

The typical 5.25" drive will run for months with no need for maintenance save an occasional dusting or session with a head-cleaner disk. When adjustment is required, it will usually be to fine-tune Speed or, less often, to set track centering.

If a 5.25" drive has difficulty reading diskettes, including those it created, and head-cleaning does not help, then, the odds are it's time to adjust speed. If your drive is a Disk][and does not have the external 'Speed Knob' mod, look for a small hole on the lower right side near the back-- some owners add this hole to allow easy access to the Speed Adjustment mini-pot screw. If there is no hole, you will need to remove the case. (Remove bolts on bottom and slide out the drive through the front.)

On the 5.25" Apple 'Platinum Drive', the Speed Adjustment is accessed through a small hole on the bottom of the drive near the front on the right side. Non-Apple 5.25" drives may place the Speed Adjustment almost anywhere. Look for a small hole through which you can see a screw head. If you don't find one, remove the case and look for a mini-pot labeled "Speed" or something similar.

The most popular speed adjustment software utility is, probably, dear old Copy II Plus. From the menu, just select "Verify", then "Drive Speed". Put a diskette into the drive you want to adjust and, turning the Speed Knob (or min-pot shaft) use Copy II's numeric speed display to zero-in on the 'magic' 200ms. number. (Standard Disk][rotation speed is 300 rpm, which comes out to be 0.2 seconds per revolution.)

Other speed adjustment utilities show an rpm number or a hires pointer. Whatever, all speed check routines need to read AND write; so, you will usually need a "scratch diskette" which you do not mind having over-written.

Track-center realignment is needed when a Disk][writes and reads its own disks fine, but does not 'communicate' with many other Apple II 5.25" drives. It generates disk errors when reading disks written by other drives and other drives have the same problem with its diskettes.

CALL A.P.P.L.E.'s APTEST, now in the public domain, tests track-center alignment. With this software, the user checks the alignment of the drive with disks regarded as well aligned --- such as Apple diskware supplied with the computer or some unprotected, original, commercial software diskette. (In a pinch, a diskette formatted by any drive that has no problem reading most other diskettes should be okay.)

Basically, a track-centering test tries to step your head between two tracks of the 'standard' diskette and read the tracks on either side. If the number of successful reads from each track is about equal, the head is "centered" and your drive is well-aligned with the standard diskette.

The test may indicate serious misalignment. ("Aha! That explains why my IIgs and II+ have problems reading each other's diskettes!") Centering adjustment is done by slightly repositioning the stepper motor (mounted on the underside of the drive). This requires loosening the two bolts holding the stepper-motor, rotating it clockwise or counter-clockwise, and retightening.

The adjustment/test process may require several repetitions. Each time, the program will report "differential fractions". The smaller these numbers, the closer you are to near perfect alignment with tracks on the diskette.