



# Tech Info Library

## Macintosh Portable: Printing to a LaserWriter IISC

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### TOPIC -----

I have a Macintosh Portable with 2MB RAM, and no INITs. I connected a LaserWriter IISC and am printing an Excel 2.2 spreadsheet. The spreadsheet is approximately 12 or 14 columns and about one page. I use landscape mode, reduce it to 75%, and print gridlines. This process takes five minutes to print. Is this print time typical, or is there something wrong?

### DISCUSSION -----

This is an issue that is inherent to applications such as Excel, Microsoft Word, MacDraw II, and other programs that don't display a watch or animated cursor while processing a print job.

The problem is that applications like Excel do not put up an animated or watch cursor while processing a print job. Since no other activity is taking place (like typing, moving the mouse, and so on), the Macintosh Portable falls into "Rest" mode. This is where 64 wait states are inserted so that the effective processor speed is slowed to 1MHz (this is done to reduce power consumption when no activity is taking place). If application manufacturers follow HIG and put up an animated or watch cursor, the CPU does not Idle and will finish the print job slightly faster than an Macintosh SE.

A suggested workaround is to deactivate "Rest", one of the power-saving features of the Macintosh Portable. This is done by opening the Portable CDEV and "Option-Clicking" on the words "Minutes until Automatic Sleep". A dialog box appears describing "Rest" and gives you the opportunity to turn "Rest" off. You can also prevent idle (aka "Rest") by performing actions such as moving the mouse, typing on the keyboard, and so on.

Using a document similar to the one described above, these were our findings:

Macintosh Portable  
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5 minutes 8 seconds with idle ON  
2 minutes 55 seconds with idle OFF

Macintosh SE

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3 minutes 8 seconds

In summary, this is an Excel compatibility problem that occurs on the Macintosh Portable when printing to any printer, not just the LaserWriter IISC. In addition, a user should have the 4X fonts installed for maximum performance when printing text in portrait. The fonts are bitmapped and can be printed directly from the Macintosh screen to the LaserWriter IISC. Printing is a little faster, too, when they are present. When printing horizontally or from graphics packages that use regions instead of polygons or bitmaps, performance suffers.

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