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## PowerBook 160 and 180: RAM Expansion (12/96)

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TOPIC -----

The PowerBook 160 and 180 can be expanded to 14 MB of RAM.

DISCUSSION -----

4 MB of RAM is on the logic board and there is one memory slot. The slot is physically identical to the PowerBook 100, 140, 145, and 170 memory connector, but uses a previously unused pin to determine the speed of the RAM chips installed.

If existing RAM cards (100 ns) are used, an extra wait state will be included when the system accesses that memory. The PowerBook 180 will run faster if 85 ns chips are used, but this is not the case with the PowerBook 160. Apple will sell two 4 MB cards: one for existing units and another for the PowerBook 180.

PowerBook 180 RAM Speed	Wait States
85 ns (recommended)	two
100 ns	three

Third-party vendors will make 4 MB, 8 MB, and 10 MB cards available for the PowerBook 160 and 180. These cards will not work with other PowerBook models.

### Article Change History

- 02 Dec 1996 - Corrected info about size of RAM cards available.
- 31 Mar 1995 - Reviewed for technical accuracy.
- 18 Feb 1993 - Revised to mention 10MB cards from third parties.

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