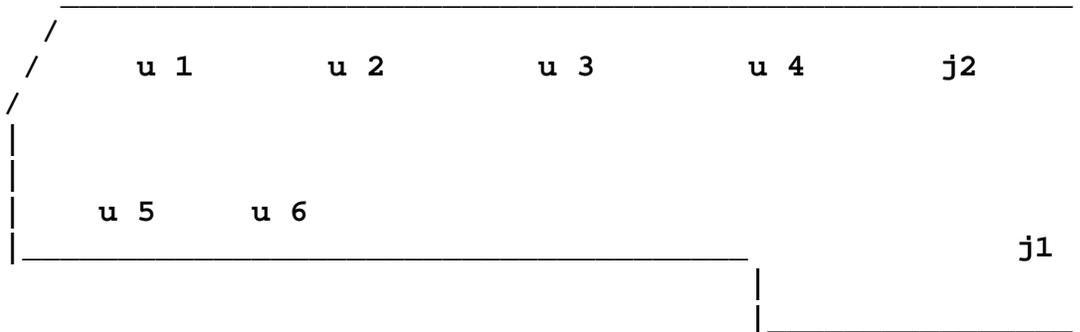


013- I want to configure a CMS hard drive controller card to run a 20 meg drive for a //e. Could someone supply info on settings?

According to the CMS manual for the 1990 ROM, the six sets of eight pairs of jumpers (u1....u6) are for the following purposes.

Note: This description of the jumpers is only true for the 1990 ROM. On the 1987 ROM the jumpers have a different usage.



u 1: Boot Scan delay....manual shows no jumpers here in default configuration

u 2: first (left) jumper is 'Enable I.C.P. (Yes/No)', middle 6 not used, last (right) is 'multiple initiators (Yes/No)'...manual shows no jumpers in default configuration

u 3: Selection phase time out delay....I believe this sets how long the card waits for the drive to come up to speed(?)...manual shows the default as having 4, 5, and 7 with jumpers installed

u 4: Arbitration phase time out delay..manual - default no jumpers installed

u 5: Bus Free phase time out delay..manual - default has jumper on number 1

u 6: Interrupt recovery delay....manual shows jumpers on 3, 4, and 5

J1 and J2 are single sets of pins. Manual - J2 is not used, J1 is jumpered.

The card I have here, came out of a IIGS where it was hooked to first a twenty meg CMS drive, and later a forty meg CMS drive. It has the following jumpers set (for use with 1990 ROM only):

u1: jumper on 7  
u2: no jumpers  
u3: jumpers on 4, 5, and 7  
u4: no jumpers  
u5: jumper on 1  
u6: jumpers on 3, 4, and 5  
j2: no jumper  
j1: jumper

As I recall, this setup yielded a rather long pause for the hard disk to come up to speed (about 40 to 45 seconds) that we found necessary at the time to avoid boot problems.

From: Andrew Roughan : The CMS SCSI card has three ROM revisions.

The 1987 ROM uses jumpers on the card to define the partitions on the drive. These partitions cannot be greater than 32MB and only two partitions are supported. The manual should be considered a MUST HAVE.

The 1989 ROM is similar to the 1987 ROM in functionality, but it has an annoying habit of shutting down the drive after a period of inactivity. It needs an access attempt to start it up again, but this access will return a failure error code (ok when you can redo the action but not too good otherwise :).

A plus in its favour is that the jumper settings are available from the utility software. Because of this, the manual is not a necessity.

The 1990 ROM gets around the problem of jumper based partitions by assuming that each partition on the drive will be 32MB (or as much as is left less than 32MB). This ROM will therefore support > 60MB of storage on multiple drives. The drawback is that only two partitions can be accessed at a time. The ROM supports switching them in and out at boot time (hold down the Open Apple key). The jumper settings are once again available in the utility software.

For the sake of compatibility with the Apple Partition Map, (do you wish to use the same drive on a RamFAST or Apple SCSI card? or on a Macintosh?) the CMS SCSI card should not be considered.

However if you just wish to access one 60MB SCSI hard drive from an Apple II, then the CMS card will do the job well.

The CMS SCSI card has one advantage over the RamFAST and Apple SCSI cards. It can be used to share a hard drive between computers. For example it is possible to use two 1989 ROM cards (in an Apple //e and a //gs) to share a 60MB drive with a second //gs which has a 1990 ROM card.

The CMS utilities disks for all ROM versions are available on the following mirror of the ground archive:

<http://www.apple2.org.za/mirrors/ground.icaen.uiowa.edu/apple8/Utils/>

CMS.NOV87.SHK / CMS.OCT89.SHK / CMS.APR90.SHK

I also scanned in the manual for the 87 ROM and currently host it here:  
[http://home.datacodsl.com/kalandi/apple/CMS88\\_OwnersManual.pdf](http://home.datacodsl.com/kalandi/apple/CMS88_OwnersManual.pdf)

The manual is also available on GSWV at  
<http://apple2.org.za/gswv/a2zine/Docs/> .