



# Tech Info Library

## LW 16/600 PS: Input/Output Processor (IOP) ROM Upgrade (1/96)

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TOPIC -----

Several LaserWriter 16/600 PS network issues are addressed by version 2.0 of the Input/Output Processor (IOP) ROM (service part number 922-1856). Please read the following symptoms to determine whether a customer will benefit by updating their LaserWriter 16/600 printer's IOP ROM.

DISCUSSION -----

NOTE:  
PostScript ROMs are unaffected by this IOP upgrade. The PostScript ROMs in the LaserWriter 16/600 printer are unchanged; the current version is version 1.0, which is the same version that originally shipped with the printer.

Printer Not Available in Chooser

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The Apple LaserWriter 16/600 PS does not respond to Ethernet traffic. It can not be seen in the Chooser.

Restarting the printer temporarily resolves this problem. There are presently two shipping LaserWriter 16/600 PS IOP ROM versions, version 1.0 and 2.0. Recommend customers upgrade their LaserWriter 16/600 PS printer's IOP to v2.0. These ROM revisions are printed on the startup page, vertically on the right margin.

You can also use the Apple Printer Utility to check what version of the IOP ROM the LaserWriter has installed:

Step 1

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Launch the Apple Printer Utility, select the zone in which the LaserWriter 16/600 is located, click to select the printer, click Open Printer.

## Step 2

Click the arrow to the left of Printer Information, and note the version of the PostScript and IOP ROMs listed under ROM Revision. The I/O ROM should be 2.0.

### Printer Available in Chooser

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The Apple LaserWriter 16/600 PS can be seen in the Chooser, but you cannot print to it.

Restarting the printer may temporarily resolve this issue, as will updating to v2.0 IOP ROM.

#### NOTE:

The printer may require another solution instead, as similar symptoms may be caused by some versions of printer drivers or routers. Follow the workarounds below if the two suggestions above do not address the symptoms.

\* The symptom may be caused by earlier versions of the LaserWriter 8.x drivers. Upgrade to LaserWriter 8.2.2 or later driver software.

\* Similar symptoms are caused by a Name Binding Protocol (NBP) gleaning problem in some routers, including Cisco routers and the Apple Internet Router 3.0. To work around this problem with Cisco routers, upgrade the Cisco software to v10.2 or later or turn NBP gleaning off. To work around this problem with an Apple Internet Router, update the Ethernet driver with Network Software Installer 1.5 or later. Both these routers induce the symptoms only under specific circumstances.

#### NOTE:

LaserWriter driver or gleaning problems are not specific to the LaserWriter 16/600 PS printer. Other printers or devices may also be affected.

### Symptoms Occurring with Dayna PathFinder Routers

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The LaserWriter 16/600 PS is not visible on networks routed by Dayna PathFinder Routers.

This symptom is caused by the LaserWriter 16/600 PS booting with a source network of 1 and the PathFinder not asserting itself to tell the printer what network range it should be in (most likely a number other than 1). In turn, the PathFinder does not respond to the printer's request for zone information, resulting in devices not being able to locate the printer.

Other symptoms may occur when multiple routers exist in addition to the Dayna PathFinder (including not being able to locate the printer in the Chooser, not being able to open a connection with the Chooser, and receiving PostScript errors when printing). A network trace may reveal that the PathFinder is not responding to the printer's Zone Information Protocol/Get Net Info (ZIP GNIs).

These symptoms are addressed in the v2.0 IOP ROM. Service Providers should replace the ROM.

#### Slow Printing

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The LaserWriter 16/600 PS is slow when using Farallon PhoneNET Star Controllers.

When a LaserWriter 16/600 PS is connected to a Farallon PhoneNET StarController, print jobs sent to the printer take a long time to print (typical) or may fail (rare) with PostScript errors. The reason for this symptom is that the LaserWriter 16/600 PS begins transmitting prematurely after receiving the StarController's LocalTalk Link Access Protocol (LLAP) packet.

This symptom is addressed in the v2.0 IOP ROM. Service Providers should replace the ROM.

#### IOP Does Not Close Jobs Correctly

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The IOP does not close jobs correctly (that is, when a PostScript error is encountered) without an End of File (EOF) message; a second job following the first gets flushed by the PostScript interpreter (to the second job's EOF), so neither the first job having the error nor the second job prints. A third job will print fine.

This symptom is addressed in the v2.0 IOP ROM. Service Providers should replace the ROM.

#### LED Continues to Blink

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The Ready/In Use LED continues to blink for five minutes when spooling jobs from an AppleShare print server.

The LaserWriter 16/600 PS printer's Ready/In Use light will blink for five minutes following a print job spooled to it from an AppleShare Print Server, until the "wait timeout" timer actually times out. If the printer is released from within the print server, the blinking stops immediately. If jobs are sent directly to the printer, the printer stops blinking as soon as the job is printed. This symptom does not interfere with printing.

This cosmetic symptom is resolved by updating to the v2.0 IOP ROM.

#### Symptoms Not Associated with IOP ROM

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The following issue is unrelated to the IOP ROM: The LaserWriter 16/600 PS returns to the default zone after being turned on.

The configuration switch on the LaserWriter 16/600 PS must be in the up position if you want zone changes made with the Apple Printer Utility to be persistent

across power cycles.

NOTE:

The version v2.0 IOP ROM addresses only the symptoms listed in previous sections. If the LaserWriter 16/600 PS printer is experiencing other symptoms, follow standard troubleshooting procedures outlined on the Service Source CD-ROM (Path: Laser Printers, LaserWriter 16/600 PS, Troubleshooting). Service Source is only available to Apple Service Providers.

Part numbers mentioned in this article are accurate as of this writing. Before ordering, verify that they are still correct as they are subject to change.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Article Change History:

12 Jan 1996 - Added information on how to check ROM version.

02 Oct 1995 - Reviewed for accuracy. Made minor grammatical corrections.

Support Information Services

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