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ImageWriter II: Dropping Commas (6/96)

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TOPIC -----

I am using an ImageWriter II and an Apple IIc. On all printouts, the tail of the comma is dropping out of the text. Despite repeated adjustments and one replacement printhead, the problem remains. All other characters that drop below the line are fine.

DISCUSSION -----

When printing to an ImageWriter II from an ASCII text based system such as the Apple IIc, all of the characters are formed within a 9 x 12 character cell (standard resolution). The character formation is created by a nine pin electromechanical printhead that fires a specific pattern of the print needles while moving horizontally to create each character. The characters such as the comma, slash, backslash, underline, and letters with descenders such as g, j, p, q, y are usually the only characters that utilize the bottom one or two printhead pins. Only the underline, comma, semi-colon, p, q, and y characters use the very bottom pin. Several scenarios can cause the descenders to disappear. Here are some of the more likely:

- Faulty character ROM on Main CPU PCB-

If specific characters are missing one or more dots, then the character ROM on the Main CPU PCB may have one or more faulty bits. Replacing the Main CPU PCB should correct the problem.

- The ribbon height is set too high or too low-

The ImageWriter II has a movable ribbon plate assembly. If the ribbon plate is not adjusted correctly, or if the ribbon shift mechanism is broken, then the black ribbon may be shifted so far that it no longer covers all nine print needles. This typically results in either the tops or bottoms of characters being clipped. To check for this issue, inspect the missing dots using a magnifying glass. If there is an impression in the paper where the print needle struck it but there is no ink, the ribbon was not present when the impression took place.

In troubleshooting this issue, print several test pages by holding the form feed button down while powering up the printer. The test page continuously prints the complete ASCII character set which provides an excellent opportunity for determining which characters are not formed correctly. Based on the results you may find that additional characters are affected also.

If additional characters are actually affected, the following possible causes should also be considered:

- Faulty printhead needle can not fire-

If the same dot position on all printed characters is missing, this indicates that one of the print needles can not fire. This can be caused by a faulty printhead coil, bent print needles, or damaged printhead PCB connections. Carefully inspect all connections and repair or replace as necessary. Remove the printhead and look closely at the printhead PCB. It is possible for printhead PCB pins to be damaged when the printhead is installed which can lead to poor electrical connections.

- An obstruction prevents print needles from striking ribbon and paper-

If the clear plastic paper guide (949-0029) is damaged or is not mounted correctly, then the small hole that the printhead pins pass through may be obstructing one or more of the print needles. This typically affects the descenders on the bottom of characters, or the tops of characters, and rarely if ever affects the middle print needles.

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