

TANDY®

**Technician Series
Diagnostics Software**

MOUSETST

Serial Mouse Diagnostic

01-0220 Computer Technical Services

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MOUSETST DIAGNOSTIC

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GENERAL DESCRIPTION

MOUSETST is used to test a serial mouse. It tests this by accepting the serial data from the mouse movement and button depression to determine if the mouse is functioning properly.

FEATURES

- * Easy to operate menu system
- * On-screen cursor and button response display
- * Tracks tested and untested functions
- * Works with COM ports 1 through 4

EQUIPMENT REQUIRED

MS-DOS™-based Compatible Computer

Monitor

Display Adapter

Keyboard

Serial Mouse--either Tandy Serial Mouse or Logitech Serial Mouse

LOADING MOUSETST

There are two methods for loading the serial mouse diagnostics. The first is to select the serial mouse test function that appears on the main menu of our diagnostic software suite for your machine. Because MOUSETST is a DOS executable program, you can also run it directly from DOS. To run it from DOS, at the DOS prompt type:

MOUSETST<ENTER>

You will then see the main display screen of the diagnostic.

OPERATING MOUSETST

ORGANIZATION:

The MOUSETST test is organized around two major screens. The first is the Test Options screen which is used to select the COM port used and the mouse type, and to perform the test. The second major screen is the test screen with the Cursor Movement area, Mouse Data display area, and Button Status area.

MOVING AROUND THE MOUSE TEST:

To select a test option, simply press the appropriate number next to the option. To leave the Movement Screen at any time press the <ESC> key.

DISPLAY DESCRIPTION

SERIAL MOUSE TEST
xxxxxx xx, 19xx Vx.xx
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TEST OPTIONS

<1> Perform Test UNTESTED

<2> Change Communications Port
 Currently: COM1

<3> Change Mouse Type
 Currently: TANDY

<4> Quit Test Program

PLEASE ENTER SELECTION: _

TEST OPTION SCREEN:

The figure above is the test option screen of the mouse test. It is the first screen that appears when starting the program and is the screen where the communications port and mouse selections are made.

Once the mouse test has been performed, the UNTESTED message will change to either PASSED or FAILED depending on the outcome of the test.

If the communications port is changed from the default, the selected port will be displayed where the COM1 is shown.

When the Logitech mouse type is selected, that will appear where the Tandy type is currently displayed.

The last line of the Option Screen box will show any test failure message if necessary.

Movement Area	
<div style="background-color: black; width: 100px; height: 20px; margin-bottom: 5px;"></div> <div style="background-color: black; width: 100px; height: 20px; margin-bottom: 5px;"></div> <div style="background-color: black; width: 100px; height: 20px; margin-bottom: 5px;"></div> <div style="background-color: black; width: 100px; height: 20px; margin-bottom: 5px;"></div>	<div style="background-color: black; width: 100px; height: 20px; margin-bottom: 5px;"></div> <div style="background-color: black; width: 100px; height: 20px; margin-bottom: 5px;"></div> <div style="background-color: black; width: 100px; height: 20px; margin-bottom: 5px;"></div> <div style="background-color: black; width: 100px; height: 20px; margin-bottom: 5px;"></div>

Tandy Mouse Data	Button Status	
Byte#	L	R
1: Button & Bits 6,7 of Row & Bits 6,7 of Col:	E	I
2: Distance of Column Movement-Bits 0-5.....:	F	G
3: Distance of Row Movement-Bits 0-5.....:	T	H
		T
TO TEST: 1) Move cursor to each corner		
2) Press all buttons	Up	Up
PRESS <ESC> TO EXIT _		

MOUSE TEST SCREEN:

NOTE: This screen may appear differently depending on which mouse type has been selected.

The mouse test screen appears above. This is where the mouse testing is done including testing the mouse directions and the mouse buttons. As an additional testing aid, the raw mouse data is displayed.

The Movement Area is where the mouse directional functions are tested. The corners are initially a solid block, but once the cursor has been placed in the corner, the block is cleared. After the cursor has been placed in the corner and then removed, the direction and OK is displayed to signify that that direction has been tested successfully.

The Button Status area shows the current status of the mouse buttons. They also initially appear as solid (except for the lettering), and when pressed change from Up to Down. After they are released, the block background goes away, letting you know that the button has been tested.

The Mouse Data area displays the raw serial data as sent from the mouse. The data is displayed in the hexadecimal (hex) format, and can assist in troubleshooting.

LOGITECH MOUSE

Initializing Logitech Mouse:

DO NOT MOVE MOUSE UNTIL MOVEMENT
SCREEN APPEARS

LOGITECH INITIALIZATION SCREEN:

NOTE: This screen appears only if a Logitech mouse type has been selected.

This screen is displayed when the Perform Test option has been selected and before the Mouse Test screen is displayed. It is necessary because the Logitech mouse has many programmable options, so the test program must program the correct one.

SELECT COMMUNICATIONS
PORT

Status	Port#	I/O Address
Selected	COM1	3F8-3FF
Detected	COM2	2F8-2FF
Not Detected	COM3	3E8-3EF
Not Detected	COM4	2E8-2EF
USE ARROWS TO CHANGE SELECTION <ESC> TO EXIT _		

SELECT COMMUNICATIONS PORT SCREEN:

NOTE: The above screen may appear differently depending on the number of installed communications ports.

This screen is displayed when the Change Communication Port option is selected from the option menu. The three columns are described below.

Status	This column displays if this COM port is Detected, Not Detected, or Selected.
Port#	This column is the COM number associated with this address range.
I/O Address	This are the I/O port addresses the program will use for serial data input and output.

TEST DESCRIPTION**MOUSE TEST:**

The mouse test screen that appears includes the cursor movement area, button status, and mouse data.

The Movement area is where the mouse directional ability is tested. The movement test is performed by moving the cursor to the four corners to check the directional ability of the mouse. While moving, ensure that the cursor direction matches the mouse movement.

The Button Status area displays and tracks mouse button depression. To test button operation, press each button and notice that the button status changes from "Up" to "Down" while being depressed. Once a button has been depressed, the background changes to signal that that button has been tested.

The Mouse Data display area shows the raw serial data coming from the mouse, displayed in hexadecimal. These are the bit patterns that signify mouse movement and/or button depression. This information could aid in troubleshooting by showing that, for instance, incorrect data is being sent by the mouse to the system, or that there is no data being sent by the mouse.

The Mouse Test is considered complete when the cursor has been placed on all four corners and all mouse buttons have been depressed and released.

To exit at any time, press the <ESC> key.

APPENDIX**ERROR MESSAGES:**

NOTE: If you receive any of the following error messages, please follow these standard suggestions for trouble-shooting communications before assuming a specific failure:

- 1) Check that the appropriate COM port has been selected.
- 2) Make sure the matching mouse type has been selected.
- 3) Ensure that the COM port installed in the system is properly jumpered or switched to match the selected port.
- 4) Check that all RS-232 connections are properly made and that any null modems or gender changers are installed if necessary.
- 5) Ensure that the selected COM port is not conflicting with another COM port installed in the system. An example of this is an on-board RS-232 board set as COM1, then installing an expansion RS-232 board and setting it to COM1. This will not work!
- 6) If using a Logitech mouse and getting any of these errors, unplug the mouse from the system for at least 15 seconds and then reconnect. This will reset the mouse to its default settings and may then enable it to be programmed.

If after checking all of the above you are still getting an error message, then see below for specific explanations.

The following error messages may appear at the bottom of the Test Option screen:

NO MOVEMENT DETECTED

This occurs when the cursor has not been moved to any of the corners. Possible causes are wrong mouse type selected, not moving the mouse when in the test screen, some sort of COM problem (see above), or a defective mouse.

Possible solutions would be to verify COM operation and settings, ensure that the mouse "ball" rolls freely, and check that the mouse is firmly plugged in.

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BUTTONS NOT PRESSED

This is displayed when none of the buttons have been pressed and there has been movement. Again, possible causes would include wrong mouse type selected, not pressing the buttons while in the test screen, a COM problem, or a defective mouse.

After ensuring that all of the above COM trouble-shooting procedures have been followed, try a different mouse.

MIDDLE BUTTON NOT PRESSED

NOTE: This error message only applies to the Logitech mouse.

This message will appear if the middle button is not depressed. See "BUTTONS NOT PRESSED" for further explanation.

MOUSE NOT INITIALIZING

NOTE: This error message only applies to the Logitech mouse.

This error message is displayed when the mouse test cannot program the Logitech mouse. This may indicate that a non-Logitech mouse is connected to the port that is selected. It may also be caused by moving the mouse while the "Initializing" screen is being displayed. Also check the COM trouble-shooting suggestions listed above. Lastly, it can be caused by a defective mouse.

NOT ALL DIRECTIONS TESTED

This message is shown when one or more corners have not been "hit" by the cursor. It is necessary in order to complete the mouse test to place the cursor on each corner to ensure that all directions are operational. If one or more corners are "hit", but at least one has not been, this message will be displayed.

For additional information, see "NO MOVEMENT DETECTED" above.

RIGHT BUTTON NOT PRESSED

This appears when the right mouse button has not been detected as being depressed. See "BUTTONS NOT PRESSED" for further information on trouble-shooting button problems.

LEFT BUTTON NOT PRESSED

This appears when the left mouse button has not been detected as being depressed. See "BUTTONS NOT PRESSED" for further information on troubleshooting button problems.

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