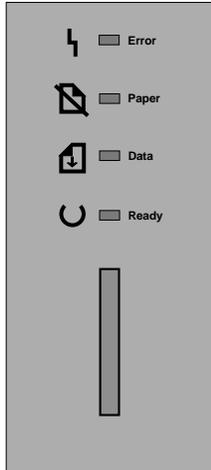# OSR

Hewlett-Packard LaserJet 4L/4ML

Print method . . . . Electrophotographic semiconductor laser

Print speed . . . . . 4 pages per minute

Resolution . . . . . . 300 dpi

Memory . . . . 1 MB standard

Paper handling . . 100 sheet paper tray, manual rear feed slot

Interface. . . . . Bidirectional CENTRONICS

Emulation. . . . . . . PCL 5e

Options . . . . 1 MB memory upgrade kit

4ML features . . . . PostScript Level 2, 2 MB memory, LocalTalk interface

Control Panel

Error light - A solid light indicates that the top cover is open or the toner cartridge is missing. A blinking light indicates that the page is too complex.

Paper light - A solid light indicates that the printer is out of paper or that no paper cassette is installed. A blinking light indicates a paper jam.

Data light - A solid light with the Ready light blinking indicates that the printer is receiving or processing data. A solid Data light with a solid Ready light indicates that data is in the buffer. A blinking Data light indicates manual feed mode.

Ready light - A solid light indicates that the printer is ready to print. A blinking light with a solid Data light indicates that the printer is receiving data.

Key

The front panel key performs the following functions in addition to self-tests:

Reset - Press the key until lights flash in sequence. This action clears all data, fonts, and macros from memory and resets the printer to a default condition.

Wake Up - Press the key for two seconds to turn the printer on if the intelligent switch has turned the printer off.

Continue - Press the key for two seconds to clear a recoverable error.

Self-tests

Single Page Test

Press the key for two seconds to print a self-test page.

Continuous Test

Press and hold the key for five seconds while plugging in the power cord, then release the key when only the Data light is on. Press the key to stop printing.

Engine Test

To bypass the formatter and test the print engine only, press the engine test button on the left side of the printer below and behind the parallel interface conector. A page of vertical lines will be printed.

Printer Configuration

The LaserJet 4L/4ML configuration and functions are controlled from the host system through the Windows - HP Explorer Remote Control Panel. The printer has no NVRAM for configuration storage. If the printer loses power, any configuration or downloaded fonts will be lost.

Common Problems and Fixes

Print Quality

Print quality problems are generally associated with the toner cartridge. Try removing and shaking the cartridge, and then reinstall it. If this does not resolve the problem, replace the cartridge with a known good one. If problems persist, run a test print and stop the printing process while the paper is under the drum in the cartridge. Check to see if the drum is imaged correctly. If the drum is imaged correctly, then the problem is in the transfer process. If the drum is not imaged correctly, the problem is in the image process.

Communication

Communication problems are often described as "no print", "garbage print", or incorrect print positioning. Communication problems are generally caused by incorrect configurations, bad interface cables, or a bad port on the host or printer.

Critical Adjustments

Leading Edge Adjustment

Run a print engine test. Measure the distance from the leading edge of the paper to the top of the printed image. This distance should be 1.5 to 2.5mm. If it is out of tolerance, remove the paper cassette and locate VR301. Adjust VR301 clockwise to decrease or counterclockwise to increase the distance.

Beam-to-Drum Mirror Adjustment (Skew)

Run a test print. Check the top edge of the printed line to ensure it is parallel with the leading edge of the paper. The difference between the left and right side should be less than 1.5mm. On the right side of the beam-to-drum mirror, loosen the adjustment setscrew, noting the present position on the adjustment scale. Move the mirror toward the front of the printer to move the right side of the printed image up. Move the mirror toward the rear of the printer to move the left side of the image up. Continue to test and adjust the printer until the desired results are attained.
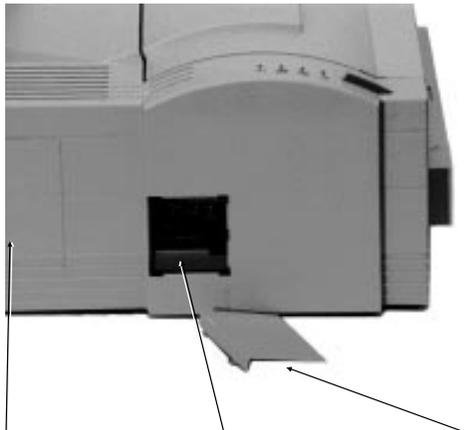
Cover Removal

Memory Door / IO Door

Open the I/O door on the left side of the printer and it will slide out of its retaining slots. Pull the small handle on the memory module and remove it. The memory door, also on the left side, opens in the same manner.

Power Door

Open the power door on the right side of the printer. Push down on the upper tab of the hinge to release the door.
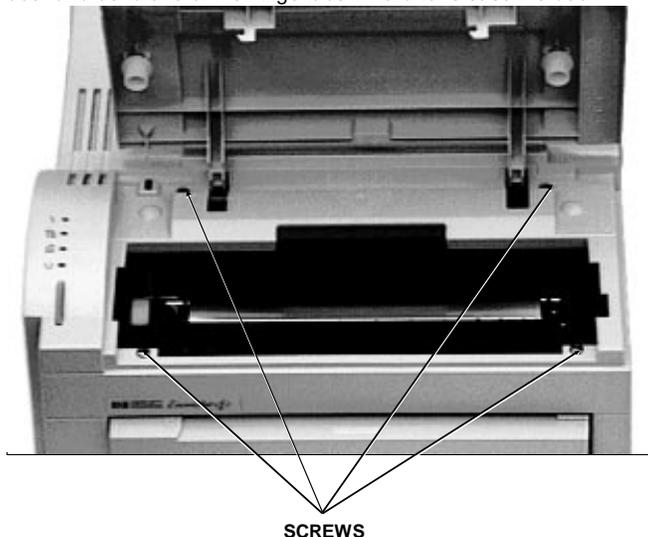
Printer Cover

I/O DOOR   **MEMORY UPGRADE LOCATION**   **MEMORY DOOR**

Remove the power door, AC power cord, toner cartridge, paper cassette, optional memory module, I/O door, and parallel cable. Open the access door and remove the four screws. Open the rear door and pull the lower rear tabs of the cover outward and then upward. Place a small object between the cover and the frame to prevent the cover from closing again. Release the front tabs in the same manner. Lift the cover straight up to remove. When reinstalling the cover, be sure the rear door is open.

Rear Door

Remove the printer cover and turn it upside down. Open the rear door and bend one of the hinge tabs inward to release the door.

SCREWS

Field Replaceable Units

DESCRIPTION	OEM P/N	IBM P/N
Arm, input paper sensor	RF5-0601-000CN	90G6921
Pickup assembly	RG5-0668-000CN	90G6920
Guide, feeder assembly	RG5-0671-000CN	90G6929
Roller, fuser pressure	RB1-3100-000CN	90G6925
Roller, fuser delivery	RB1-3103-000CN	90G6924
Roller, fuser conductive rubber	RB1-3109-000CN	90G6922
Roller, delivery	RB1-3107-000CN	90G6923
Gear train plate assembly	RG5-0684-000CN	90G6928
Formatter PCA	C2004-67901	90G6933
DC controller PCA	RG5-0753-000CN	90G6934
Laser scanner assembly	RG5-0662-000CN	90G6932
1MB memory upgrade	C2024A	90G6926
Main motor assembly	RG5-0764-000CN	90G6930
Fan assembly	RG5-0703-000CN	90G6931

Note: Be sure to note DIP switch settings and/or print a configuration list before replacing any PCB .

IBM machine type

LaserJet 4L. 2998-H07

LaserJet4ML. 2298-H11

Resources:

IBM Hardware Maintenance Manual, ZA38-0168-01

Tech Support 800-877-7764