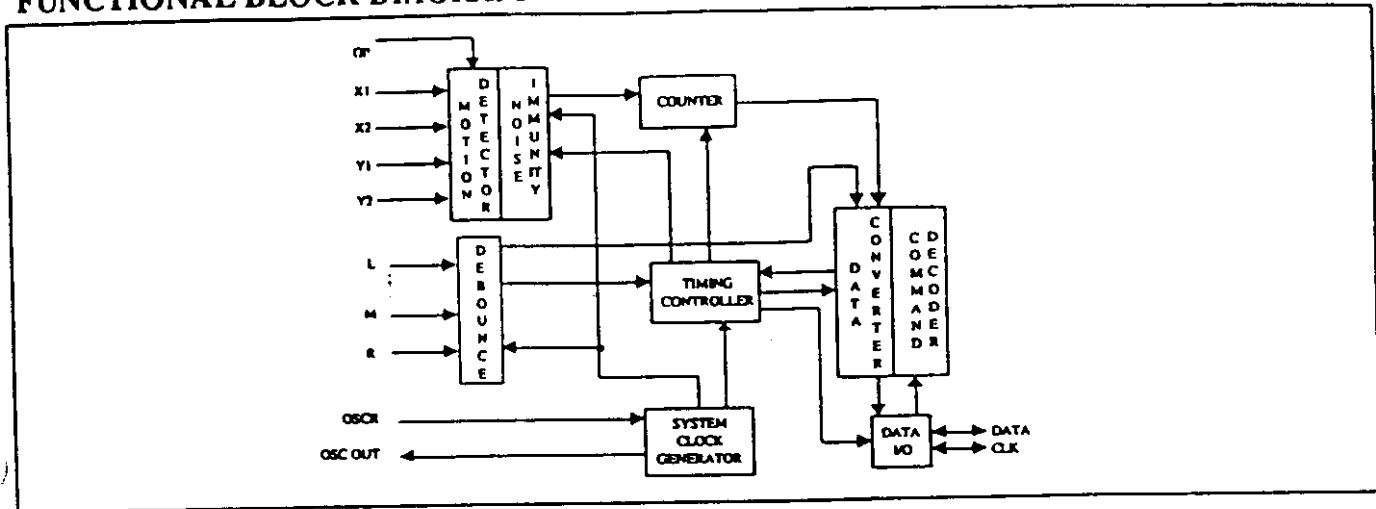


***EXHIBIT E***

***Block Diagram***



## FUNCTIONAL BLOCK DIAGRAM



## PIN DESCRIPTIONS

| Symbol               | I/O | Function                                                                                                                                                                                                                                                                                                                                                                   |
|----------------------|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| V <sub>DD</sub>      |     | Power                                                                                                                                                                                                                                                                                                                                                                      |
| OP                   | I   | X, Y inputs.<br>Floating : Comparator input.<br>GND : Schmitt trigger input.<br>Short to OSC OUT : Testing Mode.                                                                                                                                                                                                                                                           |
| OSCO                 | O   | Clock output.                                                                                                                                                                                                                                                                                                                                                              |
| CLK                  | I/O | 8042 auxiliary port CLK line.                                                                                                                                                                                                                                                                                                                                              |
| DATA                 | I/O | 8042 auxiliary port DATA line.                                                                                                                                                                                                                                                                                                                                             |
| V <sub>SS</sub>      |     | Ground                                                                                                                                                                                                                                                                                                                                                                     |
| R<br>M<br>L          | I   | Three key-switches exert seven different combinations totally. Both key-pressed and key-released signals will be sent accompanied with horizontal and vertical state. The status of the key-switches will be preserved, whenever the value of horizontal or vertical counters will present at DATA. And the debounce interval for both key-press and key-release is 12 ms. |
| X1<br>X2<br>Y1<br>Y2 | I   | Four photo-couple signals denote UP, DOWN, LEFT, and RIGHT state. During the scanning period, as long as the photo-couples change their states, the value of vertical or horizontal counter will increase or decrease accordingly.                                                                                                                                         |
| OSCR                 | I   | 30 Kohm $\pm 5\%$ pull low for 35 KHz oscillation.                                                                                                                                                                                                                                                                                                                         |

## FUNCTION DESCRIPTIONS

### A) Operating mode

There are four operating modes in PS/2 mouse

#### i). Reset Mode

In this mode a self-test is initiated during power-on or by a Reset command. After reset signal, PS/2 mouse will send: