall the software after reformatting or repartitioning the drive. They contain the same specialized software that is already loaded onto the FOCUS Drive. This chapter will explain what exactly is on this disk.

There are 3 files on this disk. They are the files that are unique to the FOCUS drive. The other files that are included on the hard disk are standard system files which are commercially available. (If you do not have a copy of them, back them up).

4.1 FOCUS CDEV

The GS/OS operating system provides "ICONS" on the desk top used for interfacing with the IIgs file system. The FOCUSCDEV defines the ICON image for the FOCUS Drive. This file should be located in the ICONS folder in the system folder on the booting drive.

This file is already installed on the FOCUS Drive from the factory.

4.2 FOCUS DRIVER

The Apple IIGS GS/OS operating system provides a common method by which all peripherals interface with the system software. Each peripheral has an associated "Driver" file located in the DRIVERS folder in the SYSTEM folder. These Driver files provide the system with information about each peripheral and how it behaves. If you examine the SYSTEM/DRIVERS/ folder on any bootable GS/OS disk, you will probably see driver files for the ImageWriter printer, the LaserWriter, 3.5" floppies, and so on.

The FOCUS Drive also has its own driver file called "FOCUSDRIVER". As shipped from the factory, your FOCUS Drive's SYSTEM/DRIVERS/ folder already contains this file (there is another copy of the FOCUSDRIVER file on the supplied floppy diskette).

When installed in the DRIVERS folder of the boot disk, FOCUSDRIVER provides these additional benefits:

Up to 8 partitions or volumes will be accessible from any ProDOS 16 application. Each volume will look like a separate hard disk on the Finder's desktop.

A Drive Access indicator will appear as a small black square in the upper right-hand corner of the screen. The square will blink when your FOCUS Drive is reading or writing data.

An 8 to 1 improvement in speed over ProDOS 8 operation.

Automatic Head Parking when you select SHUTDOWN from the Finder.

Due to the flexibility of the FOCUS Drive, it can also work without its own driver in the Start Up disk's DRIVER folder. However, this will result in a significant loss of speed and only the first two partitions will be accessible.

If you ever need to reformat your FOCUS Drive or delete its SYSTEM Folder, remember to place a copy of the FOCUSDRIVER file back into the /SYSTEM/DRIVERS/ folder. If you boot your system from a floppy that does not contain a copy of FOCUSDRIVER, all of the features mentioned above will not be present.

NOTE: You have probably made a backup copy of your
master menu selection will automatically park the SYSTEM.DISK that came with your computer. If not, we suggest you do so and place a copy of the FOCUSDRIVER file in the SYSTEM/DRIVERS folder on the backup. This way, you won't forget about installing it later. Also, if you boot some IIgs-specific applications from floppy, they too must have the FOCUSDRIVER file installed.

DO NOT install the FOCUSDRIVER file on any floppy that is copy-protected. Writing any file to a copy-protected file may destroy all data.

4.3 FOCUS FORMAT

This file is used to format the disk under GS/OS. It will not work with the Apple IIe, only the Apple IIgs. More information about this file is in the next chapter.

5.0 FORMATTING YOUR FOCUS DRIVE

As shipped from the factory, your FOCUS Drive has been Low-Level and High-Level formatted. In addition, the necessary files have been placed on it to make it bootable. There is no need to format your FOCUS Drive in order to make it functional. If you are having problems getting your drive to operate properly, refer to the Troubleshooting section of this manual.

5.1 APPLE IIe

The utilities provided in the system disk do not yet allow for low level formatting or partitioning of the FOCUS Drive on an Apple IIe. 16 Sector is working on bringing a partition utility for ProDOS 8. In the meantime, if you are using a CF card, CiderPress can partition your card. Or we can do it for you, too.

5.2 APPLE IIgs

For the Apple IIgs, there are two types of formatting that can be done called Low-Level and High-Level formatting.

Low-Level formatting completely erases the disk, including the fundamental information used to identify where each sector of data is to be placed. Low-Level formatting of a disk can take over an hour to perform, because each bit of information must be placed in an exact way. You will rarely, if ever need to perform a low-level format operation on your drive.

High-Level formatting is the process of writing directory and control information in specific sectors on the disk in order for the ProDOS operating system to manage it (A high-level format is also performed when you select “Erase Disk” from the Finder). The process is usually fast, since only a few sectors of information are actually written. Once a disk is high-level formatted, files can be read and written to the drive. In order make a disk drive bootable, certain files must be present.

5.3 FOCUS FORMAT UTILITY

A program called FOCUSFORMAT has been included on your FOCUS Drive diskette. This utility program performs both high and low level formatting, allows you to change the sizes of your partitions, verifies proper operation of the controller and disk mechanism, and performs read verification tests. You probably will use FOCUSFORMAT the most for its partitioning capability.

To use FOCUSFORMAT, launch it from the Finder or your program selector. After a few seconds, you’ll see a standard desktop with menu bar. Each of FOCUSFORMAT’s menu selections do the following:

APPLE Menu

About: Provides version number and mailing address information.

Help: Provides an online reference to each of FOCUS FORMAT's menu items and a brief description of their operation.

FILE Menu

Close: Provided for desk accessory support. Not used.

Quit: Quits FOCUSFORMAT and returns you to the Apple IIgs Finder.

EDIT Menu

No functions are active in this menu.

FUNCTION Menu

Verify: Performs a read operation of every sector on the disk including all partitions. VERIFY makes sure that every block is readable and operating properly.

Park Heads: Parks the heads of the FOCUS Drive.

Self Test: Performs a series of internal tests to make sure the controller and drive mechanism are functioning properly. Although SELF TEST performs write tests, it does not destroy any data present on the disk.

Change Partitions: Allows you to reconfigure the capacity of your FOCUS Drive into more or less individual volumes. All data will be lost.

Format Drive: Performs both a Low-Level and High-Level format of the FOCUS Drive. All data will be lost.

5.4 PARTITION DECISIONS

The FOCUS Drive can be configured to appear as multiple disk drives to the ProDOS operating system. This feature makes your Apple II think you have more than one hard disk drive connected to your system.

Partitioning allows you to have independent, smaller volumes. If you purchased the FOCUS 40 Drive, the partitions have been set to a pair of 20MB partitions. If you purchased the FOCUS 80 Drive, the partitions have been set to a pair of 30MB partitions and another third 30MB partition.

Because of the near unlimited use of folders or subdirectories, large amounts of software can be stored on your hard disk neatly and efficiently in separate folders. However, if your computer's use is divided in some independent ways, you may prefer to segregate your data using partitions. Once again, the 20/20 split of the FOCUS 40 Drive, and the 30/30/20 split of the FOCUS 80 Drive is usually sufficient for this purpose. If not, you may vary the amount of storage allocated to each volume using the program FOCUSFORMAT included on the supplied diskette.

Setting new partitions or changing existing ones erases all data on the hard drive. If possible, we suggest you leave the partitioning scheme as supplied for now until you've had a chance to use your FOCUS Drive. With experience, you'll be able to determine whether the existing partitions are acceptable for application or if you need to change them.

When selecting new partitions consider the following:

Partitioning erases all data on the entire hard disk, including data in all previously set partitions. You must make a full backup of all of your data in order to restore the information the way it was. If you create new partitions that are considerably smaller than the old ones, your previous data may not fit in the new partition size. If this is likely to occur, you should back up all of your data on a file-by-file basis using standard "file copy" utilities before repartioning.

Make sure you have enough floppies on hand to perform the backup operation. See the section "Backing Up your Data" for additional information. If you partition your drive for more than two volumes, ProDOS 8 programs will only be able to use the first two volumes. You won't be able to use any ProDOS 8 program (typically, these programs end in ".SYS" or ".SYSTEM") including BASIC programs unless they are located on partitions 1 or 2. In other words, partitions 3 or higher can only be used with IIgs-specific programs, and only if the file FOCUSDRIVER is in the DRIVERS folder of the boot disk.

Both ProDOS 8 and GS/OS are limited to a maximum of 32 megabytes for the volume size. Example, on the FOCUS Drive 40, this means that if you set the first partition to 32MB, the second partition must be 8 megabytes or less.

Partioning will not allow the copying of DOS 3.3, Pascal, CP/M, or copy-protected programs to the FOCUS Drive. The FOCUS Drive supports only ProDOS volumes, regardless of partitioning.

If you use a block-oriented backup program (such as ProSel 8 Backup) you won't be able to restore the data if you change ANY of the partition sizes. As you can see, there are a lot of considerations when setting partitions. Once again, we suggest you use your FOCUS Drive's partitions as they are now. After a few months of use, you will naturally figure out what's best for you.

5.5 CHANGING PARTITIONS

If you decide to change the partitions of your FOCUS Drive (See the section entitled Partition Decisions) you must first back up all of your data on all current partitions, even if you do not change some partitions from their present sizes. You can create from 1 to 8 partitions, dividing your total drive capacity in megabyte increments any way you like.

After selecting the CHANGE PARTITION menu item, follow the user friendly directions to change the partitioning of your FOCUS Drive.

NOTE: You DO NOT have to Format the drive after changing partitions. No formatting is necessary.

After the partitions have been created and you quit FOCUSFORMAT, you should power down your system. Your new partitions will not take effect until you turn the power off for at least 20 seconds, then back on again. You CANNOT use Open-Apple Control Reset and simply reboot the machine. YOU MUST power down. If you don't, you will have a mixture of new and old partitions which will confuse GS/OS and possibly cause read write errors on your FOCUS Drive.

5.6 LOW LEVEL FOCUS DRIVE FORMATTING

If your FOCUS Drive is using Solid State storage this step is unnessary. You can format your drive following the on screen hints that talk about doing it quickly.

While partitioning may only take a few seconds to perform its operations, FORMAT DRIVE will take over an hour. You should NEVER have to use this command under normal circumstances. The only reason to use Format Drive is if FOCUSFORMAT does not allow you to use the CHANGE PARTITIONS function, if you receive excessive drive media error problems, or you receive some error messages during the launching of FOCUSFORMAT. In this case, the low-level format of the drive is probably damaged and is in need of repair by the FORMAT DRIVE function.

After selecting FORMAT DRIVE, you will receive a warning message followed by the partition dialog box. You can still cancel the format operation by clicking CANCEL in this dialog. If you click CREATE, the format operation will begin.

Once started, you should not disturb the system until the operation is complete. This includes accessing the Control Panel, clicking the mouse, or resetting the system.

During the format operation, the drive will make what seems to be random whirring sounds, lots of seeking, and other sounds that you probably don't hear during normal usage. These sounds are normal. Again, do not interrupt the format process until it is completed.

Once complete, you will have to quit FOCUSFORMAT and power down your system under the same precautions listed above for partitioning.

6.0 PROBLEMS ?

Or better titled : READ THIS BEFORE YOU PANIC

If you are having trouble getting your FOCUS Drive to work properly, chances are you overlooked a section of the manual regarding its installation or use. We Suggest you go back and read the section entitled “Installation” to see if this clears up the problem. Follow the steps exactly as described. If you still have difficulties, try to locate the problem in this section that may be similar to the one you’re experiencing.

PROBLEM: At power-on, the system just hangs instead of booting, or the system beeps and jumps into the Monitor, displaying lots of numbers followed by an asterisk.	CAUSES: The FOCUS Drive card is not seated properly in one of the slot connectors. The FOCUS Drive is installed in slot 3. The drive has been reformatted and the files ProDOS and/or the SYSTEM folder has not been copied or files are missing.
PROBLEM: Halfway or so through the boot process, the system “Beeps” and reboots all over again. Sometimes it just hangs or jumps into the monitor.	CAUSES: The FOCUS Drive is in Slot 3. Move it to another Slot.
PROBLEM: When running certain programs from the FOCUS Drive, the system either hangs or jumps into the monitor. It seems to happen more often when switching between ProDOS 8 and GS/OS applications.	CAUSES: On the Apple IIgs, boot with the shift key down. This will boot without the CDEVS and INITs. If the problem goes away, then a CDEV or Desk accessory is bad. Locate and remove the CDEV or INIT. Not enough memory to run applications or bad system RAM. Focus includes a RAM Check utility.

PROBLEM: The system boots from floppy rather than the FOCUS Drive	CAUSES: Apple IIe: the controller card must by in Slot 7. Apple IIgs: Control Panel's Start up Slot is not set to that of the FOCUS Drive Controller card. "Your Card" is not set for the controller card.
PROBLEM: During a IIgs boot, the message "Ram Disk too large" appears and the system stops booting.	CAUSES: Your memory expansion card is missing or not inserted properly. You do not have at least 256K RAM on your memory board. You have selected a RAM disk size that does not leave enough room for GS/OS. Set the size to 0K, power down for 10 seconds, and try again.
PROBLEM: During a IIgs boot, I hear the FOCUS Drive "whirring" several times. Later on, it never shows up in the Finder (IIgs) or I get the message "No Device Selected" when I try to CATALOG the drive from BASIC.	CAUSES: Format damaged or no ProDOS directory. Computer was reset during the Format process. Try to change partitions using FOCUSFORMAT.
PROBLEM: During a IIgs boot, I get a text message on the screen with and error number, forcing me to Restart again.	CAUSES: One or more files in the System Folder are damaged or missing. Replace the System Folder with the one located on the FOCUS Utilities diskette. Replace the file ProDOS. If all else fails, delete all files and try again.

	Run Change Partitions from FOCUSFORMAT.
PROBLEM: When I boot from floppy, the hard drive icon does not appear in the Finder.	CAUSES: Make sure the Control Panel's "Startup Slot" selection is that of the Controller card. Verify that "Your Card" has been selected for the Controller card's slot.
PROBLEM: I've reformatted my FOCUS Drive, copied a new SYSTEM folder, and everything works, but it doesn't run as fast as it used to.	CAUSES: For the IIgs, Make sure the file "FOCUS DRIVER" is located in the SYSTEM/DRIVER/ folder on the FOCUS Drive.
PROBLEM: I've copied one of my programs to the FOCUS Drive, but it won't run. Instead, I get the message "Path not Found" and a line number on the display.	CAUSES: All of the files associated with the particular program have not been copied. If it's a BASIC program (and you are familiar with AppleSoft Basic), you need to modify the program line at the line number indicated to reflect the new prefix.
PROBLEM: I've copied one of my programs to the FOCUS Drive, but it won't run. After launching, the program hangs the system, jumps into the monitor, or the floppy LED just flashes.	CAUSES: The program may not be Installable on a hard disk. Check the user's manual that came with the program. All of the files associated with the particular program have not been copied.

PROBLEM: During copying one of my programs on to the FOCUS Drive, I get I/O Error (IIe) or the Finder reports a read or write error (IIgs).	CAUSES: The program may not be installable on a hard disk and is probably copy-protected. Run the Finder menu item "Verify Volume" or the System Utilities "Verify Disk" function. If errors are reported, the program is copy-protected or the diskette is damaged.
PROBLEM: When booting into the Finder, a message appears indicating that the Hard disk volume may be damaged.	CAUSES: Possible corruption of the FOCUS Drive's Block usage map, a directory, or specific data files. Try to verify Disk from the Finder. Run Change Partitions on FOCUSFORMAT.
PROBLEM: When copying files, the message I/O Error, Read Error, or Writing Error appears, interrupting the copy process. The error occurred while accessing while accessing the FOCUS Drive.	CAUSES: Possible corruption of the Hard drive's Block usage map or Directories. Run Change Partitions on FOCUSFORMAT. Valid Read/Write Error. Try again.
PROBLEM: Instead of booting, the display reads "Unable to Load ProDOS".	CAUSES: Wrong Startup Slot selected. The File ProDOS is missing.
PROBLEM: Only two of my volumes show up in the Finder.	CAUSES: The file FOCUS DRIVER was not on the last disk that booted the system.

PROBLEM: Only two of my volumes are accessible in my program.	CAUSES: ProDOS 8 programs only recognize the first two partitions of the FOCUS Drive. The file FOCUS DRIVE was not on the last disk that booted the system.
PROBLEM: Whenever I use the Finder, a small black square blinks on the screen.	CAUSES: Normal. This is the FOCUS Drive activity indicator. It flashes whenever reads or writes occur to the FOCUS Drive.
PROBLEM: I booted into the Finder. The FOCUS DRIVER file is there and I still can't access more than two volumes.	CAUSES: Only two partitions exist. FOCUS DRIVER installed on System Disk 3.2 or earlier. FOCUS DRIVER only works on GS/OS, or System Disks of version 4.0 or higher.

The Power][Be Your Best

http://16Sector.com

http://8bitsystem.com

http://a2central.com

http://ReactiveMicro.com

http://Ultimateapple2.com