

Important CF2 Version 4.03r1 Information

ReadMe!CF2!.pdf – June 1,2007

Overview

The 4.01 release of PicoDOS for CF2 fixes all known major bugs, adds several new features, tweaks the build tools to support future enhancements, and adds support for Silicon Systems' SiliconDrive brand Industrial Grade flash cards.

Compatibility

PicoDOS version 4 is compatible with all 2.27 and 2.28 .APP, .PXE, or .RUN binaries that limit use to card and drive volumes of 2GB or less. Version 2.26 and earlier, version 3.0x, or any version needing to work with volumes larger than 2GB must be recompiled for use with PicoDOS 4.xx. However, no coding changes are required for any older projects – just recompilation with the new PicoDEV tools.

FORMAT & FDISK Commands: PicoDOS version 2 FORMAT used the volume description information from whatever had been on the card, which could have been from the card manufacturer, and explicit FDISK command, or Windows formatting tools. FORMAT in PicoDOS versions 3 and 4 quietly perform a single volume FDISK operation to yield the maximum capacity and compatibility, but only if the current volume description already defines a single volume. If you have special FDISK requirements, you must specify the '\P' option in the FORMAT command to have PicoDOS use the existing partition scheme.

FAT16 & FAT32: PicoDOS version 2 restricted card and drive volumes to 2GB or less. Version 3 added FAT32 support to remove that limitation and automatically selected FAT32 when formatting volumes greater than 512MB. A year of working with FAT32 showed that 2GB was a better default cutover point because FAT32 takes more time and space. You can change the cutover with the SYS.F32MBCUT environment variable.

Root directory size: FAT16 file systems have root directories with a fixed number of entries which is 512 by default. Subdirectories for both FAT16 and FAT32 grow dynamically as needed until the card runs out of space. PicoDOS version 2 and 3 supported a non-standard FDISK scheme that had FDISK setup the fixed FAT16 root directory based on the volume size as follows:

Volume (MB)	< 32	>= 32	>= 64	>= 128	>= 256	>= 512
Root entries	512	1024	2048	4096	8192	16384

This works in all PC readers, but because it's non-standard, it can confuse drive repair utilities used for emergency data rescue. It's also completely unnecessary for FAT32 which has a dynamic root directory and mostly unnecessary for FAT16 where subdirectories make a better choice for huge numbers of files. However, for compatibility with legacy systems, the FORMAT command allows you to revert to the version 2 behavior with the '\D' switch, or even specify a value by following '\D' with a value between 512 and 16384.

FAT32 Considerations: If you will be using PicoDOS with larger than 2GB volumes, you should read about some of the issues that must be considered at:

<C:\Program Files\Persistor\MotoCross Support228c4\CFX\Docs\Release Notes\FAT32Considerations.htm>

Getting Started with the CF2

1. **Install CodeWarrior and the PicoDEV tools.** This is described in the printed CF2 Getting Started Guide and can also be found on the installer CD at:

<D:\files\program files\Persistor\MotoCross Support\CFX\Docs\pdf\CF2GSG.pdf>

This release requires that you uninstall all older PicoDEV tools prior to installing!

2. **Locate and review the PicoDEV Documentation Index.** After installation, this can be found in the **Start Menu** in **Programs→Persistor→PicoDEV Documentation Index** and at:

<C:\Program Files\Persistor\MotoCross Support\CFxDocumentationIndex.htm>

This index can also be found on the installer CD at:

<D:\files\program files\Persistor\MotoCross Support\CFxDocumentationIndex.htm>

3. **Read the Release Notes.**

Doc Index→ CF2 Release Notes

4. **Update the CF2 firmware.**

Doc Index→ Updating Persistor Firmware

CF2s ship with the latest firmware so this is only required if updating an older CF2.

5. **Read the CF2 Getting Started Guide.**

Doc Index→ CF2 Getting Started Guide

This will help get you acquainted with the key capabilities of the CF2.

6. **Review the CF2 Programmer's Manual.**

Doc Index→ CF2 Programmer's Manual

This document is intended to offer specific CF2 programming guidance and advice.

7. **Review the CF2 API Reference.**

Doc Index→ CF2 API Reference Guide

This document lists the specific C functions for the CF2 hardware.

8. **Explore the CF2 Programming Examples.** Some are listed in the documentation index and others can be found at: <C:\Program Files\Persistor\MotoCross Support\CFX\Examples>

9. **Check www.persistor.com for updates.** We'll periodically post updated documentation and new programming examples.