

This Cure for Noisy Disk Drives is repeated from the OK PC JUG (Junior Users Group) Newsletter, Oklahoma City. We hope they don't mind some liberties taken by our editor,

CURE FOR NOISY DISK DRIVES

For an outlay of less than \$2, you can make a dramatic difference to your computer... especially if its disk drive sounds like a real meat grinder. The right lubricant applied to the right place on your disk drive mechanism works like magic --- if the drive is moderately noisy in operation, it will become nearly silent; if it sounds like that meat grinder - full of coffee beans - it will at least become more liveable.

More than a few Junior owners know what we are talking about here --- the disturbing noise every time the computer is turned on and goes through its diagnostic routine, and much of the time during operation as the drive head travels over the disk surface. New owners will be forgiven for thinking that the little red light stands for danger!

The noise is not the whirring of the disk drive motor, but a kind of grinding squawk that could well be compared to a boxcar coming to a halt. Aside from the annoyance, especially if you're using a program that goes to disk fairly often, the sound indicates a problem that will most likely get worse as time passes

The problem is that the drive head carriage is hanging up on the rail it travels back and forth on to access different tracks on the diskette. (This has been compared to the straight-line-tracking tonearms on some newer stereo turntables, where the pickup cartridge moves back and forth in a straight path across the record instead of the more usual slight arc found with pivoted tone arms.) The grinding sound comes from the head mechanism vibrating as the stepper motor pushes it down a (possibly misaligned) rail which has insufficient, or no, lubrication.

The solution to this isn't hard to come by. Its easy to do yourself, and hardly worth the "downtime" you'd have if you took it to th shop. If you're worried about doing something wrong, find a repair shop that will do the job but be prepared to part company with your computer for a few days instead of a 15-minute

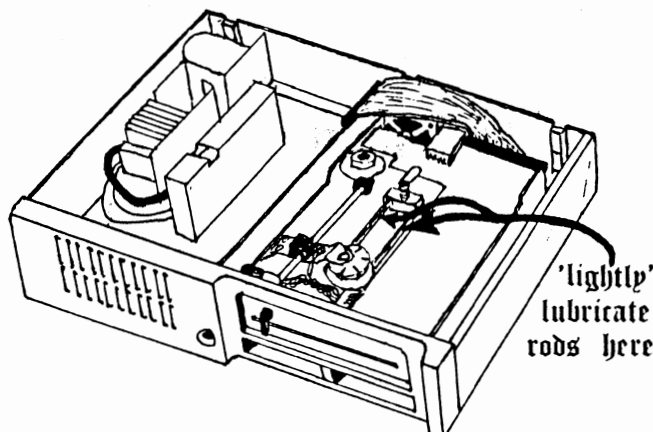
job that takes very little technical knowhow.

Also, you may not get any satisfaction at a store anyway, depending on which one you take it to. This is because the official IBM line on lubricating drive rails appears to be "Just forget it". The reason behind this, according to one technician, is that plastic parts in contact with the lubricant can be corroded. (This may be true with machine oil [such as 3-in-One], but it ain't necessarily so with other [plastic compatible] types of lubricant.

Some repair shops see the folly in this and will lubricate your drive anyway, even under warranty. They evidently realize that you're faced with a tradeoff --- you can either let your drive vibrate itself to pieces or you can take a chance on corrosion. Since the average life of a drive is supposed to be less than five years anyway, the choice seems pretty obvious, unless you want to put up with the noise for a long time.

You can do the job yourself if you're careful and don't have an inborn fear of machinery. If you haven't "popped open the hood" of your JR, to see what's inside, this may be the time! All you will need is some (proper) lubricant, some cotton swabs, and a good look at what you are dealing with. A little care is called for here, because you don't want to get any lubricant (or your fingers) on the drive heads themselves, i.e., the parts that actually touch the surface of the diskettes. To find the right place to lubricate, you may also need a flashlight, but everything is in plain sight and the only thing that has to be removed is the top. The best way to see what to lubricate is to slip a disk in and then turn the power back ON, watching the head mechanism shift back and forth.

Quieting junior's Drive



Continued on next page...

CURE FOR NOISY DISK DRIVES --- Continued:

You can push the head carriage back and forth yourself (after pulling the plug) but do so gently and keep your fingers on the top or sides and away from the heads themselves. Don't worry about getting the carriage out of position, because it's supposed to go back to home base automatically every time you power up.

When you put the lubricant on, do so just a little at a time, and not too many times. A little bit goes a long way. This also helps make sure that none drips or falls down below. Move the carriage back and forth a few times to spread the lubricant along the rail, and you're done.

What kind of lubricant? Take your pick.

Ordinary light machine oil would probably be all right, but there's that likelihood of corrosion, and anyway it wouldn't last as long as silicon grease or Teflon oil. Radio Shack sells a Teflon oil (Precision Oiler) in a handy container about the size of a large ball point pen, with a tipped applicator that is easy to squeeze into the tight places.

Another possibility is silicon grease, which comes in two types; the white type which is to be avoided as too messy and "stiff", and the clear silicon grease (actually greyish) and marketed sometimes as "Phonolube" to lubricate stereo turntable motors and gears, and it works well.

Also, molybdenum disulfide grease ("molly" grease) is available at some auto-parts stores especially speed shops, but is not available in small amounts, AND greases may attract dust (Try Eugene Toy & Hobby, 32 East 11th Avenue, for small tubes of these lubricants, Ed). The Radio Shack Teflon oil is supposed to resist dust and last indefinitely. (Also, it's only \$1.49 for enough to lube 10,000 Juniors.)

A couple of people have applied their lubricant with a match stick or a toothpick, but cotton swabs are better because they conform to the round shape of the rail and it's thus easier to get the lubricant on the bottom surface. Don't use Q-Tips or other medicinal swabs, but the kind made especially for cleaning tape recorder heads. These won't leave a trail of cotton fibers in their wake.

DISTURBING NOTE: This procedure is not guaranteed. If your drive has gone for some time without lubrication and sounds it, it may be past the point of an easy fix. It may quiet down for a brief period and then start up again.

- DICK PAGE WILL DEMONSTRATE THIS PROCEDURE AT THE NOVEMBER CLUB MEETING. ●

ZORKING IN COLOR & 80 COLUMNS

by Larry Maurer

Those of you who spend many happy hours wandering through the musty paths and tunnels of The Great Underground Empire in search of adventure and treasure may have been dismayed to discover that the Infocom adventure games only come up in 40 columns on our PCjrs, and they do not ask if you want color. If you have never had the opportunity of seeing the games on a standard PC, you may not even be aware of the 80 column color option, but if you prefer the 80 column color display, as I do, it is frustrating to be unable to use it. After all, one of Junior's few advantages over the standard PC is its enhanced display capabilities, and anything the PC can display, Junior should be able to display as well.

Well, I have good news. (I bet you had already guessed). After spending many more happy hours wandering through the forbidding intricacies of Assembly Language, delving into the hidden treasures of the ROM-BIOS, and (hardest of all) breaking into the guts of the Zork program itself, I have a solution to the problem. The fix itself is quick and fairly simple, and you don't need to know Assembler. I will guide you through it step by step.

First of all, USE A BACKUP COPY!!! That's just good common sense in any case, but it's especially important when you are going to modify the program, as we are. If you don't have a backup copy, make one. Second, READ THIS ENTIRE ARTICLE THROUGH FIRST, before you turn your computer on, to see if you even want to consider attempting this fix. Third, FOLLOW THE DIRECTIONS EXACTLY, especially if you haven't the slightest idea of what the commands are doing. If you don't understand the directions, don't even start. Get someone to help you.

Now that you are thoroughly nervous, relax. Nothing will go wrong (probably) and you won't lose your \$40 game, (because you're using your BACKUP COPY), so here we go.

First, you need to get into DEBUG. If you've never used DEBUG before, you'll find it on your DOS supplementary diskette. Type DEBUG, and you will get a hyphen prompt, thus:

-

Now take your (BACKUP) Infocom diskette, remove the write protect tab if there is one, and insert it into drive A. Then type the following:

```
L 105 0 0 1
```

Continued on next page...