

## FreeBSD's loader fails with wrong harddisk geometry in BIOS

It's been a while since [I last saw](#) issues with FreeBSD's loader(8).

The error I came along today read like this:  
can't load kernel

The most obvious reasons would be that either the kernel is missing or its filename was specified incorrectly. I thought to verify this by issuing 'ls' in the first place, only to notice that it would show nothing. Wait! This is supposed to show the root directory contents, isn't it?

Maybe loader didn't catch up with the devices? Let's look at them:

```
lsdev  
disk devices:  
  disk0: BIOS drive C:  
    disk0s1: FFS bad disklabel
```

Well, this is not supposed to happen at all.

Obviously loader can see the device but is unhappy with the disklabel.

Given the fact that the disklabel is not corrupt, which can easily be verified if the system is booted by using a recovery disk or [a FreeBSD bootonly CD](#), then there must be some other reason for this.

So I checked the disk in question for its logical configuration, which was manually established by means of fdisk and disklabel. This and also the filesystem were intact and did not reveal any errors. To make sure I even checked the primary boot blocks and re-installed them using the 'boot0cfg -o packet ad0' command to ensure use of LBA addressing.

Since it would still not boot from the device I checked with my BIOS where I noticed that it reported the disk's translation mode as being "automatic".

I suspect "automatic" in this consensus likely meant 'CHS' and not 'LBA', this is why loader(8) failed on the disk.

After changing BIOS disk translation mode to 'LBA' it finally worked out.