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# Making CP/M 3 CF disks for S100 IDE Board

**Version 1.0**

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## Introduction

This document is how to quickly get started making disk images for the S100 IDE Board so that CP/M 3 can be booted and ultimately customized and modified to meet the users needs. This is the 1st version and will focus on a set of “stock” images that can be further customized by adding files to the disk that user wishes to add.

I have provided all the necessary tools to customize the images and write them to a CF card.

I would also like to thank John Monahan for the original work on the S100 boards and the work on CP/M 3 for these boards. Also thanks to David Fry for working out the “no-holes” wrlba routine which made the use of cpmtools practical.

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## How do I do this?

I will give a quick tutorial of how to write a CF card with a CP/M 3 image. First we have a couple of tools to install first:

1. We need to install the `cpmtools` that are provided. Simply double click the compressed archive and extract the tools at C:\
2. Next you can install the Win32diskImage program - again choose a directory to install them like C:\WindiskImage

Now that we have the tools in place let's talk about the other files on the disk. There are several directories the most important is the Images directory. In this directory are 4 files:

`cpm3-nonbanked-serial.img`  
`cpm3-banked-serial.img`  
`cpm3-nonbanked-prop.img`  
`cpm3-banked-prop.img`

If you want to simply get up and started you can put your CF card into your card reader - Windows might ask you to format it - go ahead and do so as we need it to be mounted. We will overwrite the format anyways.

Next run the program Win32DiskImage (you may want to create a shortcut to the program). It should automatically find your CF card drive letter and then browse to the Images directory and select the type of system you want (banked or non banked) and whether the console is the prop console or serial port console (the serial port is defined at 19200 baud rate). Click on write and the image will be written to the CF card and then exit the program. **Be sure to eject the CF card from windows by selecting the drive and right clicking and select eject.** That is all there is to it!

Now lets say you want to customize the image with some extra files. Let's take the example where we want to add the files from the BASIC-FILES directory (this a group of Basic interpreters/compilers) taken from <http://schorn.ch/altair.html> which is a good source of CP/M programs and the altairz80 simulator which is used to build the images which will be covered in version 2 of this project.

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First lets copy one of the images in the Images directory to say the windows desktop. We can do that by right clicking on one of the images selecting copy and then go to the desktop and right click paste.

Next let's click on the shortcut in the base directory called cpmttools Command Prompt. This will open a command window. We need to navigate to the users desktop (C:\Users\<username>\Desktop.

Next let's see what is in the current image. By typing **cpmls -f s100ide <our image name>** where <our image name> is the name of the image we pasted on the desktop>. This will list all the files that are in the CP/M filesystem image.

Now let's say we had extracted the original archive on our desktop and we want to put all the BASIC-FILES in to user area 1 on the CP/M image disk we would do the following:

**cpmcp -f s100ide <our image file name> CPM3/BASIC-FILES/\*.\* 1:**

This will copy all the files that are in that directory to the user area 1 on the CP/M image disk. Now if we do a:

**cpmls -f s100ide <our image file name>** we will see all the previous files and the new files listed under user 1. We can now write this image to our CF card and use the files on our CP/M system.

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## Summary

This document has shown how to quickly get started with getting a standard image onto a CF card that can be used with the S100-IDE controller board. It has also shown how to add files to the standard images and to look at the content of the images before writing them to the CF card.

The next version of the project will focus on taking the sources for CP/M and building those standard images. It will also discuss how to modify them, for example, adding in the ZFDC board so that floppy drives can be supported as well, rearranging the drive numbers, etc.