

Apple II Technical Notes



Developer Technical Support

Mouse

#2: Varying VBL Interrupt Rate

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November 1988

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November 1985

This Technical Note describes a method to make the AppleMouse peripheral card interrupt at a rate other than the default 60 Hz. This method does not work on the Apple IIc or IIGS.

This Technical Note describes a previously undocumented call to the AppleMouse II firmware which allows the user to set the interrupt rate to 50 or 60 Hz. (The default is 60 Hz, which keeps the card-generated VBL interrupts synchronized with the actual VBL rate on standard North American Apples; European Apples use 50 Hz as a standard.)

Call: TimeData
Offset Location: \$Cn1C
Input: Accumulator bit 0: 0 for 60 Hz
1 for 50 Hz

Note: All other accumulator bits are reserved, and **must** be set to 0.

Output: carry bit clear

screen holes unchanged

You must make this call just prior to calling `InitMouse` to be effective. If you want to change the interrupt rate in the middle of an application, you must call `TimeData` with the appropriate value in the accumulator, then call `InitMouse` (which generates an interrupt). `InitMouse` resets the mouse position, mode, clamps, etc. to their default values. If you fail to call `TimeData`, `InitMouse` will use a default interrupt rate of 60 Hz.

Note: This call exists **only** on the AppleMouse card for the IIe or II+ and should only be used when you know you are working with a IIe or II+. A user may configure a IIGS to 50 Hz by holding down the Option key while rebooting. The standard North American Apple IIc will not generate 50 Hz VBL interrupts.