

Care and

Cleaning of the

IBM[™]

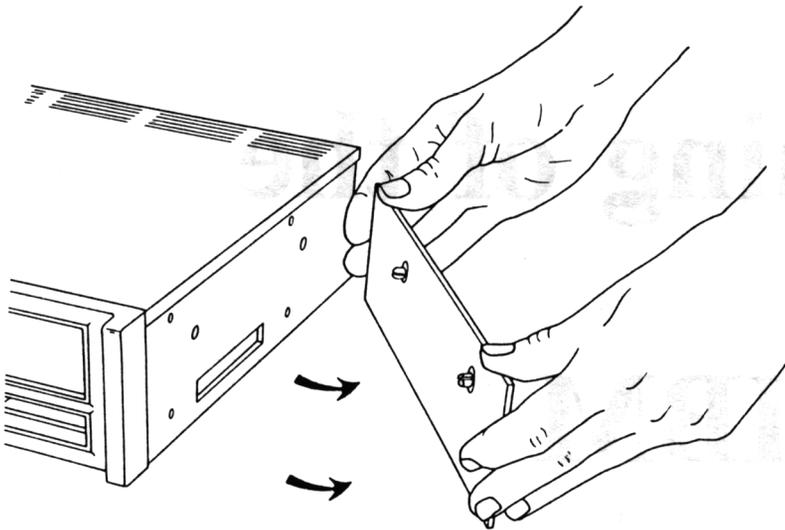
PCjr Computer

**Eugene PCjr Club
1011-116B Valley River Way, Suite 220
Eugene, OR 97401-2127**

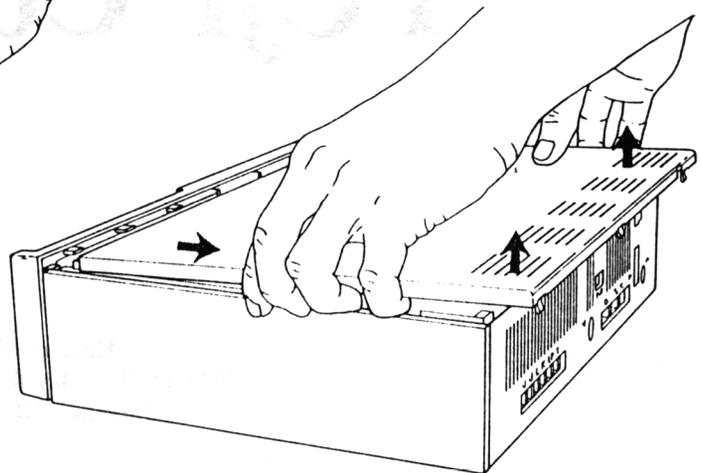
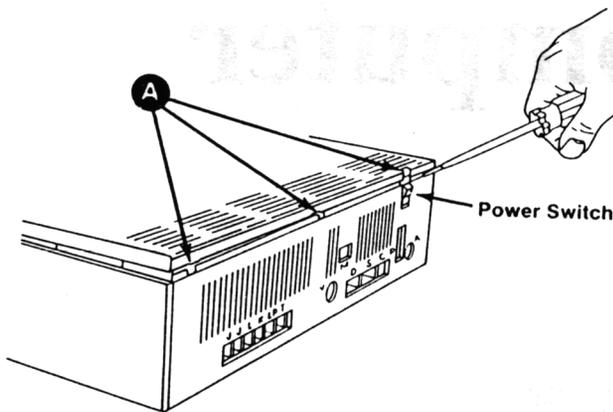
Taking Junior Apart

There may be times when you need to disassemble your PCjr. A component may need replacing or you may be just cleaning the "dust bunnies" from the inside of Junior. These instructions should help you along the way.

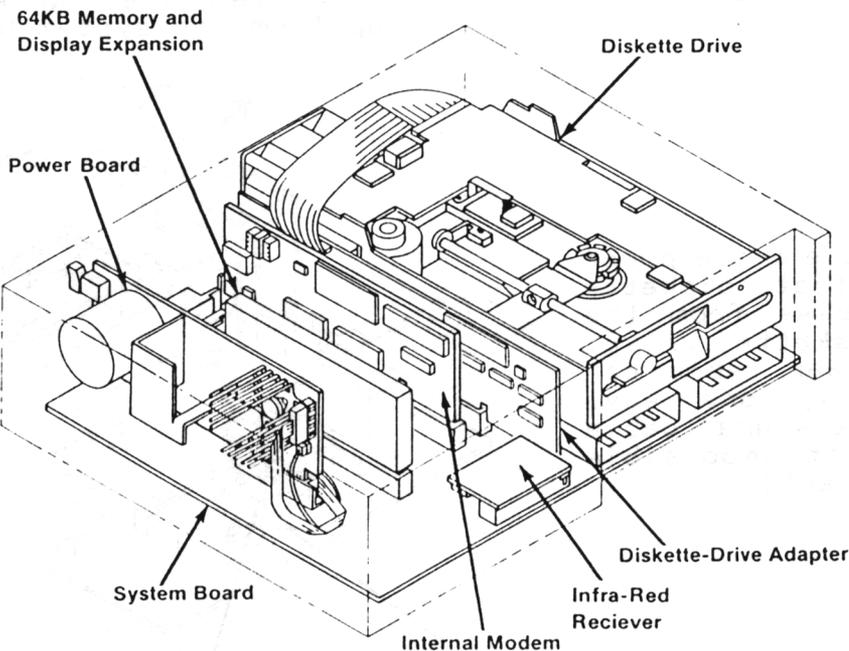
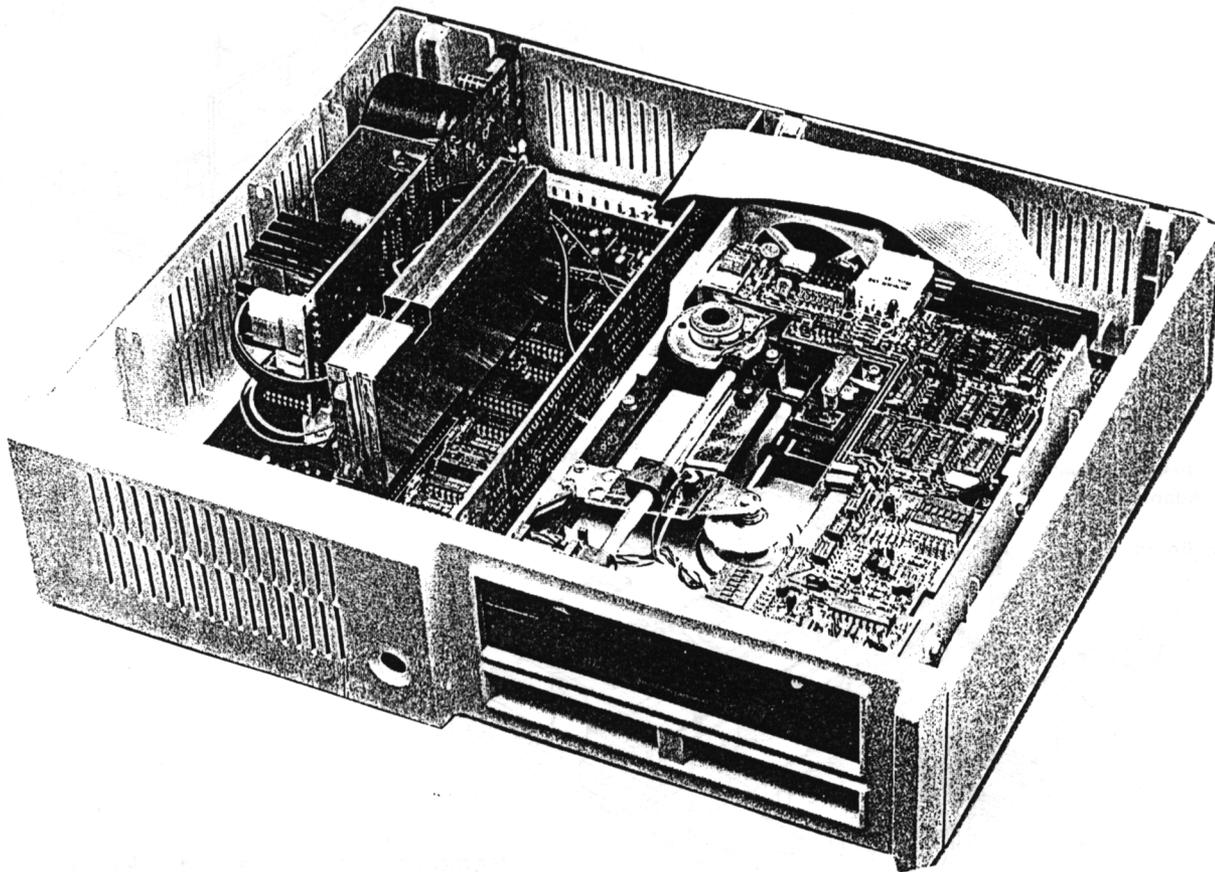
Before doing any work on your Junior, be sure to disconnect the power brick from the back of the computer. Junior's top can be removed by gently prying up on the rear and middle of the lid, separating it from Junior's main case. You will then see how the lid can be gently pulled back and away from the front of the casing as indicated in the figure below. The side cover can be removed either before the lid is removed or after by gently prying it from its mounting holes.



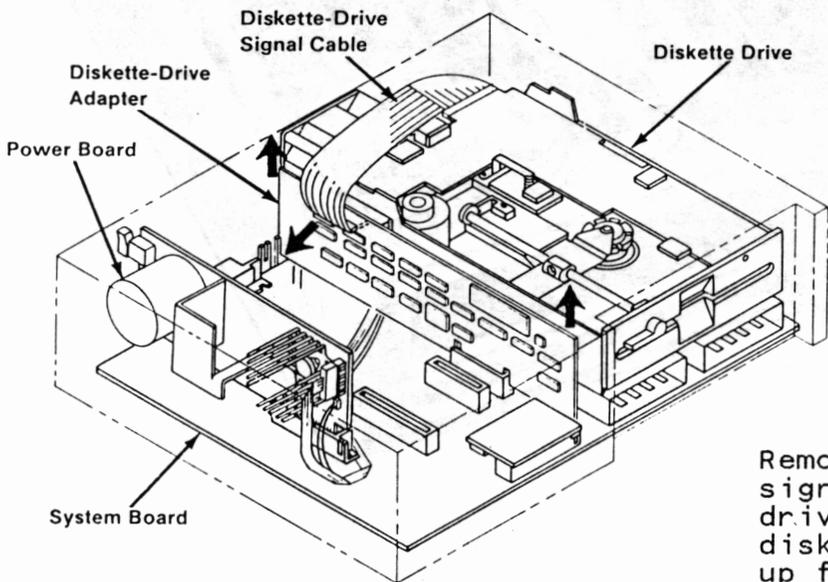
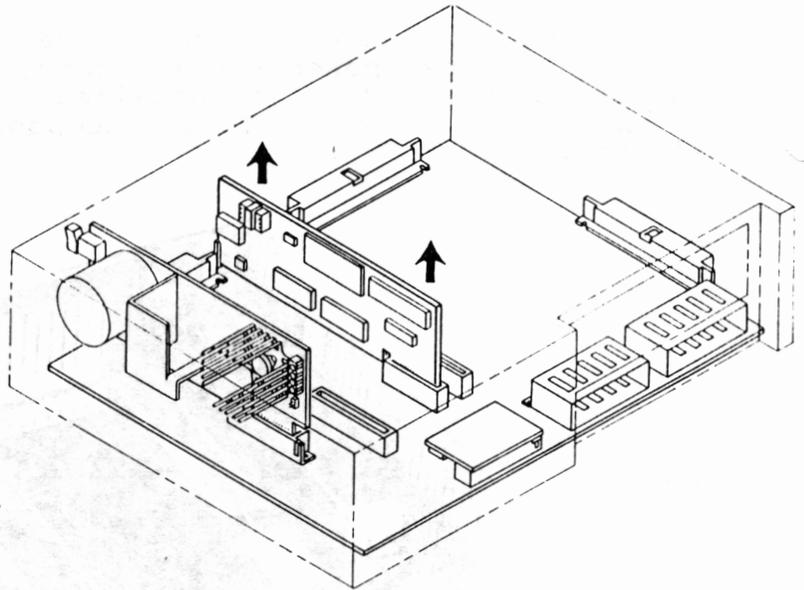
WARNING: The components on the power board may be hot if your computer has been in use. Let it cool before touching any of the components inside Junior.



Looking into your Junior, you will see the following parts (from left to right): Internal power supply board, 64K memory and display expansion board, internal modem (if installed), diskette drive adapter board and the diskette drive. These components are marked in the below illustration.

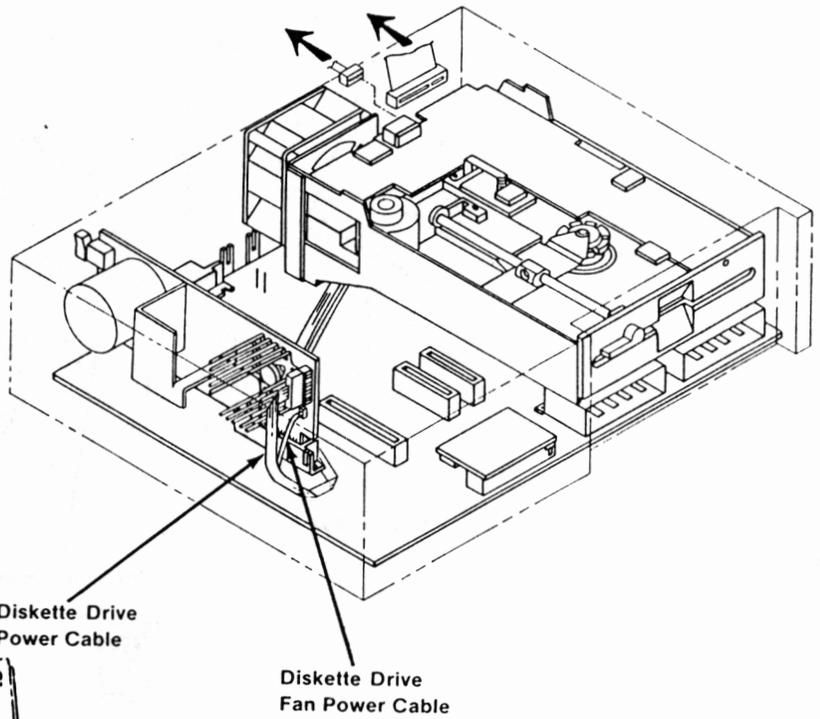


If installed, remove the internal modem from the computer's system connector.

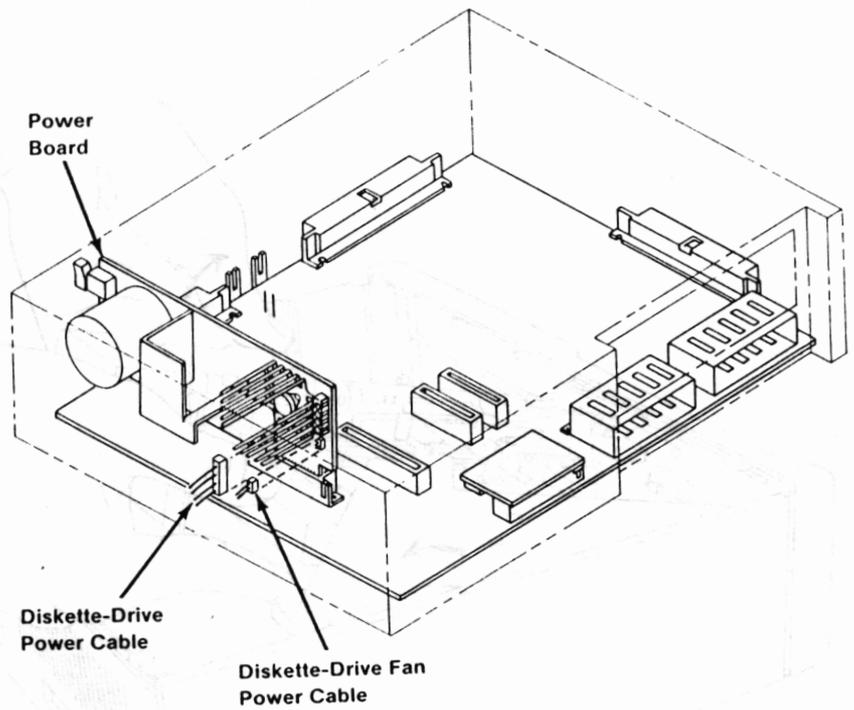


Remove the flat diskette drive signal cable from the diskette drive adapter. Gently pull the diskette drive adapter straight up from the system board.

Remove the diskette drive power cable and the flat diskette drive signal cables from the rear of the diskette drive. Note that the power cable can be installed only one way. Also note that the signal cable is keyed making it impossible to install incorrectly.



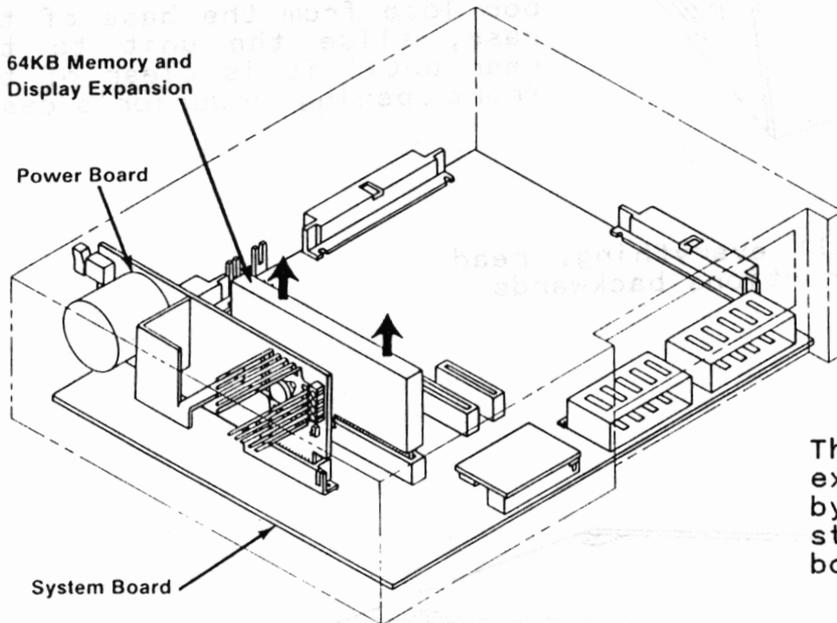
Gently disconnect the diskette drive power cable and diskette drive fan power cable from the internal power supply board. Gently pull the power board straight up from its system board connector.



64KB Memory and Display Expansion

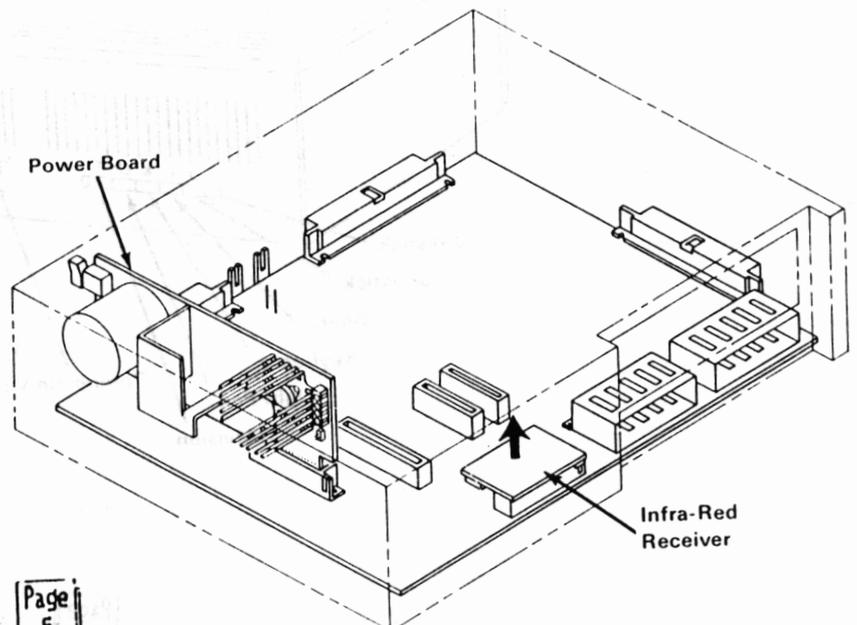
Power Board

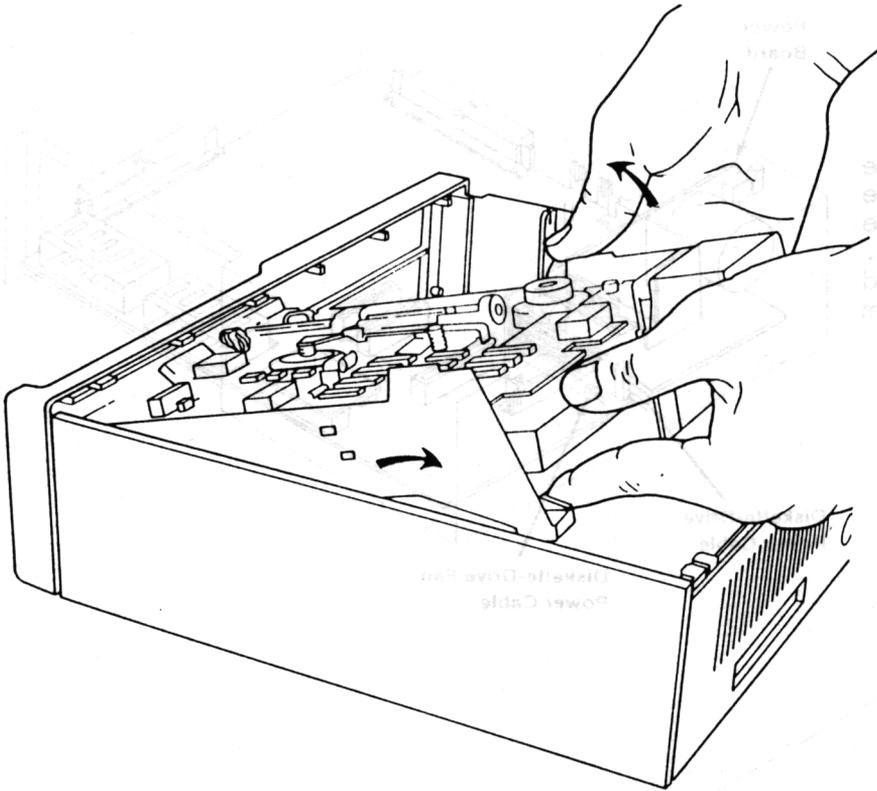
System Board



The 64K memory and display expansion board can be removed by gently pulling the board straight up from its system board connector.

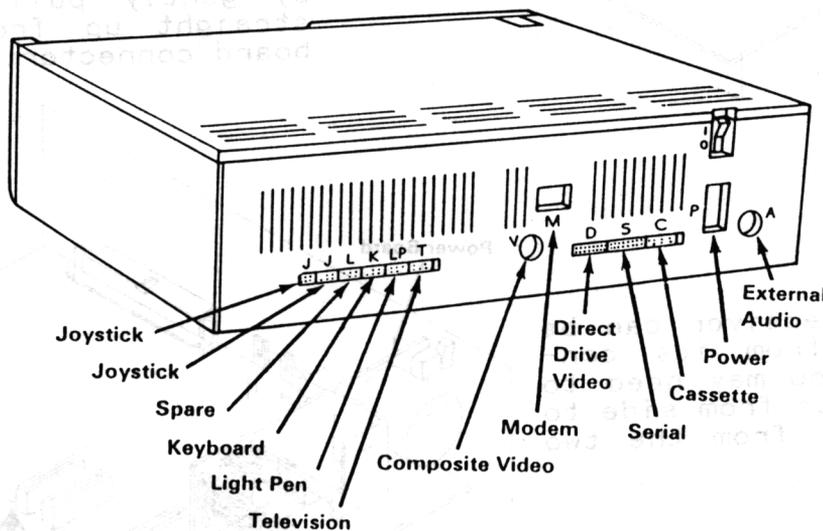
The infra-red receiver can be gently pulled from its connector, also. You may need to rock the receiver from side to side to free it from the two mounting posts.

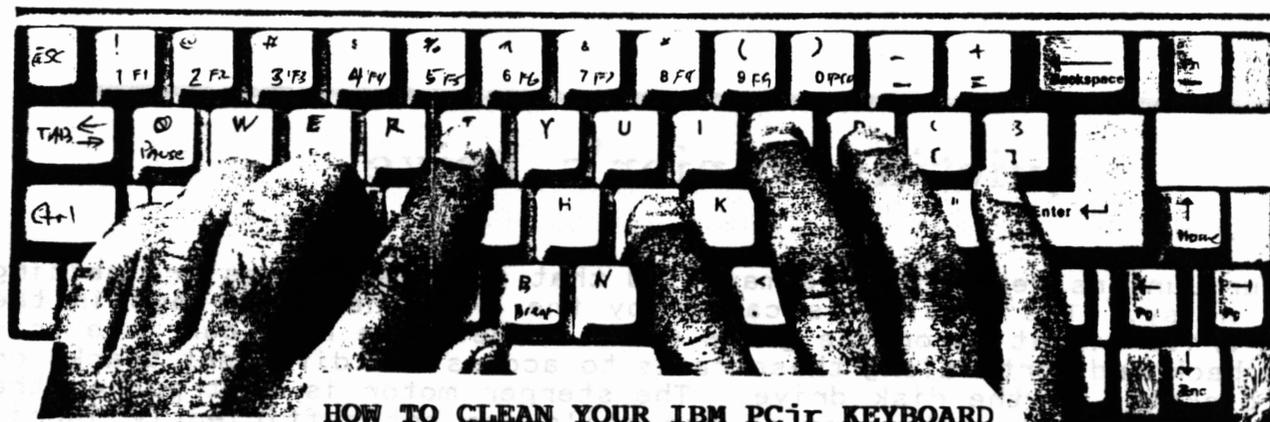




To remove the diskette drive, take a moment to notice that the drive is installed in a white plastic mounting bracket. This bracket houses both the diskette drive and cooling fan, and it is removed all as one unit. The unit is held in place by two studs that protrude through the base of Junior's case. Junior is not getting any younger and the tips on these studs may be quite brittle. Because of this, gently compress these tips while you pull up on the rear of the diskette drive mounting bracket. DO NOT PULL ON THE CIRCUIT BOARD. When the studs pop lose from the base of the case, slide the unit to the rear until it is clear of the front opening in Junior's case.

To reinstall everything, read these instructions backwards.





HOW TO CLEAN YOUR IBM PCjr KEYBOARD

Adapted from an article by John Schwab, SF PCjr Users Group

1. Disconnect your keyboard from the computer, and remove the keyboard cable or batteries.
2. Place the keyboard upside down on an uncluttered table. Carefully remove the six Phillips-head screws from the base of the keyboard. Note: one screw may be covered by the serial number sticker.
3. Gently pry the two plastic halves apart and remove the top half (really the base of the keyboard). This will expose the green circuit board. Using great care, remove this circuit board and gently brush off any visible dirt particles with a lint-free cloth or small soft brush. **CAUTION:** Be very careful not to drop or scratch the circuit board as this could lead to keyboard failure.
4. Beneath the circuit board you should see a gray rubber sheet. It is about the same size as the circuit board, and about 1/8th of an inch thick. It appears to have craters about a half-inch in diameter all over it with little black posts in the crater centers. Lift this sheet out. You will notice the bottom side has what looks like little suction cups (or tiny mounds). These act as springs for the keys below. Clean the dirt and dust from this rubber sheet.
5. All that is left now is the inverted top half of the keyboard. If you lift the keyboard from the table, the keys will slide down, but not out. The SPACE BAR or the ENTER key may fall out, but they can be easily replaced. Remove the dirt and dust from the keyboard keys and their posts.
6. To reassemble, place the rubber mat on top of the keyboard. The three small holes on the mat should be on top and it should slide down comfortably over the three guide posts. Note: The black dots should be facing up toward you.
7. Replace the circuit board. The chips should be facing down and toward the top. Once again, the three holes should be at the top and slice comfortably over the three guide posts.
8. Replace the bottom of the keyboard by "hinging" it down from the top to the bottom. This insures that the keyboard fits together properly. The battery box should be on the top left corner as you "close" the bottom down toward you. Holding the keyboard shut, replace the lower center screw. Next, replace the other five screws, tightening them until they are just snug. **CAUTION:** Do not overtighten the screws.

Note: If you use a vacuum cleaner to clean any of your keyboard components, exercise extreme care so as not to loose any parts into the vacuum cleaner, or to scratch the circuit board with any attachments.

Quieting Junior's Drive

As our Juniors get older, we may find that our disk drives are getting more noisy. The problem is caused by the drive head carriage in the disk drive vibrating on the guide rails. The drive head carriage travels back and forth along these rails to access the different tracks on the diskette in the disk drive. The stepper motor is what pushes the head along these rails, and if the rails are not sufficiently lubricated, the heads will begin to vibrate causing the noise.

Correcting the problem isn't difficult. Disconnect the power brick from the back of Junior. Remove the lid from your Junior by gently prying up on the rear of the lid, separating it from Junior's main case. You will then see how the lid can be gently pulled back and away from the front of the casing.

Looking into your Junior, the view you see should be similar to what Dick Page has duplicated in the illustration. You may need a small flashlight to get a good look into your disk drive, but locate the rails that are indicated in the drawing. You can GENTLY push the read/write heads fore and aft, but be very careful doing so. You should see shiny, bright areas showing where the heads travel back and forth on the rails.

Using a light silicon grease or Teflon oil, (Radio Shack has a great little "Precision Oiler" that contains 1/4 ounce of lubricant; enough to lubricate at least 8,327 disk drives) apply a VERY SMALL amount onto each rail and slide the heads back and forth to spread the oil. If you use a cotton swab to clean the rails or apply the oil, do not use Q-Tips or other commercial applicators as they can leave cotton fibers on the rails. Use wooden type swabs that are available in electronic stores; these won't leave lint in your disk drive.

This should quiet your drives quite a bit. . .but, there is the chance that your disk drive is about worn out. If this is the case, they will soon become noisy again. Under normal use, a drive should last for five years or more. . .most of our Juniors are getting nearly ten years old! So, if you haven't lubricated your disk drive in the past couple of years, you can thank IBM for building such a great computer!

