



Tech Info Library

Macintosh Mouse: Mouse/Cursor Tracking

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Security: Everyone

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There is a way to detect if the mouse was moved and how far it was moved. The mouse location call provides the current coordinates of the mouse position. If two successive calls to mouse location yield different results, then the mouse has moved, and (given the previous and present coordinates) the distance traveled can be calculated. If you wish to know the total distance the mouse traveled between calls to mouse location, then you should use the mouse odometer. The fact that the mouse moves is not considered an event, so it is up to the programmer to determine the mouse's location and distance traveled. Also note that the only thing that happens to a cursor as it travels around the screen (without any mouse clicks) is that the cursor changes according to the area it is in--e.g., it becomes an I-beam over text, a cross in a spreadsheet, and an arrow most other times. It should also be noted that these cursor changes are under program control and are not automatic.

Here is a small program that uses some of the cursor/mouse tracking routines. These routines automatically keep the cursor on the screen--i.e., if the cursor is already at the left edge of the screen and you move the mouse further left, the cursor stays on the screen. This program is similar to the Hendrix program on the MacMaster 2 disk in that it makes noise.

```
PROGRAM VOL;
USES
{$U-}
    {$U QD/QuickDraw } QuickDraw,
    {$U QD/QDSupport } QDSupport,
    {$U QD/Hardware } Hardware;
{$U+}

VAR heapBuf:    ARRAY[0..10000] OF INTEGER;{must keep array under 32K
byte limit}
    ABS,ORD:PIXELS;
    event:      KeyEvent;

FUNCTION HeapFull(hz: QDPtr; bytesNeeded: INTEGER): INTEGER;
{ This function will be called if the heapZone runs out of space }
```

```
BEGIN
  WRITELN('The heap is full.  The program must now terminate! ');
  Halt;
END;

BEGIN {MAIN PROGRAM}
  {----- Initialization - Generic to all applications using QuickDraw
  -----}
  QDInit(@heapBuf, @heapBuf[10000], @HeapFull); { Must do this once at
beginning }

  INITCURSOR;
  SHOWCURSOR;
  REPEAT
    MOUSELOCATION(ABS,ORD);
    SETVOLUME((ABS DIV 120)+1);
    NOISE(ORD *(8000 DIV 360)+80 );
  UNTIL KEYBDEVENT(FALSE,FALSE,EVENT);
  HIDECURSOR;
  SILENCE
END.
```

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