



# Tech Info Library

## A/UX: Partitioning Hard Drives (9/94)

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TOPIC -----

My current system is a Macintosh IIX with 5MB of memory and three 80MB hard drives. The first 80MB drive is partitioned for Macintosh OS only. The second has a 2MB Macintosh OS partition, and the rest is the factory-installed A/UX. The third drive is not formatted or partitioned. On it, I want to create a 20MB Macintosh OS partition and a 60MB A/UX partition and file system.

Although creating the partition with HD SC Setup seems straightforward, what partition type should I assign to each? (Before, I used "Misc A/UX" and Macintosh OS.)

When I tried to use "mkfs" and "mount," I was able to create a file system and mount it. However, whenever I restarted the machine, I got an error tone, and the screen went blank. I had to restart the system and turn off the third hard drive. It then started up correctly.

What are the correct parameters or prototype file needed for mkfs for an Apple HD80 SC with the above configuration? If I do not use parameter files, what do I call the partition to mount it?

DISCUSSION -----

It seems that you don't have problems creating partitions using the HD SC Setup program. We think that the partition types you chose for Macintosh OS (20MB) and Misc A/UX (60MB) are correct. You may also choose "UNIX Usr" or "Free UNIX Slice x" for A/UX partition type. If you choose "Usr" partition type, A/UX will assign slice number 2 (/dev/[r]dsk/cXd0s2) as the default.

Generally, the partition type "Misc UNIX" is best avoided, simply because of the inconvenience of using dp. Do not use the Autorecovery partition for personal files. You should never need to associate the Autorecovery partition with a slice because the autorecovery utilities will do this when necessary.

Note that if you chose the "Misc A/UX" partition type in HD Setup, you have to "pname" this partition to a slice before you can "mkfs" on that partition in A/UX. Here is an example to make a new file system on the "Misc A/UX" partition with SCSI ID #5 and slice 3:

```
Login as root
# pname -c5 -s3 "Misc A/UX"
==> /dev/dsk/c5d0s3
```

Using the "dp" command to display the "Misc A/UX" partition map information, write down the total number of blocks in the partition. This number will be used in the "mkfs" command.

```
# dp /dev/rdisk/c5d0s31
==> Command?
```

Make the file system on that partition with disk interleave factor 1 1

```
# mkfs /dev/dsk/c5d0s3 total-number-of-blocks-from-dp 1 1
```

It is always good practice to do a "fsck" after "mkfs"

```
# fsck /dev/rdisk/c5d0s3
```

Mount the "Misc A/UX" file system on a mount point, say "misc". Create a "misc" directory from root, if it has not been created.

```
# mount /dev/dsk/c5d0s3 /misc
```

Make a lost+found directory for "fsck" purposes.

```
# cd /misc
# mklost+found
```

This completes the task of making a new file system.

If you want to have an automatic "fsck" when A/UX is booting, insert this line in the /etc/fstab file:

```
/dev/dsk/c5d0s3 /misc 5.2 rw 1 2
```

Note that because /misc is a non-root file system, the pass # (the last field) should be greater than or equal to 2, so that it will be checked in /etc/rc automatically.

To pname automatically, insert this line in the /etc/ptab file:

```
Misc A/UX::5:0:3:Misc partition
```

or include the -a option in the above "pname" command. You also may want to add the -a option to pname. This creates a new entry in /etc/ptab for the partition. For example:

```
# pname -a -c5 -s3 "Misc A/UX"
```

For more information on preparing a hard disk for A/UX, refer to the A/UX Local System Administration manual.

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