



***Printhead Replacement
and Adjustment Guide
for the CD Printer***

110553-001 Revision B



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Description

This procedure consists of steps that describe how to replace the printhead for the CD Printer. You should use an anti-static bracelet or another means of grounding yourself when you are performing these procedures.



Caution:

Serious **printhead damage** can result from improperly installing and/or adjusting the printhead. This procedure should be performed only by Rimage trained and qualified personnel using the required tools. Rimage is not responsible for any equipment, parts, or personnel damages that may be incurred by printhead cleaning, adjustments, or replacements. Rimage offers factory servicing for all printers including printhead replacements.

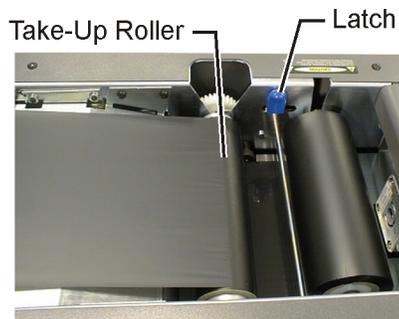
Required Tools

The following procedure to replace and adjust the CD printer's printhead requires a CPR print head replacement kit (210538-001). This kit includes the necessary screwdriver (Torx T10) along with the printhead. A 3/32" Allan Wrench is also needed.

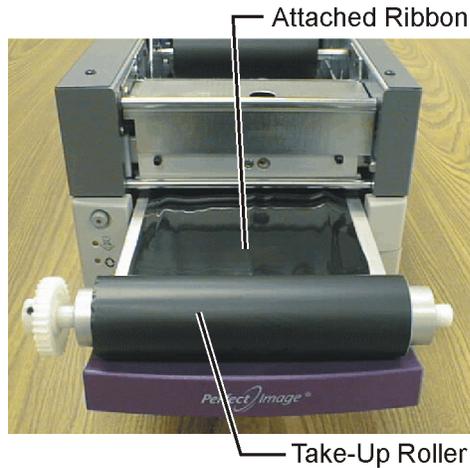
Removing the Printhead

Before replacing the printhead, make sure the cam is not damaged, or out of adjustment! From the Rimage Technical Website locate the "Cam Broken" document.

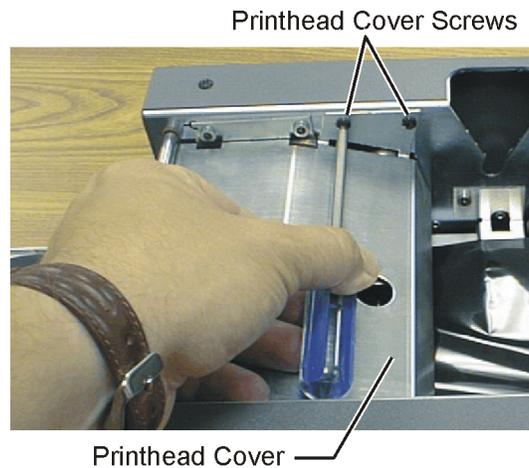
1. Make sure the CD drawer is in the out position. If necessary, power up the printer and press the Unit Attention button to open the drawer.
2. Power off the printer, then disconnect the power cord.
3. Remove the top printer cover by lifting the cover up.
4. If the ribbon is present, remove the Take-up roller by pulling back the latch, then lifting up on the Take-up roller. See the figure below.



5. Place the Take-up roller with the attached ribbon on the drawer of the printer.
See the figure below.

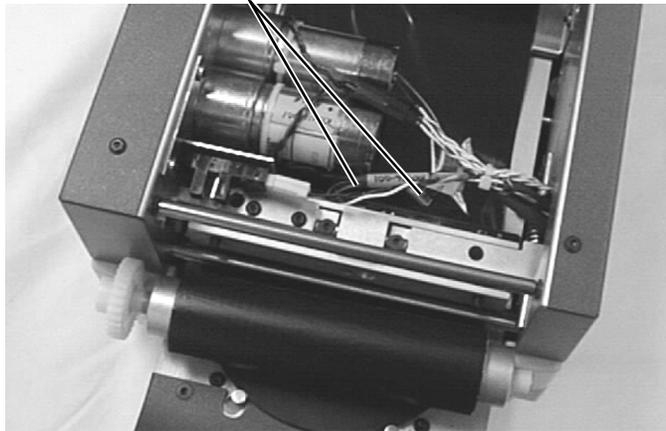


6. If no ribbon is present, place a piece of paper as wide as the ribbon on the drawer under the printhead to protect the printhead.
7. Using a T10 Torx Screwdriver, remove the four screws located on the sides of the printhead cover. See the figure below.



8. Slide the printhead cover upward to remove.
9. Disconnect two or three printer cables located on top of the printhead by *carefully* pulling upward. See the figure below. Some printers have three cables connected to the printhead.

Printer Cables

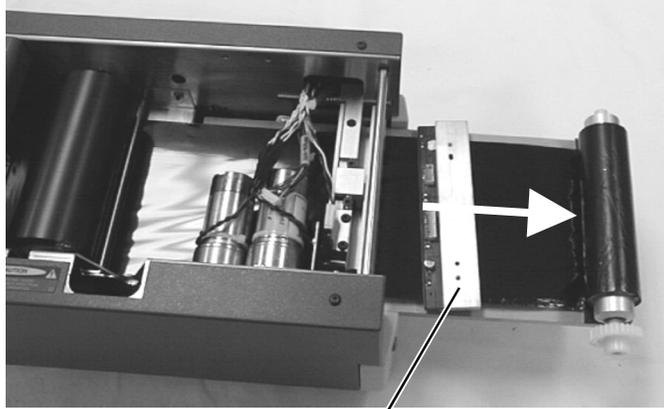


9. While supporting the printhead with your hand, use a T10 Torx screwdriver to remove the screws inside the two access holes. These holes are located at the top of the printhead pivot arm assembly (see the figure below). The printhead is released from the printhead assembly. You may need to remove the sensor from the optical sensor bracket to gain access to the screw.



Two Access Holes

10. Remove the printhead by sliding it under the printhead pivot-arm assembly and then toward the front of the printer. See the figure below.



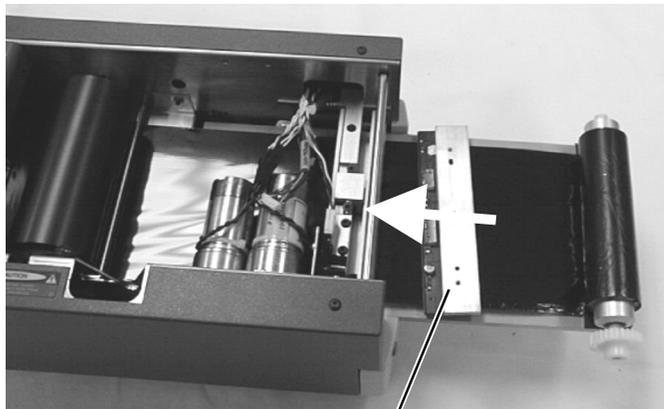
Printhead

11. Remove the screws from the access holes.
12. Go to “Installing the Printhead,”

Installing the Printhead

This procedure should be done after removing the printhead. If you have not removed the printhead, go to “Removing the Printhead” on page 3.

1. Power off the printer.
2. With the cable connectors facing up and placed toward the back of the printer, slide the new printhead under the printhead pivot-arm assembly. See the figure below.



Printhead

3. Plug in all of the cables to the printhead before installing the screws. Some printheads have three connections while some printers may have only two cables. This is not a problem, just connect the two cables as shown on page 5. (Middle and right side as you face the printer from the front.)

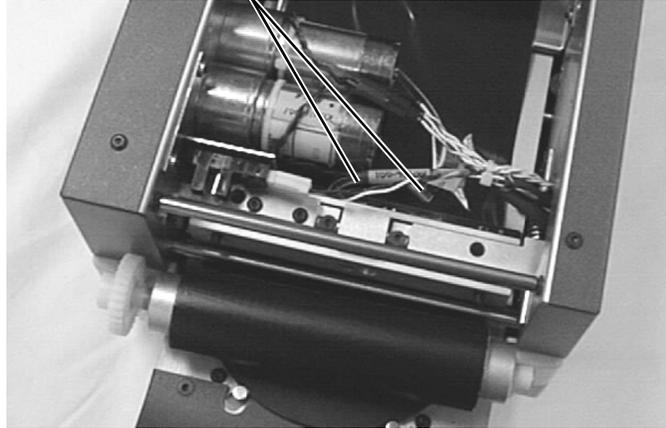


Caution:

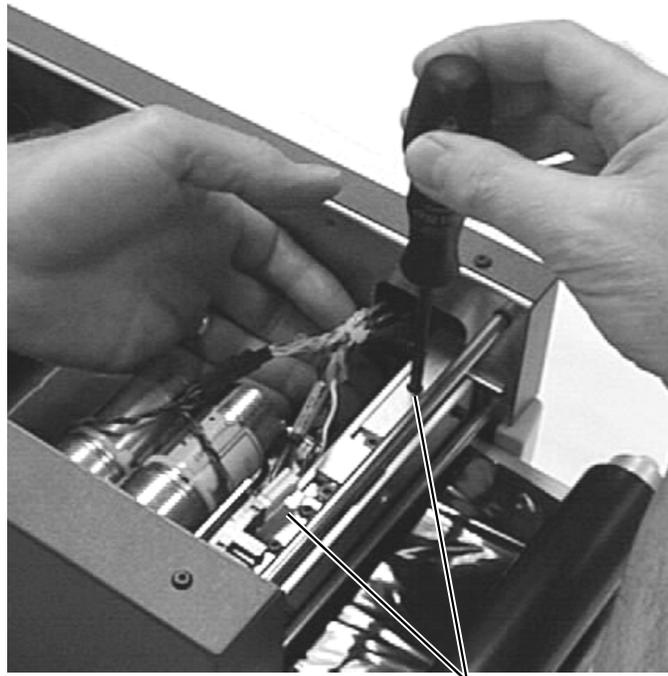
Handle the printhead with care to avoid damage to the printing elements. Do NOT use any objects to prop or position the printhead in position.

4. Use the cables and your hand to hold the printhead into position.
5. Align the printhead holes to the printhead pivot arm assembly. The screws must be removed from the recessed holes.

Printer Cables



6. Install one of the Torx screws into the hole and tighten it up while keeping the printhead aligned with the other hole. The beakside of the printhead must be flush with the mounting block. Install the other screw through the other access hole. See the figure below.



Two Access Holes

7. If a piece of paper was placed on the drawer, remove it.
8. Install the print ribbon.

Printhead Adjustment

Once a new printhead is installed, or if an old one is not printing correctly, you need to test and adjust the printhead.

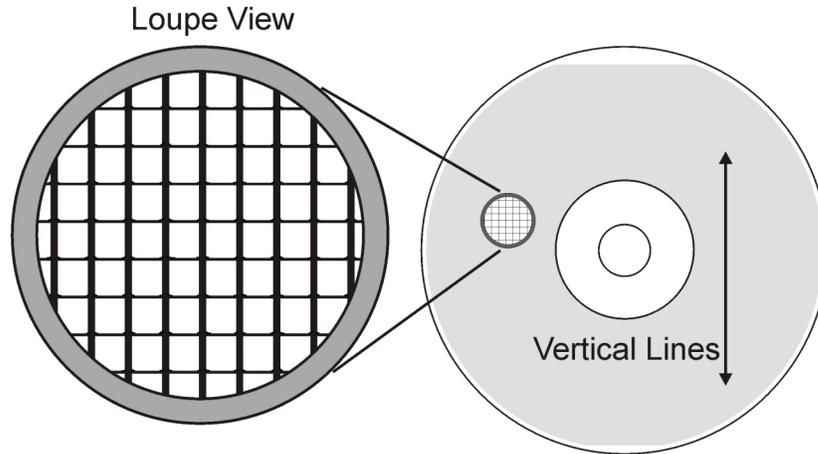


Note: The cam must be adjusted properly before continuing. See “CD Printer Cam Adjustment” on the Rimage Technical Support site.

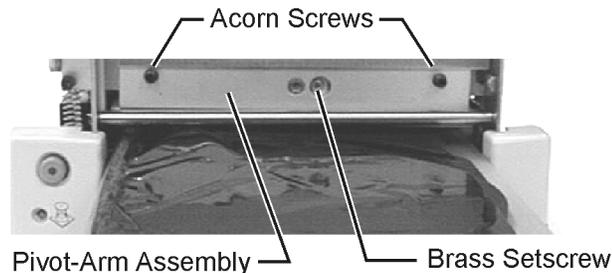
This adjustment requires the person familiar with the diagnostics tests of the printer.

1. If the top cover is present, remove it.
2. Ensure the ribbon is properly tensioned and has no creases.
3. Power on the printer in “Diagnostics Mode” (hold down the Unit Attention button for at least eight seconds while turning on the power. The printer drawer opens or it will move back and forth if it was open before the diagnostics was selected.
4. Place a new **lacquer** disc on the drawer. A lacquer disc has the best print surface and therefore provides the best indication if the printhead is adjusted for the best position.
5. If the printer has an EPROM of 4.09 or better, than either a color or black ribbon works. If the printer has 4.07 EPROM or less, install a black ribbon. Then go to step 8.
6. If using a color ribbon, go to step 8. If the printer has a black ribbon and has EPROM 4.09 or higher, run test 17 first.
7. After the printer errors by flashing 13 times, press the button once. This is normal to error with this version of EPROM.
8. Press the Unit Attention button seven times to run test 7. This test will produce a crosshatch or screen pattern on the disc. Some versions of the EPROM produce a thick bar at the top and bottom of the printed pattern.

9. Test 7 should produce a fine screen pattern. Look at the pattern for these parameters:
- There should be a consistent print appearance. If it appears faded, it would need adjustment.
 - Use a jewelers loupe to compare the thickness of the horizontal lines to the vertical lines. The horizontal lines should be thick like the vertical lines. If they are not the same, adjustment is necessary. The example below shows the horizontal lines thinner than the vertical lines.

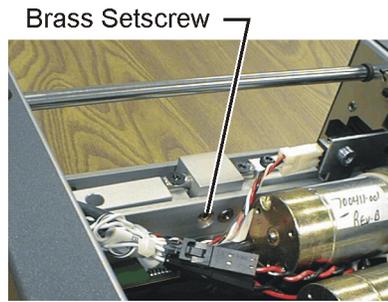


- If no adjustment is needed, power the printer off and resume your work. To make the adjustment, unlatch the print ribbon and move the take-up spool out to the front to gain access to the printhead cover.
- Power the printer off.
- Remove the four T10 screws, and then pull the printhead cover upward to remove it. Be careful not to damage the screwheads. Picture shown on page 4.
- Install the take-up spool in the printer.
- Power on the printer in Diagnostics Mode (hold the Unit Attention button for at least 8 seconds while powering on the printer).
- Pull back on the take-up shaft retainer and remove the take-up roller. The take-up roller should be placed on the table in front of the printer.
- With a $3/32$ " hex Allen wrench, loosen the two acorn screws on the front of the printhead as shown below.

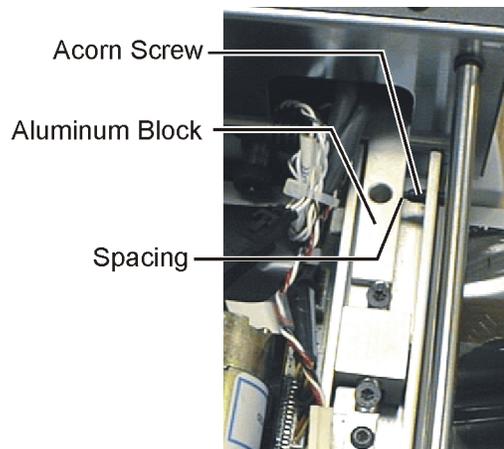


- With a $3/32$ " ball-end hex Allen wrench, loosen the brass setscrew on the front of the printhead $1/6$ of a revolution counterclockwise (which will control the printhead pitch). See the figure above.

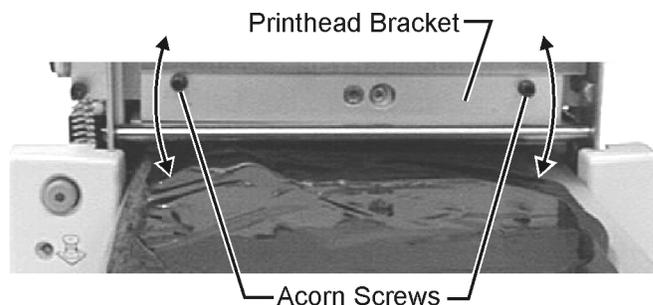
18. Tighten the brass setscrew on the back of the printhead pivot-arm assembly 1/6 of a revolution counter-clockwise. This will raise the back of the printhead.



19. Run test 7 again with a new disc.
20. Look at the printed disc for the same characteristics as in step 9. If the print still needs improvement, make another adjustment. If the image gets worse, and then go the other direction by loosening the back brass setscrew first, then tighten the front brass setscrew. Make small adjustments and test after each adjustment.
21. Once the optimum print is acquired, snug the front or rear brass setscrew. Do not over tighten these screws.
22. Turn in the acorn screws so they are about to touch the aluminum block.



23. Make sure the acorn screws do not prevent the printhead bracket from pivoting freely as shown in the following figure.



24. Install the printhead cover.
25. Replace the take-up roller to its original location.