Tech Info Library

MODE32: Boot Drive SCSI ID Must Be Zero (9/94)

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Security:       Everyone
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MODE32: Boot Drive SCSI ID Must Be Zero (9/94)

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TOPIC ---

My Macintosh seems to continually restart if I install MODE32. If I boot from a
floppy, the problem goes away so it appears to be related to MODE32. I need to
use MODE32, what's wrong?

DISCUSSION --

If your boot drive uses software to change the SCSI ID, then you will need to
set the ID to 0 if you are using MODE32, otherwise the machine just seems to
continually restart.

Here is the technical explanation of what is going on. MODE32 must
"stutter-start" the machine since the ROMs only have a 24-bit memory manager and
some software (like the disk's driver) have already loaded and would have loaded
in a different place if 32-bit addressing had been enabled. So, as soon as
possible in the boot process, MODE32 gives the machine a 32-bit memory manager,
and effectively restarts the machine to let things load in their proper space.

A potential problem exists here however. What if the machine then restarts off
another disk? Perhaps it didn't spin-up quickly enough, or the user inserted a
floppy at the wrong instant. The new disk may not even have MODE32 on it! So,
if MODE32 detects restarts from a different SCSI ID, it does a full restart,
figuring that by now all the disks should be up to speed, and the machine will
consistently choose the same startup disk.

Some SCSI drives, however, use software to control their SCSI ID, and
effectively restart (for a moment) as SCSI ID 0 no matter what the jumpers are
set to. The only way MODE32 can work with these disks is to change the SCSI ID
to 0 so it will be the same on both boots.

Article Change History:
12 Sep 1994 - Reviewed for technical accuracy.