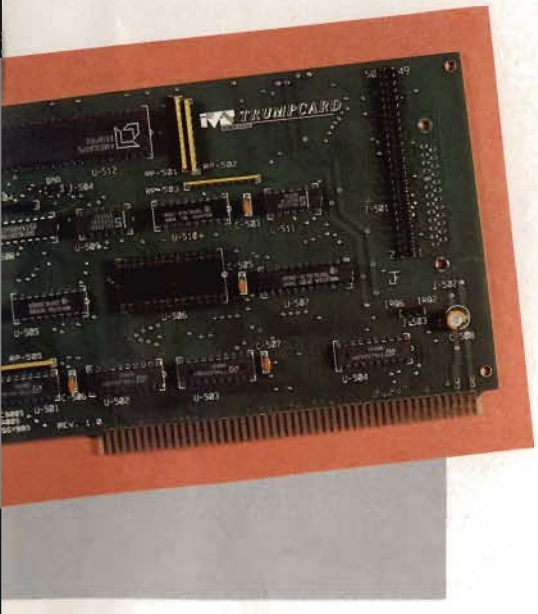
Trumpcard

SCSI HARD DISK CONTROLLER

DOES THE JOB FOR YOUR AMIGA 2000

Reviewed by Morton Kevelson

Mount a standard 3.5-inch hard disk on this half-length board and you've got a self-contained hardcard.



Trumpcard photo by Morton Kevelson.

The $199.95 **Trumpcard** from Interactive Video Systems (IVS) is a SCSI hard disk controller for the Amiga 2000 that's reliable, easy to install and use, and competitively priced. Mount a standard 3.5-inch hard disk on this half-length board and you've got a self-contained hardcard which leaves the Amiga 2000's extra drive bays free for other devices. IVS offers the Trumpcard with a variety of hard drives or with optional brackets for mounting your own.

Since I already had a 48Mb Seagate ST157N drive installed in my system, I choose the basic Trumpcard with the optional autoboot ROM chip. This package includes a standard 50-pin SCSI cable, the Trumpcard boot/utility disk and instruction manual.

Installation took only a moment, since my Seagate drive was already in the 5.25-inch drive bay. I just pushed the Trumpcard into the first available slot and hooked up the SCSI cable. The Trumpcard is a no-frills SCSI controller with only a single 50-pin connector. Since it does not extend the full length of the slot, it lacks the 25-pin modified connector usually provided on full-length cards. However, the Trumpcard does have the mounting holes and printed circuit traces for a 25-pin connector on the board.

Under AmigaDOS 1.3 it is possible to boot directly from a hard drive. For hard drive autobooting to work, the computer must have the version 1.3 Kickstart ROM installed and the Trumpcard must have its Autoboot ROM installed in the empty 28-pin socket on the board. All new Amiga 2000's are sold with the new ROM in place. If you have an older computer you must contact your dealer for the upgrade.

Once the proper ROMs have been installed, the Amiga 2000 will automatically boot from the hard drive. Autobooting can be defeated by simply putting a disk into drive unit df0: when powering up or rebooting. This will work even if the floppy disk is not a boot disk. If the left mouse button is held down while booting, the Trumpcard will only mount the boot partition on the hard drive and will then boot from the floppy.

Setting Up

Configuring a hard drive can be a complex task. It requires a knowledge of the drive's physical arrangement regarding the number of cylinders, heads, sectors per track and so on. This information must be properly entered into the devs/mountlist file on the boot disk. The Trumpcard's custom control program also must be copied into the devs directory of your boot disk. The ▶

Speed Tests

I ran some simple checks to benchmark the performance of the Trumpcard. Even though the Trumpcard does not use DMA hardware, it did very well. The first test simply copied all of the Workbench 1.3 C directory files from the hard disk to RAM and back again. This involved a total of 188,744 bytes in 64 files. I then did the same test using a single 722,790 byte file. The results are summarized below:

Test	File System	Time	Bytes/Second
Copy DH1:C to RAM:C all quiet	FFS	11.5	16413
Copy RAM:C to DH1:C all quiet	FFS	16	11797
Copy DH1:bigfile to RAM:	FFS	7	103256
Copy RAM:bigfile to DH1:	FFS	6.5	111198
Copy DH2:C to RAM:C all quiet	OFS	18	10486
Copy RAM:C to DH2:C all quiet	OFS	23.5	8032
Copy DH2:bigfile to RAM:	OFS	32	22587
Copy RAM:bigfile to DH2:	OFS	33.5	21576

Trumpcard Utilities program makes the installation process as painless as possible. Simply work your way through the onscreen checklist sequence and the job will be automatically taken care of. When done, you will have a properly configured boot disk which will transfer control to the hard drive.

The first three steps involve drive selection, low level formatting and drive certification. There are presently 19 drives that are directly supported. About half of these can be automatically selected by the software. The low level format is normally done only when the drive is first set up. Since I was planning to use the new fast file system which requires a different interleave, I decided to reformat my drive at this time. Drive certification checks the disk for hard errors and automatically allocates the bad sectors. No less than eight certification methods, both destructive and non-destructive, are provided by the Trumpcard Utilities. Low level formatting and drive certification are optional.

The Trumpcard Utilities program is very cautious with regard to formatting the drive. It gives you no less than four warnings about impending loss of data, along with options to cancel. The location of the CONTINUE gadget is also changed, so you can't just mindlessly click your way through the requestors.

The next three steps add the drive to the mountlist, mount the drive and perform the AmigaDOS format. If you accept the default values you will end up with a single partition with the full drive capacity. Before proceeding, just make sure to set the menu selection to either the old file system or fast file system. As per Commodore's specifications, Trumpcard reserves cylinder 0 for the autoboot code. A 1Mb partition, using the old file system, is also created to support autobooting. IVS is presently working on code to support autobooting directly from a fast file system partition.

At this point you can manually intervene and set up your own partitions. I chose to arrange my drive with two 20Mb partitions using the fast file system, with the remainder of the space in a third partition using the old file system.

The final step automatically writes the setup information to the hard drive and copies your Workbench disk into the first user partition. When finished, you will be left with a floppy to boot into the hard drive, or with the auto boot ROM installed you can boot directly from the hard drive. ■

IVS TRUMPCARD $199.95

Interactive Video Systems, 15201 Santa Gertrudes Ave. Y102, La Mirada, CA 90638. (714) 994-4443.

CIRCLE 268 ON READER SERVICE CARD