

Amiga Hard Drive Configuration Attempts

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Using ExpertPrep or HDToolBox to Format and partition a large gig hard drive.

I had considerable difficulty with this task. First thing to remember is:

- 1) Know what type of hard disk controller that is in use, meaning...
 - a. Use the Commodore Amiga OS tools (HDToolBox) to set up a disk on a A2091 hardware card.
 - b. Use GVP tools (FastPrep or ExpertPrep) to set up a disk on a GVP hardware card.
- 2) Do NOT use “low Level Format” within the HDToolBox and or the GVP tools. It locks up the drive. Other than that, follow the directions within the HDToolBox program.
 - a. I had great success with identifying, formatting, and portioning the drive until I did a low level format.
- 3) DO set up the SCSI pins correctly on the adapter.
- 4) The size of the disk does not matter. The limitations of a 2 Gig size allocation are imposed within the Amiga Architecture.
 - a. For example: I have set up a 146 gig drive, with EIGHT, 2 gig partitions on a GVP hard disk controller. The GVP tools are useful and allow the partitions to be set up, but the software has a difficult time displaying the correct size of the disk in gigabytes. Instead it presents its best guess. I am speculating that the Amiga design and chip set does not allow for displaying the actual size of the disk. However, it does allow the partitions to be set up correctly.
 - b. The first disk that I set up, I did using the slide bar tools within HDToolBox for setting the partition size on a A2091 Commodore controller. This is very much a pain to position the slide bar exactly where you want it, but you can get close.
 - c. When the disk locks up, it becomes no longer visible or accessible with any software.
 - d. I also had strange results setting up the SCSI2SD interface without first setting the ID number of the device. It appeared to be fully functional all throughout the setup process, but typically it showed an NDOS disk icon on one of the two partitions, or in a 3 partition setup, two of the partitions came up as NDOS on a reboot.

d.i. I was working with a machine that had AOS 3.1 ROM at the time. When I went to install OS software on the new disk, the strangeness increased and then the machine corrupted one of my install disks. Later I learned that there is a setup utility that you must use with a Windows machine to set the SCSI ID. I was also working strictly with the Floppy disks and a pure Amiga environment without an OS installed. This proved to be very problematic. More on this later.....

5) The following table describes the partition allocation I set up on the 146 gig drive on a GVP controller. Needless to say, most of the drive is not used, but it is a new old stock hard drive I had similar results / success with a 74 gig hard disk.

Hard Disk Drive: ID/REV BD14685A26 / HPB7

- SCSI ID set to 0, but it is best to set the ID to a higher number. I eventually chose # 5.
- I chose this because my 40 year old Western Digital or Quantum disks are typically set at # 6. Typically Unit 0 is reserved for SCSI bus management.

MB Size	Name	File Sys.	Low Cyl.	High Cyl.	Boot Pri.	Avg. Cyl.Size
1004	CDH0	FFS	2	359	BOOT	357
2013	CDH1	FFS	360	1076	MOUNT	716
1999	CDH2	FFS	1077	1788	MOUNT	711
2013	CDH3	FFS	1789	2505	MOUNT	716
2016	CDH4	FFS	2506	3223	MOUNT	717
2013	CDH5	FFS	3224	3940	MOUNT	716
2005	CDH6	FFS	3941	4654	MOUNT	713
2016	CDH7	FFS	4655	5372	MOUNT	717

As described in the previous text, I had much failure in setting up the SCSI2SD adaptor. If you are moving through the setup and installation processes and it appears to be looking good, then all of a sudden there are Checksum errors on the new partitions, it is time to stop and restart from scratch. If you start the HDToolBox program and the SCSI bus identification process seems slower than usual, then the disk is not setup right. I tried many different approaches, but in the end, this device wanted partitions that were less than a gig in size. I chose 650 meg for each partition, which resulted in 3 partitions, with a little extra space that was disregarded.

6) NOTE; it became evident that the incorrect setup procedures were corrupting the disk. I had to put the disk in a windows machine and format it to FAT32.

7) Then I had to use the windows based SCSI2SD utility to set the ID number for the drive.

- 8) It appears to be possible to partition the other gigabytes on the disk into additional partitions, within the utility, but I did not try it out yet.
- 9) And it is less painful to do this setup work on an existing operating system.
- 10) So the process is as follows:

- a. Format the Flash Disk on a PC in the FAT32 format
- b. Insert the flash card into the SCSI2SD adaptor and connect to the windows PC and initiate the utility. External voltage to the card is not needed.
- c. Run the SCSI2SD utility on the PC and set the Unit ID number to "5"
- d. Set the partition size to a number less than 1 gig. 950 Meg might be OK
- e. Set up additional partitions in the additional tabs within the utility if needed. I will include more details here when I attempt to do this.

Name	Start Cyl.	End Cyl.
CDH0	2	1226
CDH1	1227	2452
CDH2	2453	3675

SAVE TO DISK / UPLOAD TO DEVICE

- f. Move the hardware to an Amiga that has an OS running and a HD ribbon cable with an expansion connector.
- g. It might be necessary to partition the drive using HDToolBox or GVP FastPrep, but I don't remember. I think the partitions and their size are already setup using the SCSI2SD Utility. Save to disk if using this step and after the partitions have been created.
- h. Using Amiga Workbench, I used AOS 2.04 but will upgrade to 3.1 next time, format the partitions, one at a time. This will take some time.
- i. After the formatting is done, apply the proper Icons to the Hard Disk Partitions using Icon Edit.
- j. In the Workbench, rename the default partitions of "empty" to whatever you like, I used CDH0, CDH1, CDH2
- k. Reboot the machine.

- l. The machine should come up to Workbench under the existing OS and show the hard disk partitions.
- m. Install your Operating system that matches your ROM to the new System Partition (CDH0). I did this step on the Amiga side using floppy disks.
- n. Reboot the machine. The computer came up under the original OS, that is to say SCSI Unit ID of 6, and Unit 5 became the slave.
- o. Shut down the machine and remove the original hard drive. Restart the machine.
- p. The computer should start under the newly installed OS.

Working with Floppy Disks from Third Parties:

Make sure to read the manual that comes with the disk. There are different methods used by these parties to install the software.

Commodore Boot Priorities:

-10 = Boot

+5 = Boot from Floppy

-11 = Next in Line

-128 = Lowest priority

When working with GVP hardware, the software allows you to make the boot priority setting. An example follows;

NAME	LOW CYL	HI CYL	BOOT PRI.
QDHO	2	359	-10
QDH1	360	1076	-20
QDH2	1077	1788	-20