Touchscreen

By using the Touchscreen option, you can change the options for your Elo TouchSystems touchscreen and MonitorMouse® for Windows software.

Choose one of the following topics for information about the dialog box:

Calibrate

Mouse Button Emulation Mode

Click Sound on Touches

No Cursor

If the Calibrate button is dimmed,
ELODEV(TM) is not installed.

If the Mouse Button Emulation Mode is dimmed,
MonitorMouse for DOS is not installed.

Calibrate

Selecting the Calibrate button initiates a calibration sequence for the touchscreen.

To calibrate the touchscreen, touch the targets as they are displayed from a position of normal use. You will then have the opportunity to test the results of that calibration. Touch different areas on the screen. If the cursor jumps to your fingertip, click the YES button to proceed. Otherwise, click NO to repeat the process.

Note   The calibration values are stored in your WIN.INI file. These points are used only when in Windows. DOS mouse-driven programs run from Windows will use the calibration points for the appropriate video mode if found in the ELOGRAPH.CAL file. MONMOUSE.COM loads the .CAL file if its path is specified with the **-d flag** or it is found in the current directory. Otherwise, all DOS programs run from Windows will use the default calibration points found on the ELODEV command line.

If you are unable to achieve acceptable calibration, write down the calibration values from WIN.INI and contact Elo Technical Support.

Why Calibration is Necessary

Mouse Button Emulation Mode

Choose the mouse button emulation <u>mode</u> of MonitorMouse for Windows. The current mode is indicated in the dialog box. You may choose any of the listed modes although <u>Drag, Double-Click</u> is recommended for Windows operation. The mode change only takes affect once the OK button is pressed.

Touch the modes below for more information:

<u>Click on Touch</u>
<u>Click on Release</u>
<u>Drag</u>
<u>Drag, Double-Click</u>

Note   The mouse button emulation mode is stored in your WIN.INI file. This mode is used only when in Windows. DOS mouse-driven programs run from Windows will use the mode specified on the MONMOUSE.COM command line with the **-m flag.**

Click Sound on Touches

Checking this box enables a "click" sound for each touch. Audible feedback can make the touchscreen easier to use.

Note   The click sound option is stored in your WIN.INI file. The setting for this option is used only when in Windows. DOS mouse-driven programs run from Windows will use the beep option specified on the MONMOUSE.COM command line with the **-b flag.**

No Cursor

Checking this box disables the Windows mouse pointer (arrow cursor). A mouse pointer is not required in most touchscreen applications and may actually be a distraction. The users eyes will follow the pointers movement instead of focusing on the application. With a pointer present, the user performs the indirect act of moving the arrow to an object instead of the direct, natural act of touching the object.

This option does not affect other cursors, such as the hourglass.

Note   The no cursor option is stored in your WIN.INI file. The setting for this option is used only when in Windows. DOS mouse-driven programs run from Windows will use the cursor off option specified on the MONMOUSE.COM command line with the **-c flag**.

modes

MonitorMouse for Windows supports four mouse button emulation modes. These modes vary in the button actions they support (<u>dragging</u>, double-clicking, etc.) and range in complexity from simple to exacting. Choose the simplest mode that will work for your application. Use the MonitorMouse <u>TUTORIAL</u> program to practice with each mode.

Click on Touch

Left button clicking only. No <u>dragging</u> or right button is supported. Works with large targets. Recommended for public kiosk applications.

Moves the mouse pointer to your point of touch and "clicks" the left button. A click sound will confirm the click. The mouse pointer will not move, nor will any other clicks be simulated until your finger is lifted and the screen retouched.

Click on Release

Left button clicking only. No <u>dragging</u> or right button is supported. Works with large and small targets.

The mouse pointer follows your sliding finger and the left button is clicked at the point of <u>release</u>.

Drag

Left button clicking and dragging. No right button is supported.

The left button is held down when you touch the screen, and it stays down until you release, dragging as you move.

Drag, Double-Click

Same as <u>Drag</u> Mode, but supports double-clicking by <u>tapping</u> twice.   Recommended for general use.

If the second touch occurs immediately after the first and is nearby, a double-click will be simulated at the exact point of the first touch. If you do not hear two click sounds, you have tapped too fast.

Why Calibration is Necessary

The need for calibration is unique to the touchscreen. Unlike mouse or keyboard applications where the cursor is part of the image, a touchscreen is a physical overlay with an independent coordinate system. Only by knowing the position of the image can the PC software convert touchscreen coordinates into image coordinates.

Besides the differences among touchscreens and controllers, calibration also compensates for the variation in video image among displays. The image is affected by horizontal and vertical adjustments on the monitor and by the physical mounting of the touchscreen.

Additional calibration complications include image blooming, where bright-colored images expand, and the "pincushion" effect, which causes the corners of the display to be stretched. Poor display linearity can cause similarly-sized boxes to be larger at the edges of the screen than they are in the middle, or vice-versa. The displayed image can also be tilted. Even changing video modes can affect the screen size.

Perfect calibration cannot be achieved in all circumstances. For example, the user can encounter parallax problems with a change in position, or because the present user is not the same stature as the person who calibrated the screen.

Even the most sophisticated calibration techniques can only partially overcome such variations. Therefore, most touchscreen software uses only a two or three-point calibration sequence and instead relies on well-placed touch zones and appropriate user feedback.

The calibration sequence used by MonitorMouse for Windows automatically corrects inverted touchscreen installations and backwards cable connections.

Once calibrated, MonitorMouse for Windows will be ready to run automatically each time the system is restarted. Recalibration should only be necessary after moving or resizing the video image, or after changing either the touchscreen, controller, or monitor.

tapping

Making touches of short duration.

release

When the finger is lifted from the touchscreen.

drag mode

Drag mode "holds down" the left button as you slide your finger, and "releases" the button when you lift your finger.

ELODEV

ELODEV is the Elo touchscreen driver for DOS, and is a Terminate-and-Stay-Resident (TSR) program. ELODEV makes all Elo touchscreens and controllers look the same to an application. All other Elo software requires ELODEV, including MonitorMouse for Windows.

ELODEV.EXE is typically installed in your AUTOEXEC.BAT file along with your mouse driver and MonitorMouse for DOS (MONMOUSE.COM), as in this example:

```
MOUSE /y
C:\TOUCH\ELODEV 2201,280,5 -C492,3624,3433,654,1,15
C:\TOUCH\MONMOUSE -m6
```

MonitorMouse for DOS

MonitorMouse for DOS is a Terminate-and-Stay-Resident (TSR) program that works in conjunction with your DOS mouse driver to emulate the mouse in DOS applications, even those run from Windows.

MonitorMouse for Windows requires that MonitorMouse for DOS (MONMOUSE.COM) is installed. MONMOUSE.COM requires that <u>ELODEV.EXE</u> and your mouse driver are installed.

MonitorMouse for DOS is typically installed in your AUTOEXEC.BAT file after the ELODEV and mouse commands, as in this example:

```
MOUSE /y
C:\TOUCH\ELODEV 2201,280,5 -C492,3624,3433,654,1,15
C:\TOUCH\MONMOUSE -m6
```

TUTORIAL program

The MonitorMouse TUTORIAL program (TUTORIAL.EXE) demonstrates the various mouse button emulation <u>modes</u> of MonitorMouse. It is typically installed in the \TOUCH directory.

TUTORIAL is useful for verifying the operation of <u>MonitorMouse for DOS</u>. Correct operation under DOS is a requirement before using MonitorMouse for Windows.