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LaserWriter Select: Checking Paper Size Switches (1/95)

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TOPIC -----

How can the paper size sensing system for the LaserWriter Select 300/310/360 printers be tested? I am trying to troubleshoot a printer that keeps producing an image size that is way too small for the paper that I have installed in the cassette tray.

DISCUSSION -----

The LaserWriter Select 300, 310, and 360 uses a unique system for providing paper size information from the cassette tray to the DC Controller. Instead of using a series of binary switches which open or close several control lines to the DC Controller, the LaserWriter Select series printers use four switches which open or close particular segments in a resistor matrix. A single control line can configure the printer for a variety of paper sizes by changing the resistance of the matrix. The following chart provides a simple method for confirming that the cassette trays are properly activating the appropriate switches. Before proceeding with these tests first make sure that the page setup information and cassette tray configuration are correct.

In order to perform the following tests it is necessary to gain access to the 12-pin cassette feeder signals at either the DC Controller (P13), or the cassette feeder itself (P115). All resistance checks should be performed with connector P13 disconnected from the DC controller or the values shown below will not be correct.

Configure a multi-meter to check resistance and connect the black lead to pin 4 on the cassette feeder PCB connector P115 using micro-clips. Attach the red lead to pin 5 of the cassette feeder PCB connector P115 if testing the standard 250 sheet cassette, or pin 6 if testing the optional feeder. Configure the cassette tray for the appropriate paper sizes shown below and install the paper cassette tray. The following resistance values should be present. If not, visually inspect the cassette tray PCB to confirm that the cassette tray is depressing the correct switches for each paper size. If all of the resistances are correct and the image size is still the wrong size then confirm that the cassette feeder cable is good and/or replace the DC controller.

Cassette Config.	Resistance	SW1	SW2	SW3	SW4
=====	=====	=====	=====	=====	=====
No Cassette	101.2	Open	Open	Open	Open
Letter	333.0	Closed	Closed	Open	Closed
Legal	185.9	Closed	Open	Closed	Open
A4	133.4	Open	Closed	Open	Closed
B5	186.2	Closed	Open	Open	Closed
A5	6.3M	Closed	Closed	Closed	Closed
Comm 10 Envelope	123.1	Open	Closed	Open	Open

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