

Joystick-To-Mouse

for Windows

Run Windows with a Joystick!

Version 2.80 Release 6

User's Guide

Joystick-To-Mouse: for Windows; Run Windows with a Joystick!; Version 2.80 Release 6; User's Guide

IMG Real World Press

179 Niblick Road #454
Paso Robles, CA 93446
1-800-889-0987 (US & Canada)
+1-818-701-1579

Website: <http://www.imgpresents.com>

To report errors, please send a note to ts@imgpresents.com

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Part I. Getting Started

General information about this guide, the product, installation, and getting started (how to get Joystick-To-Mouse running).

Chapter 1 - Quick Start contains details on the fastest way to install & begin using Joystick-To-Mouse

Chapter 2 - Getting Started has more information about this guide, Joystick-To-Mouse features, Installing / Un-Installing, Licensing Information, Standard Settings, using Joystick-To-Mouse Setup, Commonly Asked Questions, and information about Customer Support.

Chapter 1. Quick Start

Install Joystick-To-Mouse

There are various ways to obtain IMG software, including (but not limited to):

- Web based / Internet download from IMG's web site (<http://www.imgpresents.com/demo.htm>)
- Shipped CD / DVD physical media - IMG Product Disc
- Download ISO image file and burn IMG Product Disc CD / DVD
- USB Flash Drive (pre-installed or installed from USB media web download)
- Single file install (from local network / internet / other media)
- IMG on-line account

Note: IMG Software is built by product and major version with minor releases. There is only 1 unique build, but can be packaged / delivered / obtained in various ways. When unlicensed, the software acts as a demonstration / evaluation copy, and operation will be limited in length or run-time or capabilities. Once licensed (typically via License Key and Serial Number, Internet / Account licensing, or OEM / Company-wide / Enterprise licensing), the software will operate with no limitations.

Recommendation: The quickest and easiest method for obtaining IMG software is to download the current version from IMG's web site (<http://www.imgpresents.com/demo.htm>). Download, then run the file to install. Test, review, play with, and verify the software meets your needs and requirements. When ready to purchase, go to the IMG License Manager, and click on the "Purchase License Now" button. If working on a machine without internet access, use the Standard single file download, or use a Product Disc option. Separately, purchase the license for the product directly on the website - once you have your License Key and Serial Number, you can install and license the software.

The following outlines a standard retail Product Disc based install. For other options, refer to notes and details available at the source. In general, the approach is to install the software, then license the software. The Product Disc Installation Assistant provides an easy way to accomplish these two tasks.

- In Windows, insert the CD or DVD - the AutoRun feature will load the Installation Assistant - you may Install a licensed product , Install other product demos, or view Release Information. **If you have a Certificate of Authenticity, enter your License Key, Serial Number, and Name to Install and automatically License.**

- If AutoRun is not enabled:
- In Windows, Click on the Start Button
- Select Run
- Select D:SETUP, or type D:SETUP (or E:SETUP if CD/DVD drive E:, etc.)
- Press (ENTER) or click on OK
- In Windows Vista, you may not have the Run Option - select Computer, your CD/DVD drive, and open Setup
- Answer the questions and follow the instructions on your screen

Note: You may also Un-Install Joystick-To-Mouse by running SETUP.EXE After Joystick-To-Mouse has been properly installed. (Joystick-To-Mouse Setup will ask you if you wish to Un-Install.) This has been provided as a convenience to the user. It is recommended that you use the Control Panel | Add/Remove Programs Icon to remove Joystick-To-Mouse.

Start Joystick-To-Mouse

Click on the Start Button, and open the Start Menu.

Select (All) Programs, then Select Joystick-To-Mouse. The Joystick-To-Mouse menu will have selections corresponding to the icons in the group. Select Joystick-To-Mouse to begin operation.

Joystick-To-Mouse will automatically start the Joystick interface, and you should be able to move the mouse cursor and click with the primary button on the preferred gaming device. If Joystick-To-Mouse is unable to automatically start, an option screen will be displayed with helpful options to diagnose configuration issues and get Joystick-To-Mouse operational as quickly as possible.

Chapter 2. Getting Started

Joystick-To-Mouse User's Guide

Version 2.80 Release 6

6/6/2022

A Utility for Windows

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Using this Guide

This guide is a comprehensive collection of details, notes, and information about

Joystick-To-Mouse. Portions are incorporated within the product itself, and it is also available in various forms (e.g. printed, on-line, PDF, etc.).

Important User Information

This guide is for users who are familiar with Windows, its basic concepts, and how to operate within Windows. If you are not, the information you may need to fully utilize Joystick-To-Mouse and this guide may be limited. You may wish to review Windows help, tutorials, and other available information on using and operating Windows before continuing using this guide.

Conventions used within this guide

Note: Notes and other additional information will be indicated in this way

Warning

Special and other important details to pay close attention to will appear this way

What is Joystick-To-Mouse?

Joystick-To-Mouse was conceived out of necessity for physically challenged people throughout the world by R.J. Cooper.

The need for input devices to operate Windows goes far beyond the keyboard and the mouse. By using technology developed by IMG, the ability to use a joystick to operate as a mouse in Windows is now a reality.

Joystick-To-Mouse continues to evolve as IMG listens to and implement customer suggestions and ideas.

Production:

Product Concept: R.J. Cooper, Kermit M. Komm

Development: Kermit M. Komm

Why do I need Joystick-To-Mouse?

Joystick-To-Mouse is intended to give the user all the functionality of a mouse while using the joystick (instead of the mouse). This is considered wonderful by users who

have difficulty using a mouse (or trackball), are more proficient or more comfortable with a joystick, or prefer the automatic centering / interface of the joystick device.

The Software That Lets You Run Windows With A Joystick!

Features

- Seamless operation from Joysticks, Game Controllers, and any other gaming device that is handled like a joystick in Windows Control Panel
- Microsoft Windows 8 / 8.1 / 10 / 11 Compatible
- Acceleration, Click, Drag, and Double-Click options
- Assignable Keystroke and Macros to buttons
- Sound options
- Limited, Basic, and Advanced modes of operation
- Operator Only Mode (protected configuration)
- Assign over 80 functions to up to 32 buttons!
- Intelligent Cursor Positioning
- User controllable Speed, Acceleration, and Sensitivity
- Motion Inversion
- Screen Wrap
- Presets for saved configurations
- Axis motion can trigger button events
- Automatic Dwell feature
- DriftGuard, Wizard's Helpers, Auto-Calibration, and Diagnostic options
- Developer Tool Kit and Extensions
- End-user and Developer Support

What You Need

To run Joystick-To-Mouse you need the following equipment (hardware requirements):

- IBM 80386 or higher or compatible
- 200 MB hard disk space available

- 1 GB memory or higher
- Windows 8 / 8.1 / 10 / 11
- Any Windows supported gaming device or joystick that is managed as a joystick in the Windows Control Panel

Installing / Un-Installing Joystick-To-Mouse

There are various ways to obtain IMG software, including (but not limited to):

- Web based / Internet download from IMG's web site (<http://www.imgpresents.com/demo.htm>)
- Shipped CD / DVD physical media - IMG Product Disc
- Download ISO image file and burn IMG Product Disc CD / DVD
- USB Flash Drive (pre-installed or installed from USB media web download)
- Single file install (from local network / internet / other media)
- IMG on-line account

Note: IMG Software is built by product and major version with minor releases. There is only 1 unique build, but can be packaged / delivered / obtained in various ways. When unlicensed, the software acts as a demonstration / evaluation copy, and operation will be limited in length or run-time or capabilities. Once licensed (typically via License Key and Serial Number, Internet / Account licensing, or OEM / Company-wide / Enterprise licensing), the software will operate with no limitations.

Recommendation: The quickest and easiest method for obtaining IMG software is to download the current version from IMG's web site (<http://www.imgpresents.com/demo.htm>). Download, then run the file to install. Test, review, play with, and verify the software meets your needs and requirements. When ready to purchase, go to the IMG License Manager, and click on the "Purchase License Now" button. If working on a machine without internet access, use the Standard single file download, or use a Product Disc option. Separately, purchase the license for the product directly on the website - once you have your License Key and Serial Number, you can install and license the software.

The following outlines a standard retail Product Disc based install. For other options, refer to notes and details available at the source. In general, the approach is to install the software, then license the software. The Product Disc Installation Assistant provides an easy way to accomplish these two tasks.

- In Windows, insert the CD or DVD - the AutoRun feature will load the Installation Assistant - you may Install a licensed product , Install other product demos, or view Release Information. **If you have a Certificate of Authenticity, enter your License Key, Serial Number, and Name to Install and automatically License.**
- If AutoRun is not enabled:
- In Windows, Click on the Start Button
- Select Run
- Select D:SETUP, or type D:SETUP (or E:SETUP if CD / DVD drive E:, etc.)
- Press (ENTER) or click on OK
- In Windows Vista, you may not have the Run Option - select Computer, your CD/DVD drive, and open Setup
- Answer the questions and follow the instructions on your screen

Note: You may also Un-Install Joystick-To-Mouse by running SETUP.EXE After Joystick-To-Mouse has been properly installed. (Joystick-To-Mouse Setup will ask you if you wish to Un-Install.) This has been provided as a convenience to the user. It is recommended that you use the Control Panel | Add/Remove Programs Icon to remove Joystick-To-Mouse.

Starting Joystick-To-Mouse

Click on the Start Button, and open the Start Menu. Select (All) Programs, then Select Joystick-To-Mouse. The Joystick-To-Mouse menu will have selections corresponding to the icons in the group. Select Joystick-To-Mouse to begin operation.

Joystick-To-Mouse will automatically start the Joystick interface, and you should be able to move the mouse cursor and click with the primary button on the preferred gaming device. If Joystick-To-Mouse is unable to automatically start, an option screen will be displayed with helpful options to diagnose configuration issues and get Joystick-To-Mouse operational as quickly as possible.

The following icons will also be available in the Joystick-To-Mouse group:

Joystick-To-Mouse - runs Joystick-To-Mouse!

Joystick-To-Mouse Help - Opens Joystick-To-Mouse Help

Licensing Information - Displays current license status of Joystick-To-Mouse, allows instant licensing

Licensing Information

Joystick-To-Mouse uses the IMG License Manager to manage the licensed use of this product. If unlicensed, the product will run as demo (i.e. a demonstration version). In the demo (unlicensed) mode, Joystick-To-Mouse will run for about an hour, and then exit, displaying the license manager (announcing that it is unlicensed). You may restart Joystick-To-Mouse up to 100 times (the demonstration period limit). After the demonstration period is over, Joystick-To-Mouse will not operate unless it is licensed. For extended evaluation and testing purposes, please contact IMG Customer Service for an evaluation license. Once licensed, the operation will not be limited in any way.

The most common methods of licensing are electronic (web/e-mail based) and by certificate (Certificate of Authenticity). In both cases, there will be a registered serial number, and a license key made available once a license has been purchased - these need to be entered into the IMG License Manager to activate a valid license. For further details, refer to the IMG License Manager.

Note: There are numerous license schemes (including OEM, site, & enterprise licenses) available to meet the needs of all our customers. If you have any licensing questions, please contact Innovation Management Group, Inc. directly.

License Manager

In order to License Joystick-To-Mouse, the correct License Key and Serial Number must be entered into the IMG License Manager, along with some text for the Customer (and optional Company) text areas. The License Key and Serial Number can be found on the Certificate of Authenticity, or in the Software Unlock Codes e-mail.

The IMG License Manager will operate with an IMG Personal License (Basic/Standard/Professional). This is a system based license that can license any supported IMG product per platform. Licensing is done through the internet and your Build-A-Board.com account, accessed via the "Retrieve System License" button.

IMG License Manager - Authentication

IMG License Manager - Authentication

License Information - Version 2.80.24242 [JTM280]
 This product is locked in Demo mode. To unlock, register, and license this product, a registered Serial #, License Key and Customer Name must be entered. Please enter the details from your Certificate of Authenticity. To Purchase or Apply a License, click on the Purchase / Apply License Now button (Internet required).

Purchase / Apply License Now **Retrieve System License**

Information to provide with Payment
 System ID: J280-1AD5-DDF3-7814
Copy System ID to Clipboard

The System ID is required for proper licensing. It is important the System ID be obtained from the already installed software. To use this System ID, click Purchase / Apply License Now (above).

Enter Unlock Codes
 (Sent after payment approved)

License Key:
 Serial No.:
 Customer:
 Company:

Additional License Options / Support

Contacting Innovation Management Group, Inc. & License Information
 World Wide Web: <http://www.imgpresents.com/order.htm>
 E-mail: order@imgpresents.com
 USA & Canada (Toll Free): 1-800-889-0987

Finish **Register Later**

When the "Retrieve System License" button is used (if applicable to the product), you will have the option of using an existing Build-A-Board.com account or selecting the type of License you wish to purchase.

Professional / Full Support License

The License Key and Serial No. entries are a matched pair, and will work together to unlock the software. The Customer entry is required (i.e. some text must be entered in the Customer text area), but is not part of the license unlock process. The Company text area is optional, and will be shown as the Source when the product is licensed.

To quickly and easily license the software (on a system that has internet access), simply click on the "Retrieve System License" button. Once connected to IMG's website, you can use your existing Build-A-Board.com account, or you can select the type of License you wish to purchase. Once paid, your order will be processed, and you will receive a confirmation e-mail and a separate e-mail with license information. Once the order is fully processed, you can then click the "Retrieve System License" button to automatically license your system.

System ID Note: The System ID is used to accurately match the Product and Version you wish to license with the License Information provided. If the system you wish to License does not have Internet Access, you can use the Copy System ID to

Clipboard to accurately copy the System ID to the clipboard (which can be saved in a text file or other document and moved to a system that does have Internet Access).

Note: The "Retrieve System License" uses a unique identifier to automatically license your system (which is only sent if the license is added or purchased after using the "Retrieve System License" button). If you try this on a different system, or after a system update or re-install (or after a change to this unique ID), the software will not license automatically. You will either need to add the system to your existing Build-A-Board.com account or purchase the appropriate license.

Important Note: Be sure to save and/or print your Order Confirmation number (with Order E-mail), along with your License Key and Serial Number in case you need to re-license the software in the future (Operating System Re-install, hard disk reformat, new system, etc.)

Certificate of Authenticity Note: For Electronic Licenses, and Certificate of Authenticity can be retrieved on IMG's website:
<https://www.imgpresents.com/orders/account/licmanager.htm>. This requires a valid License Key and Serial Number. Once entered, you may view a PDF of the Certificate, or download the Certificate of Authenticity PDF file (for printing or saving).

The IMG Personal License

Purchase of a new IMG Personal License creates a Build-A-Board.com account, and the system will be licensed automatically via the "Retrieve System License". If you already have a Build-A-Board.com account, you can Apply a license to your system when you use the "Retrieve System License" button.

IMG License Manager - Account Credentials

After selecting the "Retrieve System License" button, you will be shown the Account Credentials dialog to enter e-mail and password, as well as several other options. If you do not have an existing Build-A-Board.com account, simply click OK to go to Build-A-Board.com for options on purchasing a license or creating an account.

If already have a Build-A-Board.com account, simply enter your existing account credentials with e-mail and password. By default, the password is obscured - to see in plain text, check on the View Password option. The password is not saved locally, and would need to be re-entered if system is unable to retrieve a valid license. If you check on the Save Password Locally, the entered password will be saved, and used to populate the field. Note the password is saved in an encrypted form (not plain text). If there is a saved password, and you wish to bypass this Account Credentials dialog, the Automatic OK if Password when checked on will skip the display of the dialog, and automatically retrieve a license based on the e-mail/password credentials provided. For automation options, see below.

Automation Options - ACCOUNT.TXT and AUTOLICENSE

ACCOUNT.TXT

ACCOUNT.TXT is a simple text file that can contain account credentials and options that LICENSE.EXE (IMG License Manager) will read in and update the System Registry. Note for security purposes, if this file exists in the same folder as LICENSE.EXE, the file is read, parsed, updates the registry, and then is deleted. The ACCOUNT.TXT file may be saved with ANSI or UNICODE encoding. This creates a mechanism to bypass the user interface required with the Account Credentials dialog, and can be used to enable one-click licensing, or to facilitate automatic licensing.

Below are the available entries for ACCOUNT.TXT and structure to enable correct reading and parsing of the file. Note that the password is plain text here, but saved in the

registry in a non-plain text format. Also note that ACCOUNT.TXT is deleted once parsed, so the account credentials will be secure once LICENSE.EXE is run. In general, LICENSE.EXE should be run soon after whatever step drops ACCOUNT.TXT into the installation folder. Also, because Administrator privileges are required to copy ACCOUNT.TXT into a Program Files location, and LICENSE.EXE requires the same privileges, treating these as a dual-step process is recommended (i.e. copy in ACCOUNT.TXT, then run LICENSE.EXE). If no user interaction desired when running LICENSE.EXE, the POSTINSTALL command line parameter will run the IMG License Manager without any user interaction needed - no dialogs, no screen display (e.g. LICENSE.EXE POSTINSTALL[Enter]). For practical purposes, this converts ACCOUNT.TXT entries into System Registry and removes ACCOUNT.TXT. See AUTOLICENSE below for no user interaction with License retrieval from Build-A-Board.com account.

```
[License Manager]
BABEmail=your.name@example.com
BABPassword=password
BABSystemName=MySystem
BABSavePassword=Yes
BABViewPassword=No
BABAUTOOK=Yes
```

The following is the structure of data saved into the Registry Key as outlined below (example data):

```
[HKEY_LOCAL_MACHINE\SOFTWARE\Innovation Management Group\License Manager]
"BABEmail"="your.name@example.com"
"BABPassword"="J,246,V,195,F,233,E,232,I,239,J,224,N,230,F,201,"
"BABSystemName"="MySystem"
"BABSavePassword"="Yes"
"BABAUTOOK"="Yes"
"BABViewPassword"="No"
```

Note the SavePassword, AutoOK, and ViewPassword can hold values of "Yes" or "No".

AUTOLICENSE

If LICENSE.EXE is ran with AUTOLICENSE added at the command line as a parameter (e.g. LICENSE.EXE AUTOLICENSE[Enter]), the LICENSE.EXE will perform certain tasks, and if the credentials are correct, the options are correct, the Build-A-Board.com Account Exists and is able to issue licenses for the account, the system will automatically license.

Steps Required to Automatically License Joystick-To-Mouse using AUTOLICENSE

1. Build-A-Board.com Account Exists - you can verify this by going to Build-A-Board.com/accounts/ and logging in with e-mail and password (account credentials).
2. Licenses available - once logged in to Build-A-Board.com account, click on License Manager tab to view licenses used and licenses available. Purchase Licenses if needed. Also note that Account Type can limit license issuance - Basic will only issue licenses for IMG Personal Products - Standard or Professional required for Joystick-To-Mouse
3. ACCOUNT.TXT - create text file ACCOUNT.TXT with correct credentials and options. As Administrator, drop ACCOUNT.TXT file into \Program Files\JOY2MSE.
4. LICENSE.EXE AUTOLICENSE - As Administrator, run LICENSE.EXE with AUTOLICENSE command line parameter. Note this can be automated via batch file or shell script.

IMG License Manager - Additional License Options

Additional License Options / Support Options / License Retrieval

E-Mail License / Evaluation License

If you received license information via e-mail, follow the instructions in the e-mail and paste the license info below. Click Save License Info to store the information. If desired, Click on Request / Retrieve Evaluation License to Begin.

Request / Retrieve Evaluation License Paste Text from Clipboard Save License Info

Support Options

View Current License File (LICENSE.LIC) Delete (Reset) License File (LICENSE.LIC)

License Retrieval (previously purchased license - Order Confirmation required)

Order #: E-Mail address: Retrieve License

IMG Personal License Mode Done License Manager Help

The IMG Personal License is a system based license, and can be retrieved at the main license page with the "Retrieve System License" button. Most license issues can be dealt with online at your Build-A-Board.com account. There are some advanced and support

options that can be managed at the Additional License Options page.

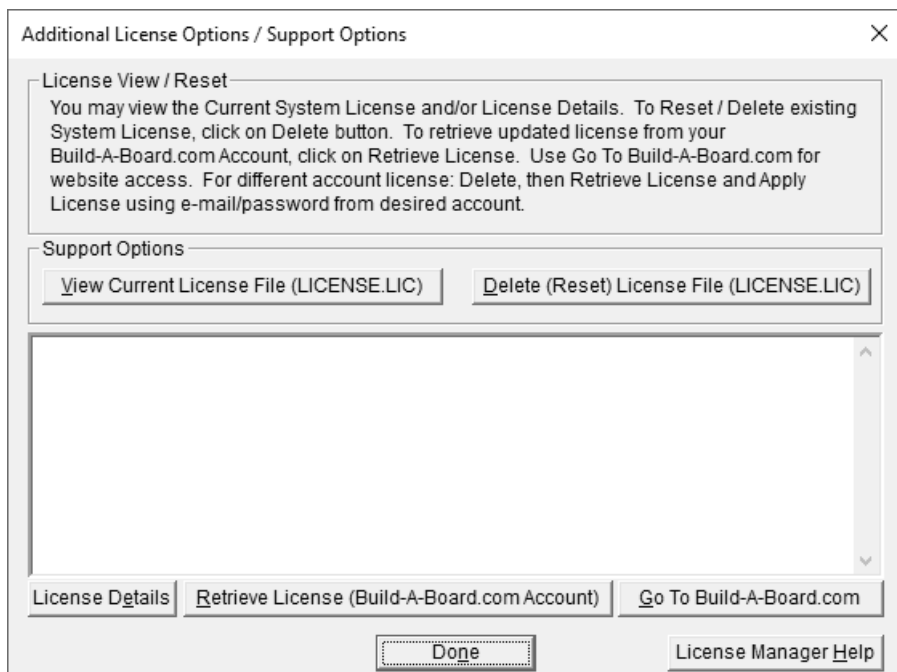
The "License Details" button will check the System License and report the issue or issues why the license is not valid. In some cases, these details may explain the situation, and point to a corrective action.

The "Go To Build-A-Board.com" button will open a browser and go directly to the login page for your Build-A-Board.com Account.

Use "View Current License File (LICENSE.LIC)" to read the System License, and display the License details. In some cases, these details may explain the situation, and point to a corrective action.

Use "Delete (Reset) License File (LICENSE.LIC)" to remove the System License and Reset the System ID. This action is not recommended and requires 2 confirmations, because all previous license information is destroyed, and a new System License will be required.

Additional License Options - Licensed View



The Additional License Options changes slightly when the software is properly licensed. The buttons already described above move positions, and there is an additional button option (Retrieve License).

Use "Retrieve License (Build-A-Board.com Account)" to reload and obtain the current license from your Build-A-Board.com account. This could be necessary if you've added a platform license, purchased a license while operating on an evaluation license, added a

serial number and been advised to renew your license, or other license change that requires a refresh/renew from the current license available tied to the current Build-A-Board.com account. Note that if you need a license from a different Build-A-Board.com account, you must Delete / Reset the license, and Apply the license to the current system with your e-mail/password from the correct Build-A-Board.com account.

IMG License Manager - Licensed Display

Professional / Full Support License



When properly Licensed, a screen similar to this will show the License Information for the product. The display of this indicates that the software is Licensed.

Note: Evaluation licenses also show this screen during the days that the Evaluation License is valid.

The IMG Personal License



When properly Licensed with an IMG Personal License, a screen similar to this will show the License Information for the product. This display indicates that the software is Licensed. For help, support, and other options, you can click on the "Go to My Build-A-Board.com Account" to open a browser and access your account online.

If you single left click on the text display box at the bottom, it will rotate through 3 different views - License Information, IMG Personal License details for the system, and results from IMG Personal License evaluation.



The second view shows License Details from the System License.



The third view shows details on how the System License was evaluated by the License

Manager.

Technical Note: Professional / Support Licenses are licensed per product and the LICENSE.LIC file is located in the installation folder. The IMG Personal License is a System License, and the LICENSE.LIC is located in the Common Files area of Program Files in the Innovation Management Group License Manager folder.

Where To Begin

Joystick-To-Mouse requires a Joystick or Game Controller in order to operate. The device must be installed properly (according to the manufacturer's instructions), calibrated, and tested within the Windows Control Panel before attempting to run Joystick-To-Mouse.

Joystick-To-Mouse has various screens & Wizard's Helpers to assist you in verifying that your system has a Joystick or Game Controller configured for proper operation. If you cannot calibrate & test your device in the Windows Control Panel, do not run Joystick-To-Mouse.

IMPORTANT: Joystick-To-Mouse requires a Joystick or Game Controller in order to operate.

Note: The information below is for first time users who are reviewing help after the software has been installed.

Step 1

Open Control Panel, and verify you have a Joystick / Game Controller installed

If you do not have your joystick listed, follow the manufacturer's instructions for installing your joystick.

If you cannot calibrate and test your device in the Control Panel applet for the Joystick (Gaming Options / Game Controllers), then there is a strong likelihood that a joystick & the required software drivers are not installed (or not properly installed). Refer to the joystick manufacturer's instructions, or review Windows help for installing a joystick or game controller. Do not proceed to Step 2, do not attempt to run Joystick-To-Mouse.

Step 2

Calibrate, then Test your joystick (strongly recommended).

If you experience problems, you may wish to restart Windows, then return to the Control Panel & try again.

If you continue to have difficulties, or cannot successfully calibrate & test the joystick / game controller, then you cannot continue with Joystick-To-Mouse until you resolve this problem. Refer to the Troubleshooting suggestions for hints & suggestions to help point you in the right direction.

If during the Test phase, the joystick / controller responds as expected, then you may continue on to Step 3.

Step 3

Verify your Joystick is on Controller ID 1 (or the Preferred Device in Windows XP (Advanced button)).

This is accessible via the Advanced Tab or Controller IDs Tab in the Control Panel applet where your joystick is listed. In Windows XP, click on the Advanced button, and select your joystick as the Preferred Device (the Preferred Device is Controller ID 1).

Hint: If you see the Advanced Tab, changing the Controller ID setting can be confusing if you have 2 or more joysticks listed. It can be helpful to set the current ID 1 to None, then set the desired joystick to ID 1, then reset the original joystick to an unused ID number.

Step 4

Now you can run Joystick-To-Mouse!

The program icon is accessible through the Start Menu | Programs | Joystick-To-Mouse | Joystick-To-Mouse.

For more information while using Joystick-To-Mouse, see Joystick-To-Mouse Operation

Joystick-To-Mouse Operation

The default setting of Joystick-To-Mouse is to begin operation when the Joystick-To-Mouse program begins. If the joystick / game controller has been properly configured in the Control Panel, Joystick-To-Mouse operation will automatically begin, and the icon will indicate that Joystick-To-Mouse is On, e.g. Joystick-To-Mouse ON.

The default settings result in the following:

- Pushing the joystick up (away from you), will move the mouse cursor up the screen (decreasing Y axis values)
- Pulling the joystick down (towards you), will move the mouse cursor down the screen (increasing Y axis values)
- Moving the joystick left will move the mouse cursor left on the screen (decreasing X axis values)
- Moving the joystick right will move the mouse cursor right on the screen (increasing X axis values)

- Clicking on the primary button (Button 1) will result in a Left mouse click
- Clicking on the secondary button (Button 2) will result in a Right mouse click

By moving the joystick, you can position the mouse cursor where you want it, and by clicking the joystick buttons, you will generate mouse clicks - Joystick-To-Mouse is on the job, and allowing your joystick to act as a mouse!

PLEASE NOTE: All of these settings, and settings for enhanced joystick options such as the Z axis, Rudder control, up to 32 buttons, etc. are configurable. The defaults allow for basic operation, similar to the capabilities of a basic mouse.

GAME CONTROLLER NOTE: Game Controllers interface into windows similar to the way a joystick does - there is a mapping between the game controller buttons, levers, and controls and joystick actions (e.g. X-axis, Y-axis, Z-axis, Rudder control, buttons, etc.) You may need to experiment with the settings and their names in Joystick-To-Mouse and your game controller to ensure desired operation. You may also wish to check with the Game Controller manufacturer for more information.

To access the Joystick-To-Mouse Menu, click on the icon button on your taskbar (e.g. "Joystick-To-Mouse ON")

The default settings will show the Basic Menu - for more details on Starting, Stopping, Calibrating, setting options & button settings, or closing Joystick-To-Mouse, refer to the Basic Menu help, or the Help Topics.

KNOWN OPERATIONAL ISSUES

(listed in order of relevance to the average user)

Cursor not visible (Windows 8)

On systems with touchscreens and others, the mouse cursor will not be shown until the physical mouse is moved. Because Joystick-To-Mouse moves the mouse at a virtual level, as of the current release, Windows does not show the mouse cursor and the Microsoft Windows API GetCursorInfo shows `CURSOR_SUPPRESSED`, but there is no way to force the cursor visible without first moving the physical mouse.

USB Joystick Preset

The default settings are for a USB joystick. Note that USB joysticks generally have consistent readings, and the Center Range Sensitivity is set low for a responsive feel.

- If you are using a gameport (analog) joystick, then this setting may cause drift. It is highly recommended that you Stop the joystick, open Program Options, select Presets, and select the Standard Gameport Joystick preset before restarting Joystick-To-Mouse.

- Z Axis / POV (Point of View hat) settings - these are default on in the USB Preset - if your joystick does not have these capabilities, you should also select the Standard Gameport Joystick preset.

Cursor Jitter (Z Axis)

Some joysticks have a throttle or slider control that is reported as the Z axis. Depending on the joystick and its driver, this value is sometimes incorrectly reported until the control is moved. Because the default settings enable this as "Fine Tune Y Position" these incorrect values cause Joystick-To-Mouse to move the Y position up & down slightly, causing jitter. You can try the following to resolve this:

- Move the control after Joystick-To-Mouse starts
- Disable the option in Button Settings - clear the "Enable slider (Z axis)" check box
- Re-calibrate the joystick & retry

Fine Tune X (+ Auto), Fine Tune Y (+ Auto) (Z Axis/Rudder)

The (+ Auto) option looks at the control, and if it is in the minimum or maximum position, it will automatically continue to move the cursor in the same direction, giving the throttle/slider control more capability to adjust the cursor position.

However, some joysticks default to a minimum or maximum position when the throttle/slider control is not being moved, forcing the (+ Auto) automatic position feature to move the cursor at all times. For these joysticks, you should not use the (+ Auto) setting.

Scroll Bars, Combo boxes keep scrolling on their own (usually up)

This issue may only be related to certain joystick drivers. What is happening is the default settings for USB joysticks enable the POV hat control (Point Of View thumb control) - if the joystick does not have this control, but the driver reports a value, Joystick-To-Mouse sends "Wheel up" events to the application. To resolve this, do one of the following:

- Select Standard Gameport Joystick preset (Program Options | Presets)
- Turn on the Advanced Settings (Program Options | Advanced Settings), go into Button Settings, select Advanced, and clear the Enable POV check box

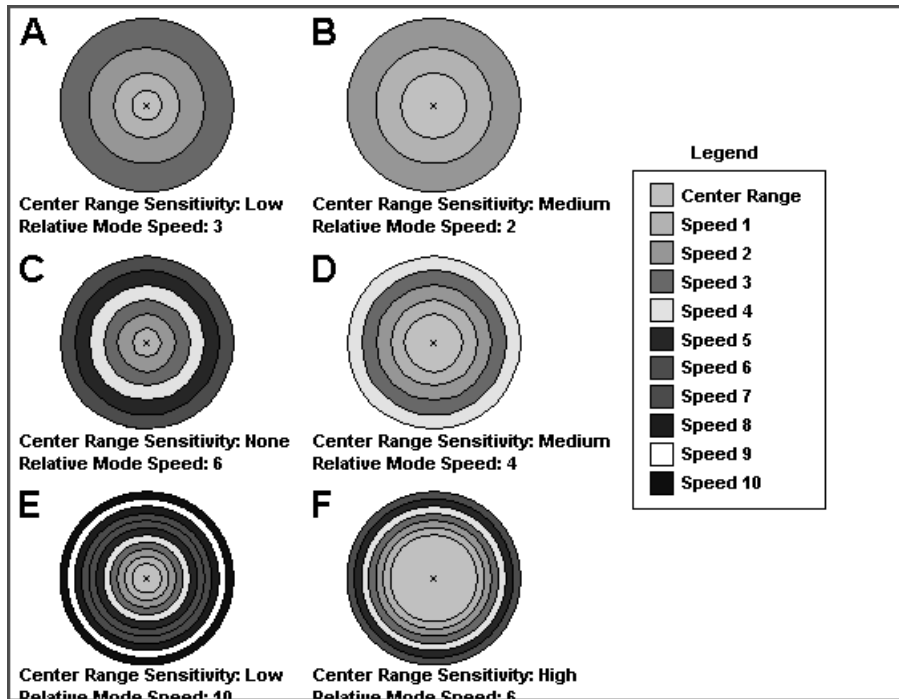
Windows XP Fast User Switching

In the Windows NT based versions of Windows (2000/XP), Joystick-To-Mouse uses a system service to allow limited operation when in the secure logon desktop. The original intent was to allow a user to at least point & click even when Joystick-To-Mouse is not running. In Windows XP, because of the design of the Fast User Switching implementation, this service may not operate properly when more than 1 session is in use (See Microsoft Knowledge Base Q308403). In order to operate in this environment with a Joystick-To-Mouse user, the following options provide methods to work around this issue:

- With Fast User switching, have users "log off" instead of "switch user"
- Do not use the Fast User switching option (See Control Panel | User Accounts | Change the way users log on or off)

Note that Joystick-To-Mouse supports Fast User Switching & running with multiple users - the limitation is while switching users at the welcome screen, the ability to click via the joystick is prevented due to security & the issues covered in Q308403.

SPEED, SETTINGS, ACCELERATION



This is a visual guideline to how Joystick-To-Mouse is implemented and the terms used within Joystick-To-Mouse. The graphics are not exact, and only used to illustrate the concepts used within Joystick-To-Mouse. Details and notes about each graphic are included below.

The entire circle indicates the maximum extent of the joystick (e.g. moved off-center as far as it will go, in any direction). The colored ranges indicate the position of the joystick as it is moved off-center, and how Joystick-To-Mouse will interpret this joystick position. The actual cursor speed depends on whether acceleration is enabled or not.

For all graphics, the Center Range Sensitivity (Light-Gray area) indicates which joystick values should be ignored when determining if the cursor should move. In the graphic, it is the range where the speed is 0. Joystick-To-Mouse equally divides the remaining area into ranges based on the relative mode speed setting. If the speed is low, there are only a few ranges. If the speed is high, there are many ranges. When the joystick position is in

each particular range, the speed is the cursor speed WITHOUT acceleration. When Acceleration is used, this speed is the starting point from which to calculate the actual cursor speed.

Graphic A

With a low Relative Speed setting, and a low center range sensitivity, this configuration will need a steady hand. The low speed means movement will be slow & steady - not for the impatient. Recommended Users: Children (large button games), Disabled, Elderly
Suggested Settings: Acceleration will help when moving large distances across the screen

Graphic B

With a very low Relative Speed setting, and a medium center range sensitivity, this configuration allows for a shaking hand. The slow speed is for those that require clear and discrete motion and need to watch the cursor move. Recommended Users: Disabled, ALS, Stroke
Suggested Settings: Acceleration will help when moving large distances across the screen

Graphic C

With a Relative Speed setting of 6, this creates a good range of values. With No center range at all, this will probably only work for a USB joystick, or where the user is always moving the cursor. Recommended Users: Gamers, average user with a steady hand.
Suggested Settings: Acceleration can dramatically change the feel & response with these settings.

Graphic D

With a medium Relative Speed setting, and a medium center range sensitivity, this configuration is a good, general setting for a game port joystick. Recommended Users: Average user with a game port joystick
Suggested Settings: Acceleration will help when moving large distances across the screen

Graphic E

With the maximum Relative Speed setting, and a low center range sensitivity, this configuration will need a steady hand. Recommended Users: Gamers, advanced users
Suggested Settings: Custom Acceleration allows customized response curve.

Graphic F

This configuration requires the joystick to move off-center a substantial amount before cursor motion will result, and then there are very fine ranges. Shown for example purposes only. Recommended Users: None
Suggested Settings: Lower Relative Mode Speed, or lower Center Range Sensitivity.

Troubleshooting

Problem: Joystick-To-Mouse does not start automatically

Solution(s):

Verify that the automatic start-up with Windows check box has been checked.

In Windows 8, you should use the option to start at the Start Screen - see System & Startup Options. The built in start options referred to in the following had to do with the Startup Group and normal operation prior to Windows 8. Changes to Windows 8 may allow both capabilities.

If already installed, from the Start Menu, copy the Joystick-To-Mouse icon from the Joystick-To-Mouse group to the StartUp group, and restart Windows. If unfamiliar with this, Re-install Joystick-To-Mouse - the Setup default is to install Joystick-To-Mouse in the StartUp group (Auto-Start with Windows).

If you see a message indicating the joystick cannot be started, review "I can not calibrate the joystick" below.

Problem: I can not calibrate the joystick

Solution(s):

Various joysticks have different capabilities and hardware settings, and Joystick-To-Mouse was written to take advantage of the standard joystick drivers & multimedia extensions provided by Microsoft.

The calibration and hardware issues are beyond the Joystick-To-Mouse software application. If you cannot calibrate and test the joystick within the Windows control panel, do not try and run Joystick-To-Mouse - it is a software program that needs a joystick, and it simply will not work until you have resolved this issue.

In testing and through feedback from our users, we can offer the following information as a starting place:

- Start off in Control Panel ("Joystick", "Game Controllers", "Gaming Options" icon)
- USB joysticks should be automatically recognized by Windows - note that any driver software (on diskette or CD) that came with the joystick **MUST** be installed as required by the joystick manufacturer.
- Verify the joystick is plugged into the proper game port. Some systems have more than one (1 with the system, and 1 on a sound card). If there is more than one, there could be a conflict. Refer to the hardware manuals that came with your system if Microsoft Diagnostics (MSD.EXE) does not detect a Game Port Adapter.
- Joystick-To-Mouse requires the joystick to be on Controller ID 1 (Available in the Advanced Tab, or in Windows XP, the Advanced setting for Preferred Device (i.e. primary joystick))

- Verify the orientation of the joystick - the calibration routine will not operate if it assumes you are at the upper-left, while the joystick is actually lower-right.
- Confirm the proper settings of the joystick. Some joysticks have the capability of removing (or lessening) the auto-centering feature. In most cases, these should be left on, so the joystick returns to the center position when released.
- Verify the "Auto-fire" setting is not turned on (if applicable to the joystick).
- Most Analog joysticks have sliders or knobs to fine tune the joystick center position. Verify these are at their center positions before attempting calibration.

Problem: The cursor moves on its own

Solution(s):

Check that the joystick is in its center position, and if it has any physical settings, that they are in their proper position.

Most USB joysticks will not have this problem - if you do experience any cursor drifting, always start by re-calibrating & testing the joystick in Windows Control Panel.

Analog joysticks: There are various settings available to compensate for joystick variability. The most effective method is to counteract the off-center position by using the sliders on the joystick itself. These may need to be adjusted periodically since the joystick values reported can be affected by temperature, joystick use, humidity, etc.

The single most important setting in Joystick-To-Mouse to compensate for cursor drift is the Center Range Sensitivity, available in Joystick-To-Mouse Custom Calibration or Advanced Menu | Joystick.

You may wish to Calibrate and select the Calibration Method to be Joystick-To-Mouse Custom Calibration. This screen gives you options to modify the motion threshold (how far the joystick must be moved in order to register motion) and center range sensitivity (how far off center the joystick must be moved to register motion). You will be able to modify settings and get instant feedback of the results at this screen.

Verify that the Relative Mode of Joystick-To-Mouse is selected - in Absolute Mode the cursor may be jumpy do to the inherent nature of analog joysticks - you may wish to use a digital joystick if higher precision is required.

On older PCs that have the game port as part of the sound adapter, playing sound while operating with Joystick-To-Mouse can cause errant values to be read by Windows (this is due to voltage problems within the sound card) and cause erratic motion of the cursor. Disable sound (Mute) while working with Joystick-To-Mouse, or try a different sound adapter.

DriftGuard - the DriftGuard feature is enabled everytime Joystick-To-Mouse begins operation. (In Windows 8, DriftGuard is default off because of the use of the screen corners). If the cursor gets stuck in one of the corners of the display during the initial few seconds, Joystick-To-Mouse will turn Off, and give you a warning message. During normal operation (with no cursor drift), this feature will be transparent. Incorrect

calibration is the most common reason why DriftGuard would stop Joystick-To-Mouse. Refer to the displayed information for further assistance. See the Joystick-To-Mouse Notes for more details on DriftGuard, and how to disable if necessary.

Refer to the Joystick-To-Mouse Initialization File for a detailed description of the settings available.

For other known issues, please refer to Joystick-To-Mouse Operation.

Commonly Asked Questions

Compatibility

Does Joystick-To-Mouse work with all Windows Applications?

Yes.

Input Devices

Does Joystick-To-Mouse require a Mouse?

Yes, Joystick-To-Mouse does require at least some type of pointing device that emulates a mouse to the extent that the system reports that a mouse device is present.

Does Joystick-To-Mouse require any special drivers?

No. Joystick-To-Mouse works with all standard Windows drivers. Note that your device **MUST** be seen as a joystick or compatible device in the Game Controllers / Gaming Options section of Window Control Panel.

Customer Support

Joystick-To-Mouse Software is backed by a support staff trained to provide you with fast, courteous service. Over the years, IMG has astounded individuals at the quality of its software and its support. So that we can continue to focus our resources on development and providing high-quality products & support, we do appreciate your assistance in reviewing the help, manual, and support information available at our website to see if the problem or question has already been addressed. However, if you need assistance beyond what the manual, tutorial, help files, and on-line support database provide, please contact IMG Customer Service:

Innovation Management Group, Inc.
Customer Service
179 Niblick Road #454
Paso Robles, CA 93446
USA

1-800-889-0987 (US & Canada)
+1-818-701-1579
<cs@imgpresents.com>
<http://www.imgpresents.com>

To open a Technical Support case and create a support ticket, please refer to <https://www.imgpresents.com/orders/support/techsupport.htm>.

Please provide, or have the following information ready when you ask for assistance:

- Joystick-To-Mouse version number, update level.
- Registered serial number (or if running demo)
- Make and Model of your computer.
- Windows version number, any Service Packs or major updates.
- A description of the problem.
- If possible, a list of the steps required to recreate the problem.
- If you have seen an error code, record and report the number.
- Additional information may be required, such as monitor type, type of pointing device, amount of RAM in your system, other software running (anti-virus, spyware, virtual machine, etc.).

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For International Contacts, please see Web Site...

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Part II. Using Joystick-To-Mouse

Description of how to operate and configure Joystick-To-Mouse.

Description of how to operate and configure Joystick-To-Mouse.

Chapter 3 - Using Joystick-To-Mouse contains general operation information, and details on the common settings used for the average user.

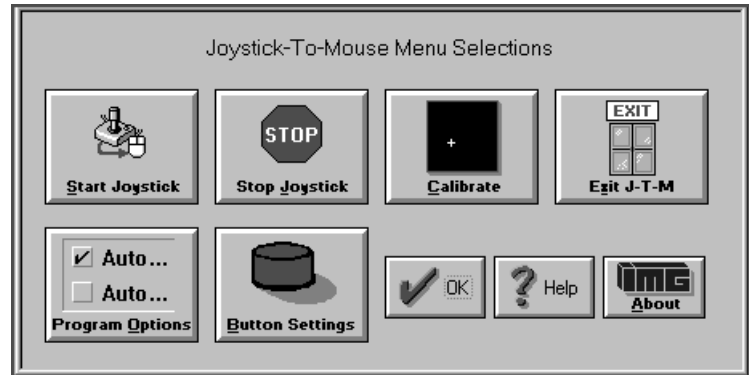
Chapter 4 - Advanced Menu Options outlines the various options accessible from the Advanced menu, and provides details on changes and additions to the basic settings.

Chapter 5 - Operator Menu details the limitations and specific usage information about the Operator Mode and the Operator Menu.

Chapter 3. Using Joystick-To-Mouse

Basic Menu

This is the Main Menu for Normal Operation. Click on a button for detailed help on each selection, or review descriptions below.



Start Joystick can be selected to Start / Begin Joystick-To-Mouse Operation.

Stop Joystick can be Selected to Stop / End Joystick-To-Mouse Operation.

Calibrate Joystick can be selected to Calibrate the Joystick (based on the Calibration Method selected in Program Options.)

Exit Joystick-To-Mouse can be selected to Exit Joystick-To-Mouse and Close the Joystick-To-Mouse Program.

Program options can be selected to configure the basic Joystick-To-Mouse settings.

Button Settings can be selected to configure how each of the Joystick Buttons will react when Joystick-To-Mouse is operating.

Select OK, to Close the Menu, or Help to bring up context-sensitive Help(this file).

Start Joystick

This option will start the joystick operation of Joystick-To-Mouse. Depending on the settings, the mouse cursor will be controlled from the joystick, and the buttons on the joystick will perform the appropriate actions as set in Button Settings.

When Joystick-To-Mouse is On, no other program in Windows can use the Joystick. The On state is indicated by the Icon Name changing to Joystick-To-Mouse ON. While Joystick-To-Mouse is On, the mouse will still operate, and the mouse must remain

connected for proper operation of Joystick-To-Mouse. During training or evaluation, another individual may assist the Joystick-To-Mouse user with the mouse. If Joystick-To-Mouse is used as the primary mouse cursor interface, you may wish to flip the mouse over, or remove the ball from the mouse or trackball.

Joystick-To-Mouse has 2 operating modes, accessible when Advanced Settings are available. For more details, see Operation Mode.

If you cannot Start the joystick, review troubleshootingTroubleshooting for options. See Joystick-To-Mouse Joystick-To-Mouse operation for default operation settings.

Stop Joystick

This option will stop operation of the joystick. If Joystick-To-Mouse is set to Off, other programs in Windows can use the joystick. The Off state is indicated by the Icon Name changing to **Joystick-To-Mouse OFF**.

When Joystick-To-Mouse is Off, the mouse may be used to operate the mouse cursor, point & click, etc.

Calibrate Joystick

To Calibrate the Joystick, from the Joystick-To-Mouse menu, Click on the Calibrate button.

When you click on the Calibrate button, Joystick-To-Mouse will allow you to select which Calibration Method you wish to use to test/verify or re-calibrate your joystick / game controller.

Joystick-To-Mouse Custom Calibration

If you have successfully installed your joystick according to the manufacturer's instructions, click on Joystick-To-Mouse Custom Calibration to fine tune operation within Joystick-To-Mouse.

Standard Windows Calibration

If not, you should verify / re-calibrate your already installed joystick with the Standard Windows Calibration process. You will be asked to move the joystick to its four corners (top-left, bottom-left, etc.). This process will record the extreme coordinates so the software can properly measure the joystick position. Wizard's Helpers are available to walk you through the Windows Joystick Calibration.

Unfortunately for the user, there is little consistency in the various versions of Windows for how the joystick is handled. Control Panel icon names have included "Joystick", "Game Controllers", and "Gaming Options." Once into the Control Panel Applet, there

are also inconsistencies. For newer version of Windows, Calibration can be handled via the Properties of a selected Controller. For USB connected joysticks & controllers, often calibration does not need to be performed more than once. If you have a game port (analog) joystick, calibration may need to be done on a regular basis.

During calibration, you can also test the joystick to verify its operations and which buttons are available to you.

From time to time, you may wish to calibrate your joystick especially if you notice any of the following:

- You cannot reach the edge of the screen (Absolute Mode)
- The cursor moves when the joystick is centered (Relative Mode)
- The cursor moves at different speeds when going up & down, or left & right

If you constantly need to calibrate the joystick, you may wish to set the Automatically Calibrate Option on in Program Options .

When Joystick-To-Mouse is first run it is necessary to Calibrate the Joystick to establish values for the joystick.

To Calibrate the Joystick, Joystick-To-Mouse cannot be On.

Controller ID

Joystick-To-Mouse requires the Controller ID to be 1 (or primary joystick device). If you have only 1 device installed, then this will be the default. However, if you install more than one joystick, or have multiple devices connected, then the IDs may be mixed around. Joystick-To-Mouse will indicate a problem if it cannot start the joystick, and give you the option to open the Control Panel applet where you can modify the controller ID. In Windows XP, this is handled in the Advanced Dialog, where you can select the preferred device (the preferred device is set to be on Controller ID 1).

IMPORTANT NOTE:

The slider trim adjustment controls on the joystick itself could be the cause of what appears to be improper calibration. Refer to Troubleshooting for more details on joystick calibration.

Exit Joystick-To-Mouse

From the Joystick-To-Mouse menu, select Exit to stop Joystick-To-Mouse operation, and close the Joystick-To-Mouse program. Joystick-To-Mouse verifies the selection.

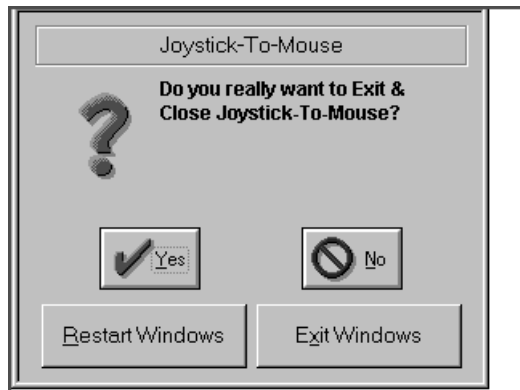
This is the standard Exit Dialog:



Select Yes to Close Joystick-To-Mouse and end Joystick-To-Mouse operation.

Select No to return to normal operation of Joystick-To-Mouse.

This is the Advanced Exit Dialog - Program Options, Display & Cursor Options, Exit Display.



Select Yes to Close Joystick-To-Mouse and end Joystick-To-Mouse operation.

Select No to return to normal operation of Joystick-To-Mouse.

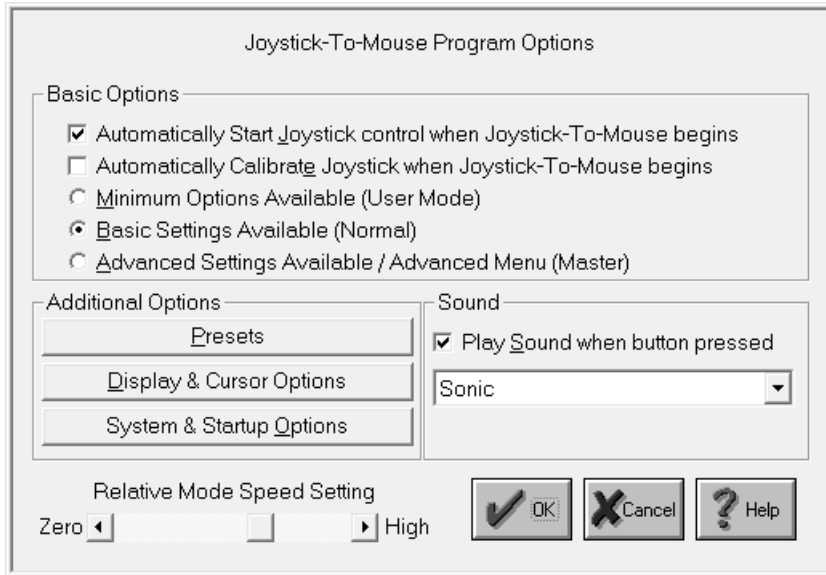
Select Restart Windows to restart Windows and re-initialize all Windows Settings.

Select Exit Windows to End the current Windows session and return to DOS (operating system).

The Supervisor may disable the Exit Button completely within the Operator Menu.

Program Options

Click on a control or button for detailed help, or review descriptions below.



Joystick-To-Mouse after installation is set to Automatically Start Joystick Operation.

Basic Options

The first two settings below are operated with a Check Box. If there is a Check Mark in the Box, then the setting is turned On - if there is no Check Mark (the Box is clear) the setting is turned Off.

Automatically Start Joystick control when Joystick-To-Mouse begins

If this option is turned On, then every time Joystick-To-Mouse is run, the Joystick operation will begin and control the mouse cursor from the Joystick. On is the default setting. To automatically have Joystick-To-Mouse operate within Windows, you should place the Joystick-To-Mouse icon in the Windows StartUp group (this can be done for you from the Setup program (located on the distribution diskette)).

Automatically Calibrate Joystick when Joystick-To-Mouse begins

If this option is On, then the Joystick Calibration routine will be run every time Joystick-To-Mouse begins. In most cases this is not necessary. From time to time, you may wish to calibrate your Joystick especially if you notice any of the following:

- You cannot reach the edge of the screen (Absolute Mode)
- The cursor moves when the joystick is centered (Relative Mode)
- The cursor moves at different speeds when going up & down, or left & right

The next three settings below are operated with a Radio Selection Buttons. Only one of the three settings can be selected. If there is a mark in the Button, then the setting is selected - if there is no mark (the Button is clear) the setting is not selected.

Minimum Options Available (User Mode)

This setting limits the ability of the User to access Joystick-To-Mouse configuration options, and enables the Operator Menu. The only way to modify settings is by entering a Supervisor Password after the Joystick-To-Mouse Options button is pressed.

Basic Settings Available (Normal)

This is standard selection & Basic Operating Menu (Main Menu) for Joystick-To-Mouse. All of the main features are accessible through Program Options & Button Settings.

Advanced Settings Available / Advanced Menu (Master)

This setting enables all of the advanced features within Joystick-To-Mouse, and enables the Advanced Menu. This setting is primarily for accomplished Windows users who have a good understanding of Windows operating concepts. Features that are set through the advanced options will remain in effect even if the Basic or Minimum Settings are selected afterwards.

This setting enables all of the advanced features within Joystick-To-Mouse, and enables the Joystick Key Assignments. This setting is primarily for accomplished Windows users who have a good understanding of Windows operating concepts. Features that are set through the advanced options will remain in effect even if the Basic or Minimum Settings are selected afterwards.

Additional Options

Presets

Press the Presets Configuration button to save the current configuration, select a different configuration, or create a new configuration based on the current settings. All of the Joystick-To-Mouse program settings, speed, acceleration, modes, etc. are saved so they can be selected at a later time. This allows easy switching for multiple users, multiple devices, or multiple applications.

Display & Cursor Options

Press the Display & Cursor OptionsD to modify settings for Joystick-To-Mouse display features such as Popup Help, and Cursor Options such as Intelligent Cursor Positioning, Cursor Wrap, and Cursor Inversion.

Play Sound when button pressed

This must be set to On in order for sounds to be played when a Joystick Button is pressed. This feedback may be important, or it may be annoying. If set Off, then no sound will be played when a joystick button is pressed. If set On, then you may select the sound to be played in the drop-down list box. You may select from the default speaker beep on your PC, the default Windows sounds, or you may select from several included sounds. You may also add sounds to this list (See Joystick-To-Mouse Notes).

IMPORTANT NOTES: On many older systems, the Game port (where the joystick plugs in), and the sound generation hardware is on the same adapter card. This may mean

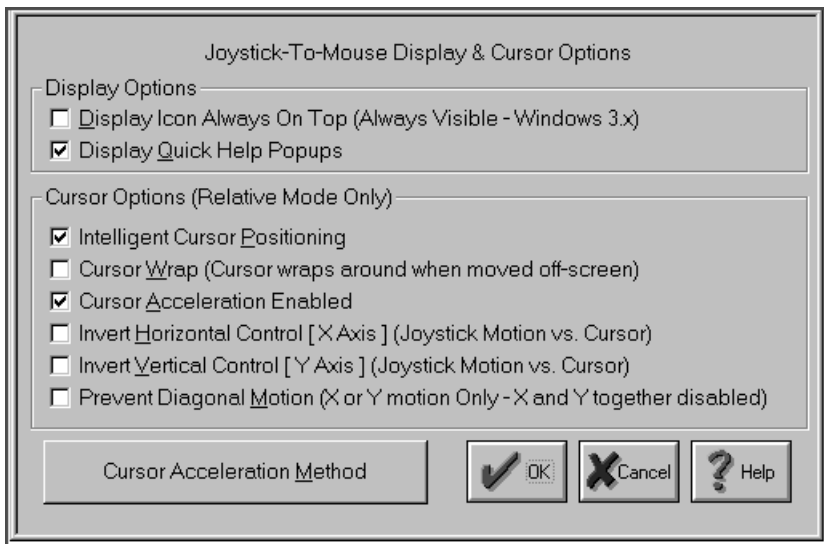
that playing sounds that are wave files can affect operation due to the delays caused by disk access, etc. If you are using a sound that is not the default speaker beep and have trouble double-clicking or other operational problems, you may wish to disable or try another sound option.

Relative Mode Speed Setting

This setting allows you to select the speed (from Low to High). This only will affect the mouse cursor motion when operating in the Relative Mode. The speed setting affects the cursor motion differently if Acceleration is enabled in Display & cursor options . The setting ranges from a Low of Speed 1 to a High of Speed 10.

Display And Cursor Settings

Click on a control or button for detailed help, or review descriptions below.



The settings below are operated with a Check Box. If there is a Check Mark in the Box, then the setting is turned On - if there is no Check Mark (the Box is clear) the setting is turned Off.

Display Options

Display Icon Always On Top (Always Visible - Windows 3.x)

This is a Windows 3.x setting only. If settings are changed often, you may wish to quickly find the Joystick-To-Mouse program. By turning this option on, the Joystick-To-Mouse icon will always be Topmost, and will be visible above other normal windows. The default is Off.

Display Quick Help Popups

This setting enables the small descriptive Popup Windows that describe each control / button when you move the cursor over it and wait a few seconds. This can be extremely helpful for new users. The default is On.

Cursor Options (Relative Mode Only)

These settings only apply when the Relative Mode of Operation is selected.

Intelligent Cursor Positioning

If this option is On, Joystick-To-Mouse will position the mouse cursor to the default button when Dialog Boxes are opened. You may find this speeds up your tasks if you always accept the default actions.

A second feature applies if one of your Joystick buttons is set as the right button. The cursor will position itself on the menu to aid in quick opens, etc. (See Joystick-To-Mouse Notes for more details)

Cursor Wrap (Cursor wraps around when moved off-screen)

When this option is On, the cursor does not treat the edge of the screen as a boundary (i.e. stopping at the edge). The cursor instantly moves to the opposite side of the screen and continues without interruption in the same direction & speed, essentially wrapping around the screen. This setting affects both top & bottom and left & right. For individual directions, see Joystick-To-Mouse Notes.

Cursor Acceleration Enabled

When On, Cursor Acceleration is enabled and the cursor action is determined by the settings configured in Acceleration Method. When Off, no additional enhancements affect the cursor motion.

The next 2 settings may be useful for non-standard Joystick orientation (i.e. rotated left or right or 180 degrees), infrared Joysticks, dyslexic operators, or other special implementations.

Invert Horizontal Control [X Axis] (Joystick Motion vs. Cursor)

When this setting is On, the calculated speeds & cursor motion are inverted from Left to Right & Right to Left (X Axis). Right Joystick motion generates left cursor motion, and vice versa. The default is Off.

Invert Vertical Control [Y Axis] (Joystick Motion vs. Cursor)

When this setting is On, the calculated speeds & cursor motion are inverted from Up to Down & Down to Up (Y Axis). Up Joystick motion generates down cursor motion, and vice versa. The default is Off.

Prevent Diagonal Motion (X or Y motion Only - X and Y together disabled)

When this setting is On, Joystick-To-Mouse internally favors the larger value between X axis motion and Y axis motion, and only the larger value is allowed for moving the cursor. This prevents diagonal motion, and you may only move the cursor in 1 direction at a

time. If both X and Y values are equal (i.e. the joystick is exactly between left/up, right/up, left/down, right/down (e.g. in a diagonal orientation)), no motion occurs. The default is Off.

Cursor Acceleration Method

Select this button to access & configure the Acceleration method available.

Button Settings

Click on a control or button for detailed help, or review descriptions below.

Button Settings

Joystick-To-Mouse has the ability to assign different actions to the Joystick Buttons. Most Game Port joysticks only have 1 or 2 buttons. Joystick-To-Mouse allows up to 4 button settings per joystick (for buttons 5 through 8, and 9 through 32 see Advanced Settings). Button settings for joystick buttons that do not exist will not affect anything. The default settings are for Button 1 to be the Left Button of the mouse, and Button 2 to be the Right Button. Use the drop-down list to view all available button settings, and select which action should be triggered when the corresponding button is pressed on the Joystick. See below for a list of available Button Settings (Notes on these settings are available in the Advanced Settings).

It is important to note that Joystick-To-Mouse does not affect the performance of the Mouse - both the Mouse and the Joystick can work together. Also, in order for Windows to recognize the mouse driver (in most cases), an actual mouse must be connected to the appropriate port on the computer.

The Macro 1, Macro 2, and Joystick Key Assignments are NOT displayed unless one of the Joystick Buttons is set to the corresponding settings - they are only displayed if needed.

Macro 1 / Macro 2

The Keyboard Macro capability allows a macro string of keystrokes to be triggered by a joystick button press. When recording a keystroke macro, you must enter the keystrokes exactly as they would be typed on the physical keyboard.

The Build Button opens the Build-A-Macro screen which offers various utilities & functions to help create a keystroke macro.

For additional keyboard support, contact Innovation Management Group, Inc. about their My-T-Soft® family of products, which provides on-screen keyboard layouts in addition to other important utilities.

Joystick Key Assignments

This option only applies to Relative Mode operation.

The Toggle Motion / Keys allows the joystick to act as a pointing device, and then act as a keyboard device by using one of the Joystick buttons as a toggle between these modes. When acting in the Keys Mode, the actual keystrokes may be modified in Joystick Key Assignments.

Automatic Button Press (Dwell)

This option only applies to Relative Mode operation.

If this option is Enabled, then the following happens: Any joystick motion enables a button press after the joystick is idle (at the center position) for the delay period. In use, this means that the user will move the mouse cursor to a position, and return the Joystick to the center position, then the delay period will begin. If there is no motion (Joystick remains at center position) during the delay period, a button press will be sent at the end of the delay period.

The Delay period can be set from a very brief 20 ms (0.02 seconds) to 5 seconds in 20 ms increments. The default value is 1/5 seconds (0.20 seconds). Note that in older versions of Windows the delay may be slower than indicated due to lack of precision in the system timers available in those versions.

The default button press corresponds to Button 1 for Joystick 1. Refer to Joystick-To-Mouse Notes for information on how to change the default button, or review Advanced Settings.

Enable Slider (Z Axis)

This control is sometimes referred to as a slider, throttle, or the Z Axis. It is important to note that sometimes the Z axis & Rudder controls have their names swapped within the joystick driver or in a particular game. For Joystick-To-Mouse, this setting refers to the control on your joystick that creates joystick messages which are sent as Z Axis joystick

motion messages - whichever control on your joystick creates these messages is the control that this setting affects. In other words, if the naming in the control panel applet conflicts with the names in Joystick-To-Mouse, don't worry too much about it, but be aware of which control on your joystick this setting affects.

When Enabled, use the drop-down selection box to select which action the control will have.

The following actions are available:

NOTE: For all these actions, moving the control slowly generates more events than moving quickly - see below for further details.

Horizontal Scroll

When an application has a horizontal scroll bar (along the bottom of the window), this setting will allow you to scroll left or right by moving the control. If there is no horizontal scroll bar, then no actions will occur.

Vertical Scroll

When an application has a vertical scroll bar (along the side of the window), this setting will allow you to scroll up or down by moving the control. If there is no vertical scroll bar, then no actions will occur.

Mouse Wheel

This will generate Mouse Wheel Up and Down motion as the control is moved.

Fine Tune X Position

This will move the cursor left or right as the control is moved.

Fine Tune Y Position

This will move the cursor up or down as the control is moved.

Mouse Wheel (+ Auto)

This is the same as the Mouse Wheel, but when the limit is reached, movement will automatically continue in the same direction. Note that some joysticks have problems with this setting and will automatically drift when this control is untouched - if you experience this, do not use the + Auto setting.

Fine Tune X (+Auto)

This is the same as the Fine Tune X Position, but when the limit is reached, movement will automatically continue in the same direction. Note that some joysticks have problems with this setting and will automatically drift when this control is untouched - if you experience this, do not use the + Auto setting.

Fine Tune Y (+Auto)

This is the same as the Fine Tune Y Position, but when the limit is reached, movement will automatically continue in the same direction. Note that some joysticks have

problems with this setting and will automatically drift when this control is untouched - if you experience this, do not use the + Auto setting.

All of these controls use a relative motion approach to trigger the selected action. Because various joysticks have different capabilities & precision, you will find that in use, moving the control very slowly will generate more motion than a sudden quick movement. Because these controls have limits (unlike a wheel), there will be a point where you can no longer go in the same direction - to reset, quickly move the control to the opposite extreme, then continue in the same direction by a slow & steady motion. This approach was adopted to allow additional capabilities while using these settings (i.e. a slider is not a wheel, and the physical limits of the device must be accepted (to keep your joystick in good working order!)).

There is a known operational issue with the Z-Axis - see Joystick-To-Mouse Operation for more details.

The following lists all available Button Settings:

- Left Button (default Button 1)
- Right Button (default Button 2)
- Middle Button
- Toggle Left (Drag)
- Toggle Right (Drag)
- Toggle Middle (Drag)
- Double-Click Left
- Double-Click Right
- Double-Click Middle
- Move Cursor Left (X)
- Move Cursor Right (X)
- Move Cursor Up (Y)
- Move Cursor Down (Y)
- Toggle Speed
- Toggle Speed/Click
- X1 Button (Backward)
- X1 Button Toggle
- X2 Button (Forward)
- X2 Button Toggle
- Wheel Down

- Wheel Up
- Toggle Motion / Keys
- Macro String 1 (default Button 3)
- Macro String 2 (default Button 4)
- Enter Key
- Escape Key
- Tab Key
- Space Bar
- BackSpace Key
- Up-Arrow
- Down-Arrow
- Left-Arrow
- Right-Arrow
- Insert
- Delete
- Home
- End
- Page Up
- Page Down
- F1 (Help)
- F2
- F3
- F4
- F5
- F6
- F7
- F8
- F9
- F10 (Menu)
- F11
- F12
- Shift Key Toggle

- Ctrl Key Toggle
- Alt Key Toggle
- Ctrl-Ins (Copy)
- Shift-Ins (Paste)
- Shift-Del (Cut)
- Ctrl-X (Cut)
- Ctrl-C (Copy)
- Ctrl-V (Paste)
- Ctrl-Del (Clear)
- Ctrl-W (Close)
- Ctrl-Z (Undo)
- Alt-Backspace (Undo)
- Alt-F4 (Close Window)
- Alt-Tab (Next App)
- Alt-Esc (Find App)
- Alt-Space (System Menu)
- Alt-Y (Yes)
- Alt-N (No)
- Shift-Tab
- Shift-F4 (Tile)
- Shift-F5 (Cascade)
- Ctrl-F4 (Close Child)
- Ctrl-Tab (Select Child)
- Ctrl-Esc (Task List)
- Ctrl-Space
- Ctrl-Backspace
- Ctrl-Enter
- Ctrl-Home
- Ctrl-End
- Ctrl-Page Up
- Ctrl-Page Down
- Ctrl-Up

- Ctrl-Down
- Ctrl-Left
- Ctrl-Right
- Ignore Button Press

Button Settings Notes

The Drag settings (Toggle Left/Middle/Right) treat a joystick button press as a toggle button down / toggle button up. This can be used for Drag, because you select an item (joystick button down, and it stays down), then you move the joystick (which drags the item, since the button is down), and then the next joystick button press toggles the down button up (release), which drops the item.

The Move Cursor options allows you to move the mouse cursor via button presses, which can be helpful for fine tuning, or alternate approaches.

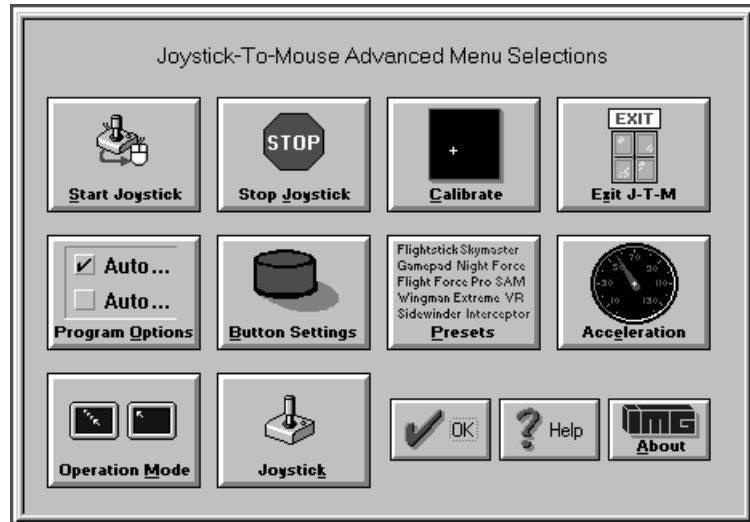
The Toggle Speed options toggles normal (based on your current settings) and a slow mode (very fine tune selection). The Speed/Click option includes a left button down/up sequence while in slow mode, allowing you to press the joystick button once (go into slow mode), then Click (and return to normal speed).

The X1/X2 buttons are on some mouse devices, and may be used in games, or browsers, providing additional navigation ability. The application must support these buttons / events to make these settings useful. For example, Microsoft's Internet Explorer uses these for Back/Forward navigation.

Chapter 4. Advanced Menu Options

Advanced Menu

This is the Advanced Menu which is only visible when Advanced Settings are enabled. Click on a button for detailed help on each selection, or review descriptions below.



Start Joystick can be selected to Start / Begin Joystick-To-Mouse Operation.

Stop Joystick can be Selected to Stop / End Joystick-To-Mouse Operation.

Calibrate Joystick can be selected to Calibrate the Joystick (based on the Calibration Method selected in Program Options.)

Exit Joystick-To-Mouse can be selected to Exit Joystick-To-Mouse and Close the Joystick-To-Mouse Program.

Program options can be selected to configure the basic Joystick-To-Mouse settings.

Button Settings can be selected to configure how each of the Joystick Buttons will react when Joystick-To-Mouse is operating.

Presets can be selected to save the current configuration to an existing Preset, create a new Preset, or select a different Preset.

Acceleration can be selected to modify the current Acceleration Method & optional settings.

Operation Mode can be selected to select Absolute Mode or Relative Mode.

Joystick can be selected to modify various Joystick Settings.

Joystick-To-Mouse Options

When Minimum Options (User Mode) is selected in Program options , the Joystick-To-Mouse Menu becomes the Operator Menu. In order to gain access to the configuration portion of Joystick-To-Mouse a Password is required (Supervisor Password). When the user does not have the permission to re-configure the options within Joystick-To-Mouse, the password should not be provided to them, but kept only by the system administrator (Supervisor).

If the Password is correctly entered, the Supervisor will have access to the Normal Menu, and have the ability to modify all Joystick-To-Mouse options. Once the OK button is selected from the Normal Menu, the Menu will revert back to the Operator Menu until the Password is entered again.

The Default Password is the four character word PASS. If the Operator mode will be used, it is recommended that the Supervisor change the password (8 character maximum), and write down and save the new password in a safe & convenient place.

To Change the Password, simply type in the Current Password, then select the Change Password button. You will be asked to type in the new password once, and then again to verify. If the new Password is correctly entered & verified, it will be registered as the new password, and be in effect from that point forward.

If there are problems with the Password, or it is lost or forgotten, review Joystick-To-Mouse Notes for information about the Initialization file encryption & ability to reset the Password. Also, if there are reasons to add even more security to the User Mode, refer to Joystick-To-Mouse Notes for additional options available to the Supervisor.

To end the Operator operation / User Mode, the Supervisor must select the Standard Mode, or Advanced Mode within Program options.

Start Joystick

This option will start the joystick operation of Joystick-To-Mouse. Depending on the settings, the mouse cursor will be controlled from the joystick, and the buttons on the joystick will perform the appropriate actions as set in Button Settings.

When Joystick-To-Mouse is On, no other program in Windows can use the Joystick. The On state is indicated by the Icon Name changing to Joystick-To-Mouse ON. While Joystick-To-Mouse is On, the mouse will still operate, and the mouse must remain connected for proper operation of Joystick-To-Mouse. During training or evaluation, another individual may assist the Joystick-To-Mouse user with the mouse. If Joystick-To-Mouse is used as the primary mouse cursor interface, you may wish to flip the mouse over, or remove the ball from the mouse or trackball.

Joystick-To-Mouse has 2 operating modes, accessible when Advanced Settings are available. For more details, see Operation Mode.

If you cannot Start the joystick, review Troubleshooting for options.

See Joystick-To-Mouse Joystick-To-Mouse operation for default operation settings.

Stop Joystick

This option will stop operation of the joystick. If Joystick-To-Mouse is set to Off, other programs in Windows can use the joystick. The Off state is indicated by the Icon Name changing to **Joystick-To-Mouse OFF**.

When Joystick-To-Mouse is Off, the mouse may be used to operate the mouse cursor, point & click, etc.

Calibrate Joystick

To Calibrate the Joystick, from the Joystick-To-Mouse menu, Click on the Calibrate button.

When you click on the Calibrate button, Joystick-To-Mouse will allow you to select which Calibration Method you wish to use to test/verify or re-calibrate your joystick / game controller.

Joystick-To-Mouse Custom Calibration

If you have successfully installed your joystick according to the manufacturer's instructions, click on Joystick-To-Mouse Custom Calibration to fine tune operation within Joystick-To-Mouse.

Standard Windows Calibration

If not, you should verify / re-calibrate your already installed joystick with the Standard Windows Calibration process. You will be asked to move the joystick to its four corners (top-left, bottom-left, etc.). This process will record the extreme coordinates so the software can properly measure the joystick position. Wizard's Helpers are available to walk you through the Windows Joystick Calibration.

Unfortunately for the user, there is little consistency in the various versions of Windows for how the joystick is handled. Control Panel icon names have included "Joystick", "Game Controllers", and "Gaming Options." Once into the Control Panel Applet, there are also inconsistencies. For newer version of Windows, Calibration can be handled via the Properties of a selected Controller. For USB connected joysticks & controllers, often calibration does not need to be performed more than once. If you have a game port (analog) joystick, calibration may need to be done on a regular basis.

During calibration, you can also test the joystick to verify its operations and which buttons are available to you.

From time to time, you may wish to calibrate your joystick especially if you notice any of the following:

- You cannot reach the edge of the screen (Absolute Mode)
- The cursor moves when the joystick is centered (Relative Mode)
- The cursor moves at different speeds when going up & down, or left & right

If you constantly need to calibrate the joystick, you may wish to set the Automatically Calibrate Option on in Program Options .

When Joystick-To-Mouse is first run it is necessary to Calibrate the Joystick to establish values for the joystick.

To Calibrate the Joystick, Joystick-To-Mouse cannot be On.

Controller ID

Joystick-To-Mouse requires the Controller ID to be 1 (or primary joystick device). If you have only 1 device installed, then this will be the default. However, if you install more than one joystick, or have multiple devices connected, then the IDs may be mixed around. Joystick-To-Mouse will indicate a problem if it cannot start the joystick, and give you the option to open the Control Panel applet where you can modify the controller ID. In Windows XP, this is handled in the Advanced Dialog, where you can select the preferred device (the preferred device is set to be on Controller ID 1).

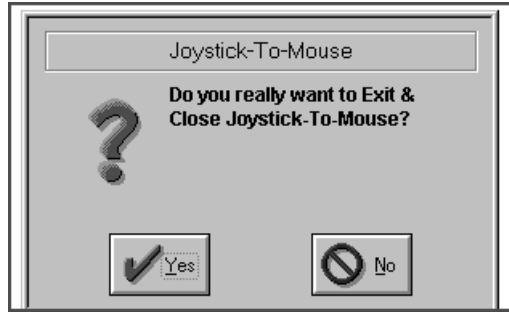
IMPORTANT NOTE:

The slider adjustment controls (Trim Controls Sliders) on the joystick itself could be the cause of what appears to be improper calibration. Refer to Troubleshooting for more details on joystick calibration.

Exit Joystick-To-Mouse

From the Joystick-To-Mouse menu, select Exit to stop Joystick-To-Mouse operation, and close the Joystick-To-Mouse program. Joystick-To-Mouse verifies the selection.

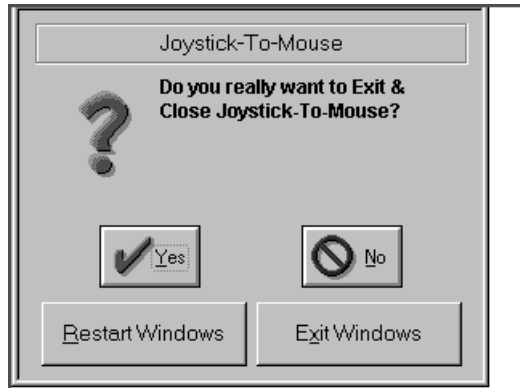
This is the standard Exit Dialog:



Select Yes to Close Joystick-To-Mouse and end Joystick-To-Mouse operation.

Select No to return to normal operation of Joystick-To-Mouse.

This is the Advanced Exit Dialog - Program Options, Display & Cursor Options, Exit Display.



Select Yes to Close Joystick-To-Mouse and end Joystick-To-Mouse operation.

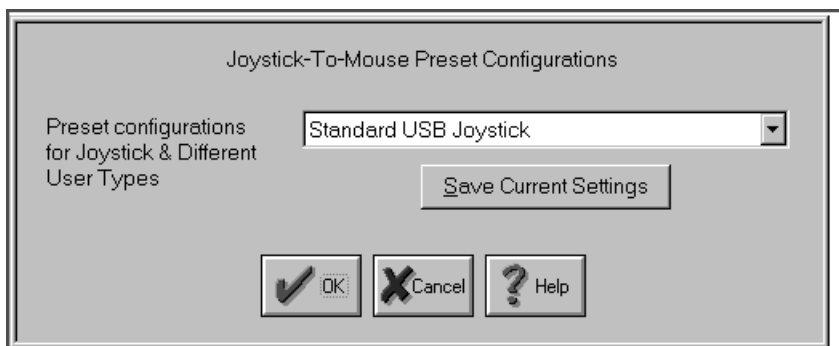
Select No to return to normal operation of Joystick-To-Mouse.

Select Restart Windows to restart Windows and re-initialize all Windows Settings.

Select Exit Windows to End the current Windows session and return to DOS (operating system).

The Supervisor may disable the Exit Button completely within the Operator Menu.

Preset Configurations



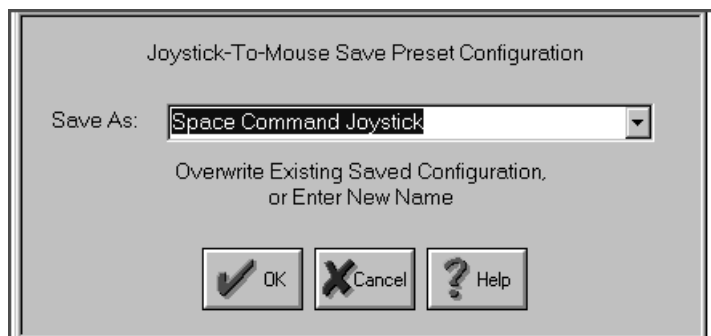
You may either select which Existing Preset you wish to make current (and overwrite all current configuration settings), or select the Save Current Preset button to save the current configuration so you may return to it at a later time.

Select Existing Preset

Use the down-arrow to open the drop-down selection list for a complete listing of all existing presets. Select the Preset you wish to switch to, then select OK.

Save Current Settings

If you wish to save the current settings for later use, select the Save Current Settings button to open the Save Preset screen.



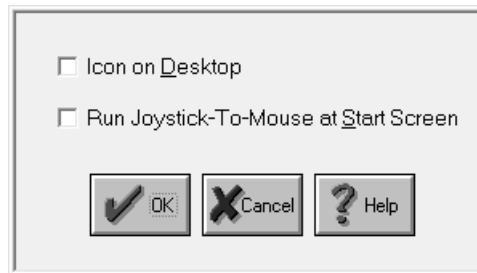
You may either select an Existing Preset to save the current configuration (and overwrite all pre-existing configuration settings), or enter a New Name and create a new Preset. The Preset keeps all of the configuration information such as speed, program options, acceleration mode, button settings saved so you can return to it later.

Save As, or Enter New Name

You may use the down-arrow to open the drop-down list and select an Existing Preset, or you may type in a New Name to create a new Preset and save it under the entered name.

Once you select OK, you will be asked to confirm your selection, as this will overwrite all of the settings for a pre-existing Preset, or create an entirely new Preset.

System & Startup Options



There are 2 options available: Icon on Desktop and Run Joystick-To-Mouse at Start Screen

Icon on Desktop

When selected, this option will display an icon on the Desktop. This is the "All Users" Desktop, so it will be available for all users. You may need correct permissions to apply this, if user is a limited user.

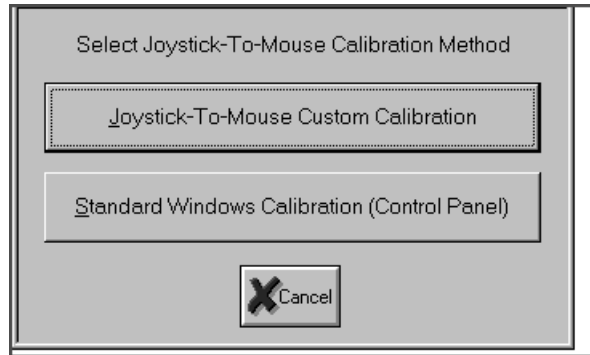
Run Joystick-To-Mouse at Start Screen

When selected, this option will enable an Ease of Access option to start Joystick-To-Mouse at the Start Screen. You may need correct permissions to apply this, if user is a limited user.

Technical Notes on Windows 8 Run at Start Screen option: The Run at Start Screen option runs JTMADMIN.exe (or JTMADMIN64.exe in 64-bit versions). For certain User Account Control settings, you may be prompted to allow this to run when the menu option is selected. When run, it will set or clear registry settings for this Ease of Access option (if set, they will be cleared, if clear, they will be set). When set, the Ease of Access option can be seen for configuring mouse/keyboard as "Enable Joystick-To-Mouse Ease of Access Start Screen Options". This option can be disabled via Control Panel | Ease of Access Center, but the Joystick-To-Mouse menu option will still be checked. The JTMADMIN utility when run via this menu option establishes the appropriate Ease of Access registry settings, or removes/deletes them. The Joystick-To-Mouse Windows menu option is checked when the registry entries exist, separate from whether the option is enabled/disabled. For best results, use the Options menu | Show Window Title Bar - on some systems, the non-titled window style when launched may be treated as a desktop launch, bypassing the start screen.

Calibration Method

Click on a control or button for detailed help, or review descriptions below.



The Calibration Method selects which Calibration Process is used.

Joystick-To-Mouse Custom Calibration

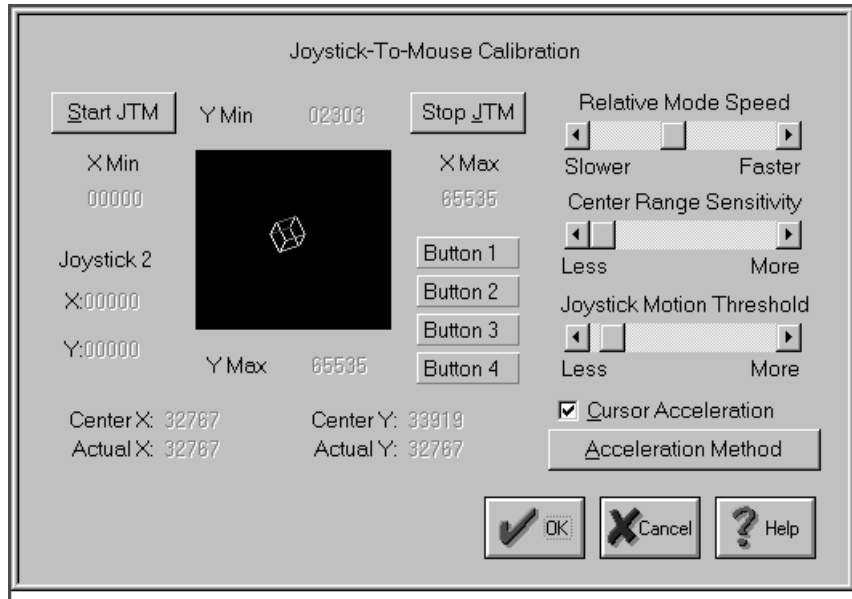
If selected, this opens the Joystick-To-Mouse Custom Calibration screen. The Joystick-To-Mouse Custom Calibration addresses issues and advanced settings that most users do not need, or need only once. The most important uses for this calibration method are to A) Verify that the joystick is oriented correctly and reasonable values are being sent to Joystick-To-Mouse, and to B) Modify the Center Range Sensitivity. This method is included for troubleshooting, advanced users, and technical support assistance. This does not in any way effect the actual Joystick calibration within Windows, and does not remove the need to do the Standard Windows Calibration. Once the Joystick is Calibrated & Working in Windows, this method allows the user to Customize the Feel of the Joystick within Joystick-To-Mouse.

Standard Windows Calibration

If selected, Calibration is performed by the Joystick control in the Control Panel. This is the Standard Windows Calibration method for calibrating the Joystick. The processes are different in various versions of Windows, but address the same issues of measuring the Joystick values at its extremes and the offering the ability to test & verify the Joystick calibration. Wizard Helpers offer varying levels of assistance in the various versions of Windows. Always refer to your Joystick / Game Controller manufacturers instructions for installation and calibration - see Where to Begin if you are installing a new joystick / game controller..

Custom Calibration

Click on a control or button for detailed help, or review descriptions below.



The Joystick-To-Mouse Custom Calibration Screen does not affect the physical calibration of the Joystick in any way. It does not replace the Standard Windows Calibration Method. It allows troubleshooting, technical support assistance, and Advanced users a way to customize various Joystick-To-Mouse settings to improve the Joystick "Feel" as it controls the cursor.

Calibration Process

There are 3 steps in this Calibration Process - note the rotating cube indicates the reported position of the Joystick - for a centered Joystick, the cube should be at the center of the black square.

Step 1 - Move the Joystick through its complete range of motion several times. This establishes the extreme values reported from the Joystick driver to Joystick-To-Mouse. These values are displayed for reference. Once completed, press a Joystick Button to continue.

Step 2 - Center the Joystick & Adjust Trim controls. When you let go of the Joystick, it should return to its centered position. The cube should be near the center of the black square. The Actual reported values (Actual X & Actual Y) are shown below the calculated Center values (Center X & Center Y). Most Joysticks have slider or wheel Trim Controls which allows you to fine tune the values reported from the Joystick. By moving these and observing their affect on the Actual values, you will be able to improve the Joystick response within the system.

IMPORTANT NOTE: It is not necessary to match the Calculated Center values with the Actual values exactly! In most cases, it is impossible! Do the best you can, and then adjust Center Range Sensitivity or Joystick Motion Threshold to remove any drift of the cursor.

Once completed, press a Joystick Button to continue.

Step 3 - Test the Joystick button to determine the named references & their physical location on the Joystick (i.e. which Joystick button is Button 1, which is Button 2, etc.). Then the user may modify the settings, the acceleration method, and test the new configuration immediately. Once the settings are acceptable, select OK to close the Window.

Start JTM

Select this button to Start Joystick Operation (Joystick-To-Mouse ON).

Stop JTM

Select this button to SStop Joystick operation (Joystick-To-Mouse OFF).

Rotating Cube

The Cube indicates the reported position of the Joystick. For a Centered Joystick, the Cube should be at, or near the Center of the black square. As the Joystick is moved off-center, the position of the cube should reflect the motion.

X Min / Y Min

These values indicate the lowest value recorded for horizontal & vertical motion reported from the Joystick.

X Max / Y Max

These values indicate the highest value recorded for horizontal & vertical motion reported from the Joystick.

Joystick 2

These values indicate reported values of Joystick 2 (or other values reported at the Game Port from other devices which correspond to the Joystick 2 inputs).

Center X / Center Y

These are the calculated Center Values [e.g. $((X \text{ Max} - X \text{ Min}) / 2)$] for the X & Y Minimum & Maximum values recorded to be used as a guide when adjusting the trim controls on your Joystick.

Actual X / Actual Y

These are the current values reported from the driver to Joystick-To-Mouse.

Button 1 / Button 2 / Button 3 / Button 4

After Step 1 & Step 2 are completed, these buttons indicate the state of the Joystick Buttons reported at the Game Port. If the button is pressed on the Joystick, the corresponding button will be displayed in the depressed state. They can be used to reference which name (i.e. Button 1, Button 2, etc.) corresponds to which button on your Joystick.

Relative Mode Speed

This setting allows you to select the speed (from Low to High). This only will affect the mouse cursor motion when operating in the Relative Mode. The speed setting affects the cursor motion differently if Acceleration is enabled. The setting ranges from a Low of Speed 1 to a High of Speed 10.

Center Range Sensitivity

The setting affects how far off-center the Joystick must be to begin registering speed values for the Cursor motion (i.e. when the Joystick is centered, the Cursor should not move - its speed is 0). The higher the value, the further off-center the Joystick must be moved to begin cursor movement.

Joystick Motion Threshold

This setting affects the ability of the driver to report new Joystick values to Joystick-To-Mouse. If the value is low, then even the slightest motion of the Joystick will generate new values. If the value is high, then the Joystick will need to be moved further to generate a new values. If too low, spurious motion may result, and if too high, it may require jerk-like motion to generate a new value. From one point of view, this could be considered Joystick sensitivity, and its proper adjustment could greatly improve the usability of Joystick-To-Mouse.

Cursor Acceleration

If this option is checked, then Acceleration is enabled, and the selected Acceleration Method is used. If this option is off, then no Acceleration is used.

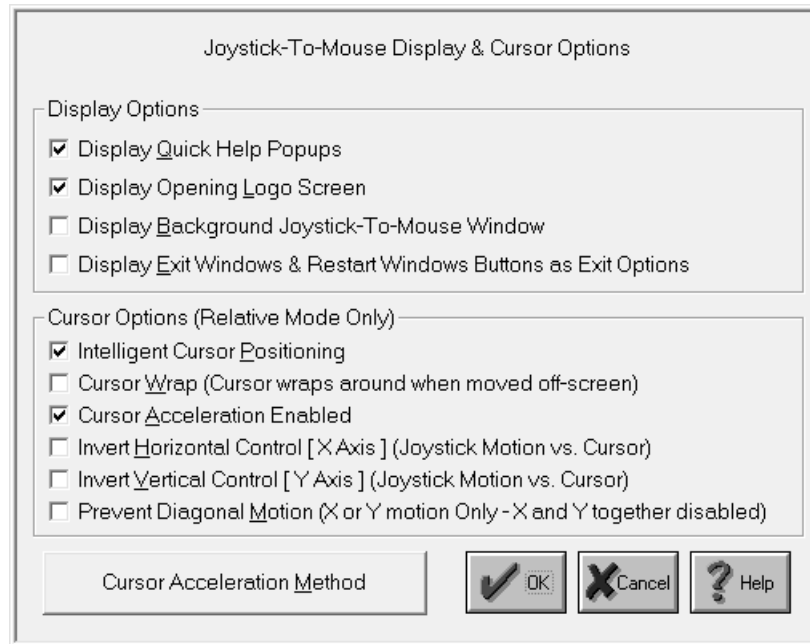
Acceleration Method

This button displays the Acceleration Method selection screen.

Advanced Display And Cursor Settings

This is an Advanced Setting Option.

Click on a control or button for detailed help, or review descriptions below.



The settings below are operated with a Check Box. If there is a Check Mark in the Box, then the setting is turned On - if there is no Check Mark (the Box is clear) the setting is turned Off.

Display Options

Display Quick Help Popups

This setting enables the small descriptive Popup Windows that describe each control / button when you move the cursor over it and wait a few seconds. This can be extremely helpful for new users. The default is On.

Display Opening Logo Screen

This setting causes the Joystick-To-Mouse Logo & Copyright screen to display briefly when Joystick-To-Mouse is first started. The default is On.

Display Background Joystick-To-Mouse Window

This option goes back to earlier versions and previous implementations. The default is Off.

Display Exit Windows & Restart Windows Buttons as Exit Options

This adds 2 buttons to the Exit Joystick-To-Mouse verification dialog. Exit Windows allows the user to Exit (or Shut down) Windows. Restart Windows allows the user to restart Windows & reload StartUp applications & close down any current applications. The default is Off.

Cursor Options (Relative Mode Only)

These settings only apply when the Relative Mode of Operation is selected. The X axis references the left & right (horizontal) motion of the cursor, and the Y axis references the up & down (vertical) motion of the cursor.

Intelligent Cursor Positioning

If this option is On, Joystick-To-Mouse will position the mouse cursor to the default button when Dialog Boxes are opened. You may find this speeds up your tasks if you always accept the default actions.

A second feature applies if one of your Joystick buttons is set as the right button. The cursor will position itself on the menu to aid in quick opens, etc. (See Joystick-To-Mouse Notes for more details)

Cursor Wrap (Cursor wraps around when moved off-screen)

When this option is On, the cursor does not treat the edge of the screen as a boundary (i.e. stopping at the edge). The cursor instantly moves to the opposite side of the screen and continues without interruption in the same direction & speed, essentially wrapping around the screen. This setting affects both top & bottom and left & right. For individual directions, see Joystick-To-Mouse Notes.

Cursor Acceleration Enabled

When On, Cursor Acceleration is enabled and the cursor action is determined by the settings configured in Acceleration Method. When Off, no additional enhancements affect the cursor motion.

The next 2 settings may be useful for non-standard Joystick orientation (i.e. rotated left or right or 180 degrees), infrared Joysticks, dyslexic operators, or other special implementations.

Invert Horizontal Control [X Axis] (Joystick Motion vs. Cursor)

When this setting is On, the calculated speeds & cursor motion are inverted from Left to Right & Right to Left (X Axis). Right Joystick motion generates left cursor motion, and vice versa. The default is Off.

Invert Vertical Control [Y Axis] (Joystick Motion vs. Cursor)

When this setting is On, the calculated speeds & cursor motion are inverted from Up to Down & Down to Up (Y Axis). Up Joystick motion generates down cursor motion, and vice versa. The default is Off.

Prevent Diagonal Motion (X or Y motion Only - X and Y together disabled)

When this setting is On, Joystick-To-Mouse internally favors the larger value between X axis motion and Y axis motion, and only the larger value is allowed for moving the cursor. This prevents diagonal motion, and you may only move the cursor in 1 direction at a time. If both X and Y values are equal (i.e. the joystick is exactly between left/up, right/up, left/down, right/down (e.g. in a diagonal orientation)), no motion occurs. The default is Off.

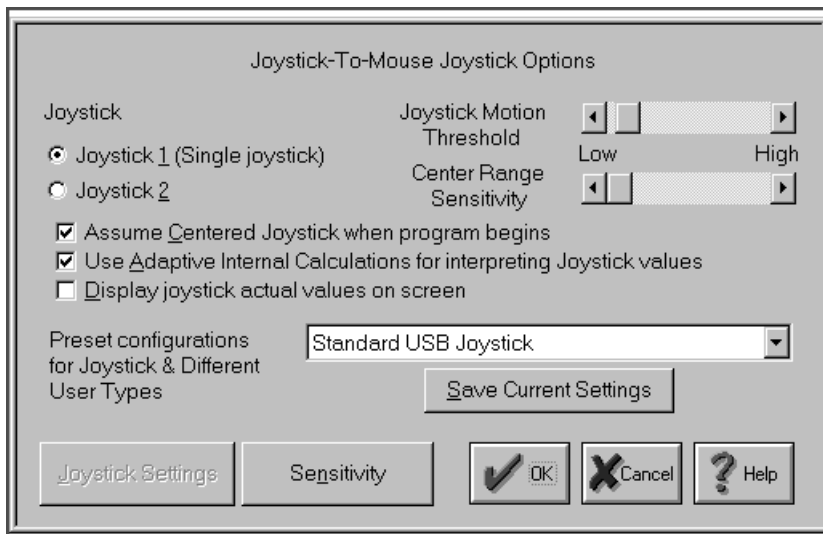
Cursor Acceleration Method

Select this button to access & configure the Acceleration Methods available.

Joystick Options

This is an Advanced Setting Option.

Click on a control or button for detailed help, or review descriptions below.



Joystick

You may select which joystick operates the mouse cursor. If there is only 1 joystick on your system, then the Joystick 1 setting should be selected.

NOTE: The button settings act independently of the selected joystick - therefore you may actually have up to 8 different button actions available with proper hardware. Note that the physical Game Port only supports 4 button inputs - more than 4 would require special software and/or hardware to interface with the Joystick driver.

NOTE: This setting affects the Analog or Game Port joystick - for USB joysticks and game controllers, this should be set to Joystick 1.

Joystick Motion Threshold:

The Scroll Bar control allows you to increase or decrease the threshold motion required to register a joystick move. This setting affects the ability of the driver to report new Joystick values to Joystick-To-Mouse. If the value is low, then even the slightest motion of the Joystick will generate new values. If the value is high, then the Joystick will need to be moved further to generate a new values. If too low, spurious motion may result, and if too high, it may require jerk-like motion to generate a new value. From one point of

view, this could be considered Joystick sensitivity, and its proper adjustment could greatly improve the usability of Joystick-To-Mouse.

Center Range Sensitivity:

The setting affects how far off-center the Joystick must be to begin registering speed values for the Cursor motion (i.e. when the Joystick is centered, the Cursor should not move - its speed is 0). The higher the value, the further off-center the Joystick must be moved to begin cursor movement.

The next three settings below are operated with a Check Box. If there is a Check Mark in the Box, then the setting is turned On - if there is no Check Mark (the Box is clear) the setting is turned Off.

Assume Centered Joystick when program begins

If this option is on, then the joystick will assumed to be in its centered position when Joystick-To-Mouse begins. This is important for analog joysticks that can vary the center calibration from time to time. If your cursor appears to be off-center (Absolute Mode) or drift (Relative Mode) when Joystick-To-Mouse begins, you may wish to use this option.

IMPORTANT NOTES:

- You should not touch the joystick if this option is on and Joystick-To-Mouse is initializing!
- You should NOT use this option if you have set Automatically Calibrate Joystick On.
- Most analog joysticks have calibration adjustments physically on the joystick, and adjusting these may be more effective.
- Different joysticks may be more consistent in their operating parameters.

Use Adaptive Internal Calculations for interpreting Joystick values

This setting is used to compensate for the imprecision found in most analog joysticks. In most cases, this setting should be checked on since it tracks minimum and maximum values provided by the joystick. In operation, it allows Joystick-To-Mouse to be more adaptive to changes in joysticks, users, and other variables. Note that this setting has no effect during Absolute Mode operation.

Display joystick actual values on screen

This setting can be used to verify joystick operation and verify the center positioning. If checked on, the actual joystick values reported to Joystick-To-Mouse will be displayed on the upper left of the screen. Note that this should not be used during normal operation, as the display may interfere with other Windows applications.

Select Existing Preset

Use the down-arrow to open the drop-down selection list for a complete listing of all existing presets. Select the Preset you wish to switch to, then select OK.

Save Current Settings

If you wish to save the current settings for later use, select the Save Current Settings button to open the Save Preset screen.

Joystick Settings

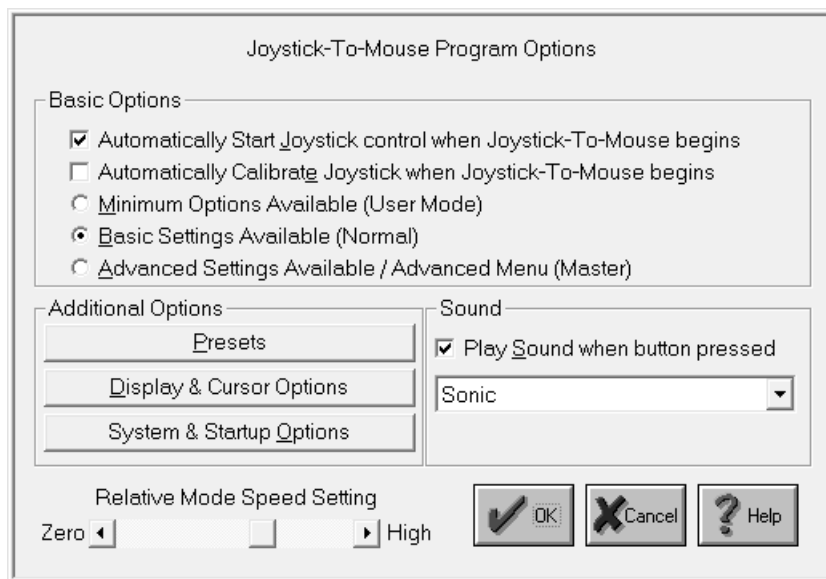
This button gives you access to the current calibration values as recorded via the Windows Calibration Process in Windows 3.x. This option has been included for special situations, and its use is not recommended.

Sensitivity

This button gives you access to current internal values that can affect the Joystick Operation. See Joystick-To-Mouse Notes for complete coverage of these concepts.

Program Options

Click on a control or button for detailed help, or review descriptions below.



Joystick-To-Mouse after installation is set to Automatically Start Joystick Operation.

Basic Options

The first two settings below are operated with a Check Box. If there is a Check Mark in the Box, then the setting is turned On - if there is no Check Mark (the Box is clear) the setting is turned Off.

Automatically Start Joystick control when Joystick-To-Mouse begins

If this option is turned On, then every time Joystick-To-Mouse is run, the Joystick operation will begin and control the mouse cursor from the Joystick. On is the default

setting. To automatically have Joystick-To-Mouse operate within Windows, you should place the Joystick-To-Mouse icon in the Windows StartUp group (this can be done for you from the Setup program (located on the distribution diskette)).

Automatically Calibrate Joystick when Joystick-To-Mouse begins

If this option is On, then the Joystick Calibration routine will be run every time Joystick-To-Mouse begins. In most cases this is not necessary. From time to time, you may wish to calibrate your Joystick especially if you notice any of the following:

- You cannot reach the edge of the screen (Absolute Mode)
- The cursor moves when the joystick is centered (Relative Mode)
- The cursor moves at different speeds when going up & down, or left & right

The next three settings below are operated with a Radio Selection Buttons. Only one of the three settings can be selected. If there is a mark in the Button, then the setting is selected - if there is no mark (the Button is clear) the setting is not selected.

Minimum Options Available (User Mode)

This setting limits the ability of the User to access Joystick-To-Mouse configuration options, and enables the Operator Menu. The only way to modify settings is by entering a Supervisor Password after the Joystick-To-Mouse Options button is pressed.

Basic Settings Available (Normal)

This is standard selection & Basic Operating Menu (Main Menu) for Joystick-To-Mouse. All of the main features are accessible through Program Options & Button Settings.

Advanced Settings Available / Advanced Menu (Master)

This setting enables all of the advanced features within Joystick-To-Mouse, and enables the Advanced Menu. This setting is primarily for accomplished Windows users who have a good understanding of Windows operating concepts. Features that are set through the advanced options will remain in effect even if the Basic or Minimum Settings are selected afterwards.

Additional Options

Presets

Press the Presets button to save the current configuration, select a different configuration, or create a new configuration based on the current settings. All of the Joystick-To-Mouse program settings, speed, acceleration, modes, etc. are saved so they can be selected at a later time. This allows easy switching for multiple users, multiple devices, or multiple applications.

Display & Cursor Options

Press the Display & Cursor Options to modify settings for Joystick-To-Mouse display features such as Popup Help, and Cursor Options such as Intelligent Cursor Positioning, Cursor Wrap, and Cursor Inversion.

System & Startup Options

Press the System & Startup Options to modify settings for Joystick-To-Mouse including the desktop icon and running at the Start Screen.

Play Sound when button pressed

This must be set to On in order for sounds to be played when a Joystick Button is pressed. This feedback may be important, or it may be annoying. If set Off, then no sound will be played when a joystick button is pressed. If set On, then you may select the sound to be played in the drop-down list box. You may select from the default speaker beep on your PC, the default Windows sounds, or you may select from several included sounds. You may also add sounds to this list (See Joystick-To-Mouse Notes).

IMPORTANT NOTES: On many older systems, the Game port (where the joystick plugs in), and the sound generation hardware is on the same adapter card. This may mean that playing sounds that are wave files can affect operation due to the delays caused by disk access, etc. If you are using a sound that is not the default speaker beep and have trouble double-clicking or other operational problems, you may wish to disable or try another sound option.

Relative Mode Speed Setting

This setting allows you to select the speed (from Low to High). This only will affect the mouse cursor motion when operating in the Relative Mode. The speed setting affects the cursor motion differently if Acceleration Method is enabled in Display & Cursor Options. The setting ranges from a Low of Speed 1 to a High of Speed 10.

Joystick Sensitivity

This is an Advanced Setting Option.

Click on a control or button for detailed help, or review descriptions below.

Joystick Sensitivity		
Time Period (50 ms)	<input type="text" value="0"/>	Period to update cursor (0 default)
Speed Multiplier (X axis)	<input type="text" value="5"/>	Speed Adjustment (4 default)
Speed Multiplier (Y axis)	<input type="text" value="5"/>	Speed Adjustment (4 default)
Speed Divisor	<input type="text" value="300"/>	Range to Pixels factor (300 default) (When Adaptive settings not in use)
Center Range X	<input type="text" value="10"/>	Centered Joystick Range where no cursor motion will be sent.
Center Range Y	<input type="text" value="10"/>	Larger values = Less sensitivity.
Default Button returns all of the above settings to their Default values	<input type="button" value="Default"/>	<input type="button" value="OK"/> <input type="button" value="Cancel"/> <input type="button" value="Help"/>

These settings only affect the Relative Mode) of Operation. If you experience sensitivity problems while operating in the Absolute Mode, your only option is to re-calibrate)the joystick.

Time Period

The Time Period affects how long each cycle lasts before the cursor is moved. For smoothest operation, the Time Period should be set to 0. By increasing the Time Period, motion will appear to be choppy and inconsistent, however this may be desirable in certain circumstances, especially when the user requires deliberate & discrete actions.

Speed Multiplier (X axis)

Speed Multiplier (Y axis)

These 2 settings are the speed multiplier (and also the top speed increment indicator) for the mouse cursor motion. A setting of 1 will force the mouse cursor to move only in pixel increments, but the motion across the screen may be too slow. Higher speeds than 4 may cause the mouse cursor to jump too far. Note that Enabling Acceleration and choosing an Acceleration Method) can have a strong influence on the cursor motion. The two directions are tied together if the speed is set in elsewhere with the Relative Mode) Speed Setting.

Speed Divisor

Speed Divisor

This value indicates the range to pixels factor. Refer to Joystick-To-Mouse Notes for a more detailed description of the internal calculations.

Center Range X

Center Range Y

Centered joystick range where no cursor motion will be sent. Larger values means less sensitivity. These values indicate the range away from center the joystick must be moved to register motion. If the values become too large, pixel by pixel motion may be impossible. If the values are too small, the mouse cursor may not stay still even if the joystick is not being handled.

Default

The default button will return ALL values for Joystick Sensitivity to their default values.

Advanced Button Settings

Click on a control or button for detailed help, or review descriptions below.

Joystick-To-Mouse Button Settings

Joystick 1	Joystick 2 (Joystick 1 buttons)
Button 1: Left Button	Button 1 (5): Application Key
Button 2: Right Button	Button 2 (6): Toggle Left (Drag)
Button 3: Windows Key	Button 3 (7): Macro 1
Button 4: Double-Click Left	Button 4 (8): Macro 2

Macro 1: [Enter] Build

Macro 2: Have a Nice Day!![Enter] Build

Joystick Key Assignments (Toggle Motion / Keys)

Enable Slider (Z axis) Slider Action: Mouse Wheel

Advanced Button Settings

Advanced Settings AutoSense OK Cancel Help

Button Settings

Joystick-To-Mouse has the ability to assign different actions to the Joystick Buttons. Most Game Port joysticks only have 1 or 2 buttons. Joystick-To-Mouse allows up to 4 button settings per joystick (for buttons 5 through 8, and 9 through 32 see Advanced Settings). Button settings for joystick buttons that do not exist will not affect anything. The default settings are for Button 1 to be the Left Button of the mouse, and Button 2 to be the Right Button. Use the drop-down list to view all available button settings, and select which action should be triggered when the corresponding button is pressed on the Joystick. See below for a list of available Button Settings (Notes on these settings are available in the Advanced Settings).

It is important to note that Joystick-To-Mouse does not affect the performance of the Mouse - both the Mouse and the Joystick can work together. Also, in order for Windows to recognize the mouse driver (in most cases), an actual mouse must be connected to the appropriate port on the computer.

The Macro 1, Macro 2, and Joystick Key Assignments are NOT displayed unless one of the Joystick Buttons is set to the corresponding settings - they are only displayed if needed.

Macro 1 / Macro 2

The Keyboard Macro capability allows a macro string of keystrokes to be triggered by a joystick button press. When recording a keystroke macro, you must enter the keystrokes exactly as they would be typed on the physical keyboard.

The Build Button opens the Build-A-Macro screen which offers various utilities & functions to help create a keystroke macro.

For additional keyboard support, contact Innovation Management Group, Inc. about their My-T-Soft® family of products, which provides on-screen keyboard layouts in addition to other important utilities.

Joystick Key Assignments

This option only applies to Relative Mode operation.

The Toggle Motion / Keys allows the joystick to act as a pointing device, and then act as a keyboard device by using one of the Joystick buttons as a toggle between these modes. When acting in the Keys Mode, the actual keystrokes may be modified in Joystick Key Assignments).

Automatic Button Press (Dwell)

This option only applies to Relative Mode operation.

If this option is Enabled, then the following happens: Any joystick motion enables a button press after the joystick is idle (at the center position) for the delay period. In use, this means that the user will move the mouse cursor to a position, and return the Joystick to the center position, then the delay period will begin. If there is no motion (Joystick remains at center position) during the delay period, a button press will be sent at the end of the delay period.

The Delay period can be set from a very brief 20 ms (0.02 seconds) to 5 seconds in 20 ms increments. The default value is 1/5 seconds (0.20 seconds). Note that in older versions of Windows the delay may be slower than indicated due to lack of precision in the system timers available in those versions.

The default button press corresponds to Button 1 for Joystick 1. Refer to Joystick-To-Mouse Notes for information on how to change the default button, or review Advanced Settings).

Enable Slider (Z Axis)

This control is sometimes referred to as a slider, throttle, or the Z Axis. It is important to note that sometimes the Z axis & Rudder controls have their names swapped within the joystick driver or in a particular game. For Joystick-To-Mouse, this setting refers to the control on your joystick that creates joystick messages which are sent as Z Axis joystick motion messages - whichever control on your joystick creates these messages is the control that this setting affects. In other words, if the naming in the control panel applet conflicts with the names in Joystick-To-Mouse, don't worry too much about it, but be aware of which control on your joystick this setting affects.

When Enabled, use the drop-down selection box to select which action the control will have.

The following actions are available:

NOTE: For all these actions, moving the control slowly generates more events than moving quickly - see below for further details.

Horizontal Scroll

When an application has a horizontal scroll bar (along the bottom of the window), this setting will allow you to scroll left or right by moving the control. If there is no horizontal scroll bar, then no actions will occur.

Vertical Scroll

When an application has a vertical scroll bar (along the side of the window), this setting will allow you to scroll up or down by moving the control. If there is no vertical scroll bar, then no actions will occur.

Mouse Wheel

This will generate Mouse Wheel Up and Down motion as the control is moved.

Fine Tune X Position

This will move the cursor left or right as the control is moved.

Fine Tune Y Position

This will move the cursor up or down as the control is moved.

Mouse Wheel (+ Auto)

This is the same as the Mouse Wheel, but when the limit is reached, movement will automatically continue in the same direction. Note that some joysticks have problems with this setting and will automatically drift when this control is untouched - if you experience this, do not use the + Auto setting.

Fine Tune X (+Auto)

This is the same as the Fine Tune X Position, but when the limit is reached, movement will automatically continue in the same direction. Note that some joysticks have problems with this setting and will automatically drift when this control is untouched - if you experience this, do not use the + Auto setting.

Fine Tune Y (+Auto)

This is the same as the Fine Tune Y Position, but when the limit is reached, movement will automatically continue in the same direction. Note that some joysticks have problems with this setting and will automatically drift when this control is untouched - if you experience this, do not use the + Auto setting.

All of these controls use a relative motion approach to trigger the selected action. Because various joysticks have different capabilities & precision, you will find that in use, moving the control very slowly will generate more motion than a sudden quick movement. Because these controls have limits (unlike a wheel), there will be a point where you can no longer go in the same direction - to reset, quickly move the control to the opposite extreme, then continue in the same direction by a slow & steady motion. This approach was adopted to allow additional capabilities while using these settings (i.e. a slider is not a wheel, and the physical limits of the device must be accepted (to keep your joystick in good working order!)).

There is a known operational issue with the Z-Axis - see Joystick-To-Mouse Operation for more details.

Advanced Settings

The Advanced Button Settings has several Options that even Advanced Users may never need.

AutoSense

The AutoSense Attachments allow new button settings to be Assigned on-the-fly, or to automatically Stop Joystick-To-Mouse when certain Applications are run.

The following lists all available Button Settings:

- Left Button (default Button 1)
- Right Button (default Button 2)
- Middle Button
- Toggle Left (Drag)
- Toggle Right (Drag)
- Toggle Middle (Drag)
- Double-Click Left
- Double-Click Right
- Double-Click Middle
- Move Cursor Left (X)
- Move Cursor Right (X)
- Move Cursor Up (Y)

- Move Cursor Down (Y)
- Toggle Speed
- Toggle Speed/Click
- X1 Button (Backward)
- X1 Button Toggle
- X2 Button (Forward)
- X2 Button Toggle
- Wheel Down
- Wheel Up
- Toggle Motion / Keys
- Macro String 1 (default Button 3)
- Macro String 2 (default Button 4)
- Enter Key
- Escape Key
- Tab Key
- Space Bar
- BackSpace Key
- Up-Arrow
- Down-Arrow
- Left-Arrow
- Right-Arrow
- Insert
- Delete
- Home
- End
- Page Up
- Page Down
- F1 (Help)
- F2
- F3
- F4
- F5

- F6
- F7
- F8
- F9
- F10 (Menu)
- F11
- F12
- Shift Key Toggle
- Ctrl Key Toggle
- Alt Key Toggle
- Ctrl-Ins (Copy)
- Shift-Ins (Paste)
- Shift-Del (Cut)
- Ctrl-X (Cut)
- Ctrl-C (Copy)
- Ctrl-V (Paste)
- Ctrl-Del (Clear)
- Ctrl-W (Close)
- Ctrl-Z (Undo)
- Alt-Backspace (Undo)
- Alt-F4 (Close Window)
- Alt-Tab (Next App)
- Alt-Esc (Find App)
- Alt-Space (System Menu)
- Alt-Y (Yes)
- Alt-N (No)
- Shift-Tab
- Shift-F4 (Tile)
- Shift-F5 (Cascade)
- Ctrl-F4 (Close Child)
- Ctrl-Tab (Select Child)
- Ctrl-Esc (Task List)

- Ctrl-Space
- Ctrl-Backspace
- Ctrl-Enter
- Ctrl-Home
- Ctrl-End
- Ctrl-Page Up
- Ctrl-Page Down
- Ctrl-Up
- Ctrl-Down
- Ctrl-Left
- Ctrl-Right
- Ignore Button Press
- Windows Key
- Application Key

Button Settings Notes

The Drag settings (Toggle Left/Middle/Right) treat a joystick button press as a toggle button down / toggle button up. This can be used for Drag, because you select an item (joystick button down, and it stays down), then you move the joystick (which drags the item, since the button is down), and then the next joystick button press toggles the down button up (release), which drops the item.

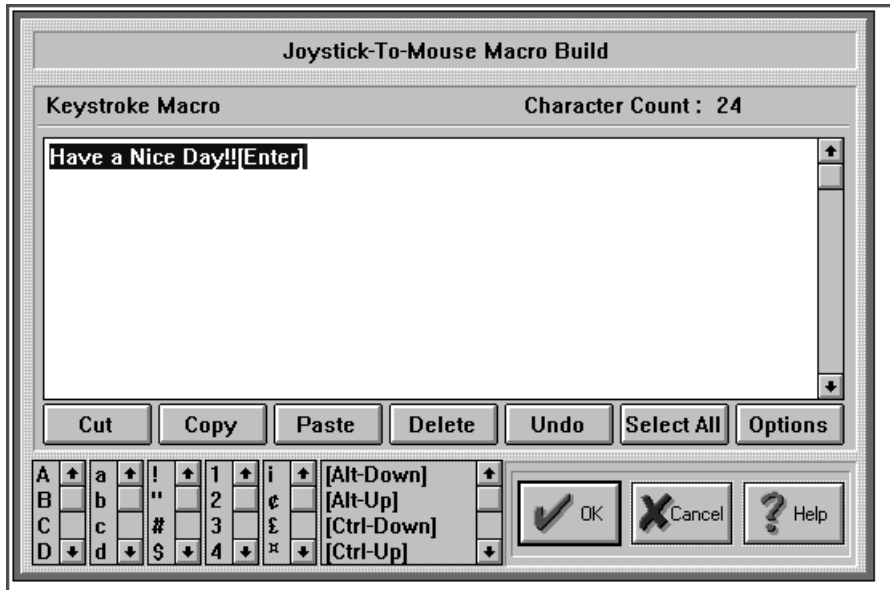
The Move Cursor options allows you to move the mouse cursor via button presses, which can be helpful for fine tuning, or alternate approaches.

The Toggle Speed options toggles normal (based on your current settings) and a slow mode (very fine tune selection). The Speed/Click option includes a left button down/up sequence while in slow mode, allowing you to press the joystick button once (go into slow mode), then Click (and return to normal speed).

The X1/X2 buttons are on some mouse devices, and may be used in games, or browsers, providing additional navigation ability. The application must support these buttons / events to make these settings useful. For example, Microsoft's Internet Explorer uses these for Back/Forward navigation.

Build-A-Macro

Click on a control or button for detailed help, or review descriptions below.



Button Settings

Keystroke Macro

This is the Macro display, formatted for easy reading. Regular characters generate a Keystroke Down / Keystroke Up sequence (which emulates the keyboard action). Note that with the Caps Lock key off, Upper Case characters generate the Shift-Down / Keystroke Down / Keystroke Up / Shift-Up sequence to generate the appropriate keystroke. This is also necessary for certain punctuation characters. Reserved words (in [] Brackets) generate the appropriate Up / Down keystroke.

Note: Macros that use reserved words in brackets must be structured to match the way keystrokes would actually be typed and interpreted by the system. For example, a Ctrl-C type combination needs the Control key in the down (pressed) position during the up/down c character, so this common keystroke combination would be built as **[Ctrl-Down]c[Ctrl-Up]**. Note lower case characters should be used, as a [Ctrl-Down]C[Ctrl-Up] sequence would expand to be [Ctrl-Down][Shift-Down]c[Shift-Up][Ctrl-Up] and this adds keystrokes that may change the way the macro is interpreted.

Note: The Windows Key and Application Key can be generated as a standalone key with a Down/Up macro of [Win-Down][Win-Up] or [App-Down][App-Up]. For macros such as go to the Desktop, the macro would be [Win-Down]d[Win-Up].

Character Count

The Character Count displays how many characters are used in the Macro. There is a maximum of 128 characters per Macro in Joystick-To-Mouse.

Editing / Option Buttons

These buttons provide shortcuts for working with Macros.

Editing Buttons

Cut - Moves selected text to the clipboard & deletes text in macro

Copy - Copies selected text to the clipboard

Paste - Pastes text from the clipboard into the macro at the selected position (Caret-position)

Delete - Deletes selected text

Select All - Highlights entire keystroke macro

Options - Switches to Option buttons useful for working with text from other sources

Option Buttons

Clear All - erases the entire macro

CR - Changes embedded carriage returns (ANSI 13) to [Enter]

CRLF - Changes embedded carriage return / line feeds (ANSI 13, 10) to [Enter]

Tab - Changes embedded Tab characters (ANSI 9) to [Tab]

Strip- Removes all Non-ANSI characters from macro

All - Performs CRLF, Tab, and Strip operations above

Editing - Returns to Editing Buttons

Upper Case Characters

This is a list of Upper Case characters - Select & Double-Click to Enter directly into Keystroke Macro.

Lower Case Characters

This is a list of Lower Case characters - Select & Double-Click to Enter directly into Keystroke Macro.

Punctuation

This is a list of Punctuation characters - Select & Double-Click to Enter directly into Keystroke Macro.

Numbers

This is a list of the Numbers - Select & Double-Click to Enter directly into Keystroke Macro.

International / ANSI Characters

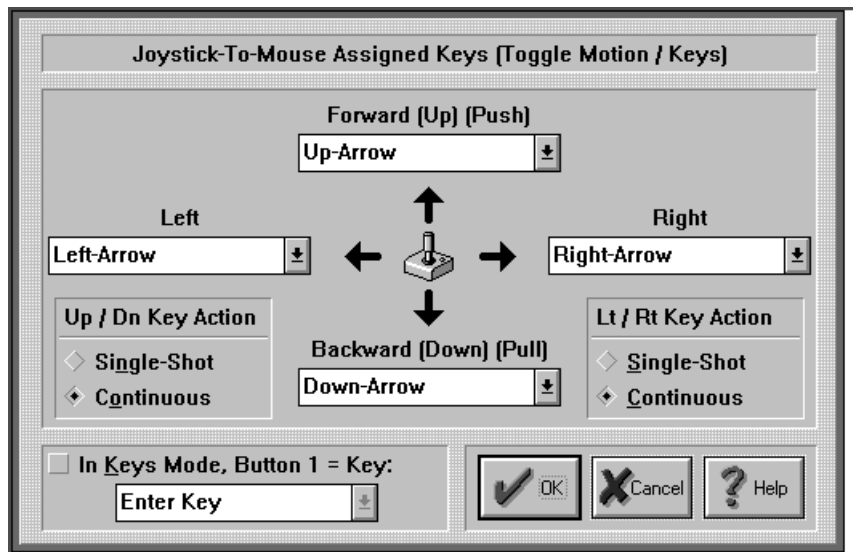
This is a list of International / ANSI characters - Select & Double-Click to Enter directly into Keystroke Macro.

Control Keys / Reserved Words

This is a list of the Control Keys, Special Macro Options & Reserved Words - Select & Double-Click to Enter directly into Keystroke Macro.

Toggle Motions Keys/KeyAssignments

Click on a control or button for detailed help, or review descriptions below.



When one of the Joystick Buttons is set to Toggle Motion / Keys, the Joystick can be toggled from a Pointing device (moving the Mouse Cursor), to a Keyboard device (the Joystick will be able to generate Keystrokes, or Keys Mode). The Keystrokes generated for the corresponding direction of the Joystick can be configured here, along with other options for this operating mode.

Forward (Up) (Push) (Away)

Use the drop-down list to select the keystroke that will be generated when the Joystick is in the Forward position. The keystrokes generated are affected by the Up / Down Key Action setting.

Backward (Down) (Pull) (Near)

Use the drop-down list to select the keystroke that will be generated when the Joystick is in the Back position. The keystrokes generated are affected by the Up / Down Key Action setting.

Left

Use the drop-down list to select the keystroke that will be generated when the Joystick is in the Left position. The keystrokes generated are affected by the Left / Right Key Action setting.

Right

Use the drop-down list to select the keystroke that will be generated when the Joystick is in the Right position. The keystrokes generated are affected by the Left / Right Key Action setting.

Up / Down Key Action

Single Shot - this will generate a single keystroke. Another keystroke cannot be generated by moving the Joystick in the same direction until the Joystick is centered, or a keystroke is generated from the opposite direction.

Continuous - While the Joystick is held in the same direction, continuous keystrokes will be sent.

Left / Right Key Action

Single Shot - this will generate a single keystroke. Another keystroke cannot be generated by moving the Joystick in the same direction until the Joystick is centered, or a keystroke is generated from the opposite direction.

Continuous - While the Joystick is held in the same direction, continuous keystrokes will be sent.

In Keys Mode, Button 1 = Key

This Enables the override of Button 1 when the Joystick is toggled into the Keys Mode. If disabled, the Joystick's Button 1 setting is unaffected. This allows the Joystick to use a Keystroke when in Keys Mode, and a Pointing Device selection action (e.g. Left-Click) when acting as a Pointing Device.

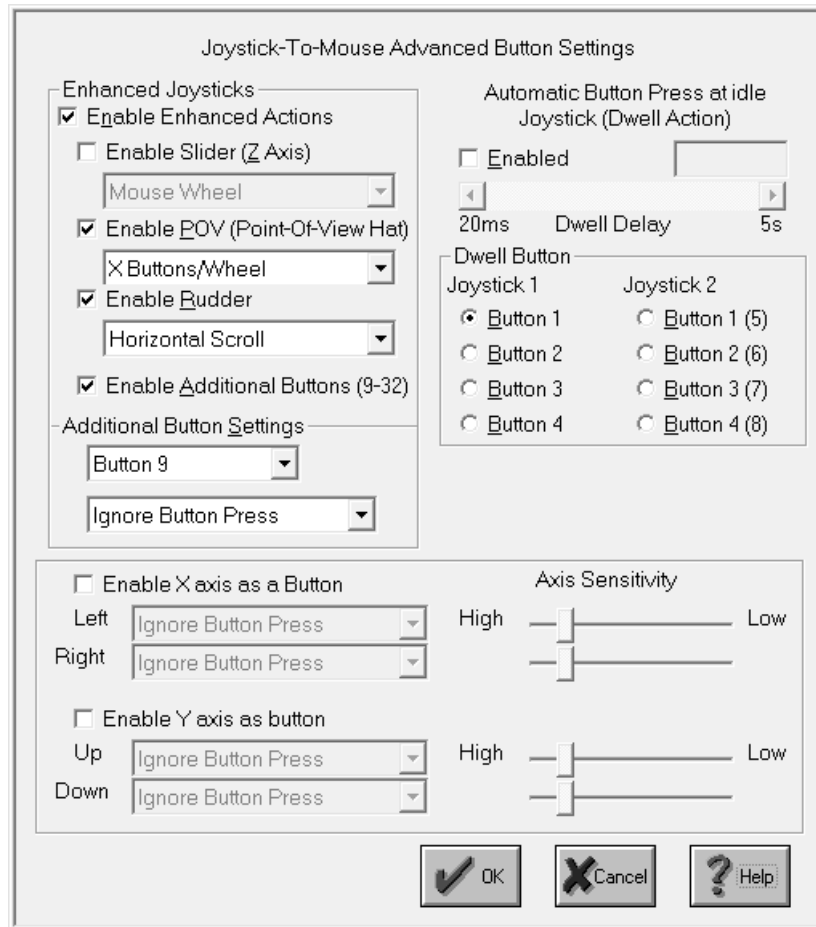
Button 1 Override Keystroke

This is the Keystroke generated when Button 1 is pressed, the In Keys Mode, Button 1 = Key option is Enabled, and the Joystick is Operating in the Keys Mode.

More Advanced Button Settings

This is an Advanced Setting Option.

Click on a control or button for detailed help, or review descriptions below.



Enhanced Joysticks include flight controllers, driving wheels, pedals, etc. They may contain additional controls, and have up to 32 buttons. This section has options to enable & select various actions for these enhanced controls.

Enable Enhanced Actions

This is the setting that controls the Joystick-To-Mouse monitoring of all of these enhanced actions. By default it is Enabled. You may clear the check box and Disable all monitoring of these controls. This setting must be On (Enabled) to monitor some or all of these controls. This setting **MUST** be On to work with Buttons 5-32, Z-Axis, the Rudder, POV, etc.

Enable Slider (Z Axis)

This control is sometimes referred to as a slider, throttle, or the Z Axis. It is important to note that sometimes the Z axis & Rudder controls have their names swapped within the joystick driver or in a particular game. For Joystick-To-Mouse, this setting refers to the control on your joystick that creates joystick messages which are sent as Z Axis joystick motion messages - whichever control on your joystick creates these messages is the

control that this setting affects. In other words, if the naming in the control panel applet conflicts with the names in Joystick-To-Mouse, don't worry too much about it, but be aware of which control on your joystick this setting affects.

When Enabled, use the drop-down selection box to select which action the control will have.

The following actions are available:

NOTE: For all these actions, moving the control slowly generates more events than moving quickly - see below for further details.

Horizontal Scroll

When an application has a horizontal scroll bar (along the bottom of the window), this setting will allow you to scroll left or right by moving the control. If there is no horizontal scroll bar, then no actions will occur.

Vertical Scroll

When an application has a vertical scroll bar (along the side of the window), this setting will allow you to scroll up or down by moving the control. If there is no vertical scroll bar, then no actions will occur.

Mouse Wheel

This will generate Mouse Wheel Up and Down motion as the control is moved.

Fine Tune X Position

This will move the cursor left or right as the control is moved.

Fine Tune Y Position

This will move the cursor up or down as the control is moved.

Mouse Wheel (+ Auto)

This is the same as the Mouse Wheel, but when the limit is reached, movement will automatically continue in the same direction. Note that some joysticks have problems with this setting and will automatically drift when this control is untouched - if you experience this, do not use the + Auto setting.

Fine Tune X (+Auto)

This is the same as the Fine Tune X Position, but when the limit is reached, movement will automatically continue in the same direction. Note that some joysticks have problems with this setting and will automatically drift when this control is untouched - if you experience this, do not use the + Auto setting.

Fine Tune Y (+Auto)

This is the same as the Fine Tune Y Position, but when the limit is reached, movement will automatically continue in the same direction. Note that some joysticks have

problems with this setting and will automatically drift when this control is untouched - if you experience this, do not use the + Auto setting.

All of these controls use a relative motion approach to trigger the selected action. Because various joysticks have different capabilities & precision, you will find that in use, moving the control very slowly will generate more motion than a sudden quick movement. Because these controls have limits (unlike a wheel), there will be a point where you can no longer go in the same direction - to reset, quickly move the control to the opposite extreme, then continue in the same direction by a slow & steady motion. This approach was adopted to allow additional capabilities while using these settings (i.e. a slider is not a wheel, and the physical limits of the device must be accepted (to keep your joystick in good working order!)).

There is a known operational issue with the Z-Axis - see Joystick-To-Mouse Operation for more details.

Enable POV

This Enables monitoring of the POV hat (Point-Of-View thumb control on flight controllers). When Enabled, the following mappings occur within Joystick-To-Mouse:

Wheel / X Buttons

POV Up (270 degrees) sends Mouse Wheel Up motion (as if you are scrolling the Mouse Wheel up)

POV Down (90 degrees) sends Mouse Wheel Down motion (as if you are scrolling the Mouse Wheel down)

POV Left (135, 180, 225 degrees) sends X1 button (Backward)

POV Right (315, 0, 45 degrees) sends X2 button (Forward)

X Buttons / Wheel

POV Up (270 degrees) sends X1 button (Backward)

POV Down (90 degrees) sends X2 button (Forward)

POV Left (135, 180, 225 degrees) sends Mouse Wheel Down motion (as if you are scrolling the Mouse Wheel down)

POV Right (315, 0, 45 degrees) sends Mouse Wheel Up motion (as if you are scrolling the Mouse Wheel up)

Arrow Keys

POV Up (270 degrees) Up Arrow Key

POV Down (90 degrees) Down Arrow Key

POV Left (135, 180, 225 degrees) Left Arrow Key

POV Right (315, 0, 45 degrees) Right Arrow Key

Windows 8 Notes: For some applications, the Wheel / X Buttons option will work better than the default X Buttons/ Wheel option, however the Start Screen, Tiles, and Windows Store are more in tune with the default option.

Enable Rudder

This control is sometimes referred to as the Rudder control, or the Z Axis. It is important to note that sometimes the Z axis & Rudder controls have their names swapped within the joystick driver or in a particular game. For Joystick-To-Mouse, this setting refers to the control on your joystick that creates joystick values which are read when the Rudder position is queried within Windows - whichever control on your joystick changes these values is the control that this setting affects. In other words, if the naming in the control panel applet conflicts with the names in Joystick-To-Mouse, don't worry too much about it, but be aware of which control on your joystick this setting affects.

When Enabled, use the drop-down selection box to select which action the control will have.

The following actions are available:

NOTE: For all these actions, moving the control slowly generates more events than moving quickly - see below for further details.

Horizontal Scroll

When an application has a horizontal scroll bar (along the bottom of the window), this setting will allow you to scroll left or right by moving the control. If there is no horizontal scroll bar, then no actions will occur.

Vertical Scroll

When an application has a vertical scroll bar (along the side of the window), this setting will allow you to scroll up or down by moving the control. If there is no vertical scroll bar, then no actions will occur.

Mouse Wheel

This will generate Mouse Wheel Up and Down motion as the control is moved.

Fine Tune X Position

This will move the cursor left or right as the control is moved.

Fine Tune Y Position

This will move the cursor up or down as the control is moved.

Mouse Wheel (+ Auto)

This is the same as the Mouse Wheel, but when the limit is reached, movement will automatically continue in the same direction. Note that some joysticks have problems with this setting and will automatically drift when this control is untouched - if you experience this, do not use the + Auto setting.

Fine Tune X (+Auto)

This is the same as the Fine Tune X Position, but when the limit is reached, movement will automatically continue in the same direction. Note that some joysticks have problems with this setting and will automatically drift when this control is untouched - if you experience this, do not use the + Auto setting.

Fine Tune Y (+Auto)

This is the same as the Fine Tune Y Position, but when the limit is reached, movement will automatically continue in the same direction. Note that some joysticks have problems with this setting and will automatically drift when this control is untouched - if you experience this, do not use the + Auto setting.

All of these controls use a relative motion approach to trigger the selected action. Because various joysticks have different capabilities & precision, you will find that in use, moving the control very slowly will generate more motion than a sudden quick movement. Because these controls have limits (unlike a wheel), there will be a point where you can no longer go in the same direction - to reset, quickly move the control to the opposite extreme, then continue in the same direction by a slow & steady motion. This approach was adopted to allow additional capabilities while using these settings (i.e. a slider is not a wheel, and the physical limits of the device must be accepted (to keep your joystick in good working order!)).

Enable Additional Buttons

This is a setting that affects Buttons 9 - 32. It must be On to Enable monitoring of these additional buttons. Note that if your joystick has eight buttons or less, then this setting has no effect whether Enabled or Disabled.

Additional Buttons Settings

This area has a drop-down selection box to select which button you wish to modify, and then a second drop-down selection box with button settings. To modify a particular button, select it in the top drop-down selection box, and then select this button's setting in the bottom drop-down selection box. For a list of button settings, see Button Settings Advanced.

Automatic Button Press at idle Joystick (Dwell Action)

This option only applies to Relative Mode operation.

If this option is Enabled, then the following happens: Any joystick motion enables a button press after the joystick is idle (at the center position) for the delay period. In use, this means that the user will move the mouse cursor to a position, and return the Joystick to the center position, then the delay period will begin. If there is no motion (Joystick remains at center position) during the delay period, a button press will be sent at the end of the delay period.

The Delay period can be set from a very brief 20 ms (0.02 seconds) to 5 seconds in 20 ms increments. The default value is 1/5 seconds (0.20 seconds). Note that in older versions

of Windows the delay may be slower than indicated due to lack of precision in the system timers available in those versions.

Dwell Button

By default, the Dwell Button (i.e. the Button Press that is sent when the Dwell Action is Enabled and the dwell period has expired after Joystick motion) is set to Button 1 on Joystick 1. This area allows you to reconfigure which Joystick-To-Mouse Button setting is triggered after the dwell period has expired.

NOTE: The button settings act independently of the selected joystick - therefore you may actually have up to 8 different button actions available with proper hardware. Note that the physical Game Port only supports 4 button inputs - more than 4 would require special software and/or hardware to interface with the Joystick driver.

Enable X Axis as button

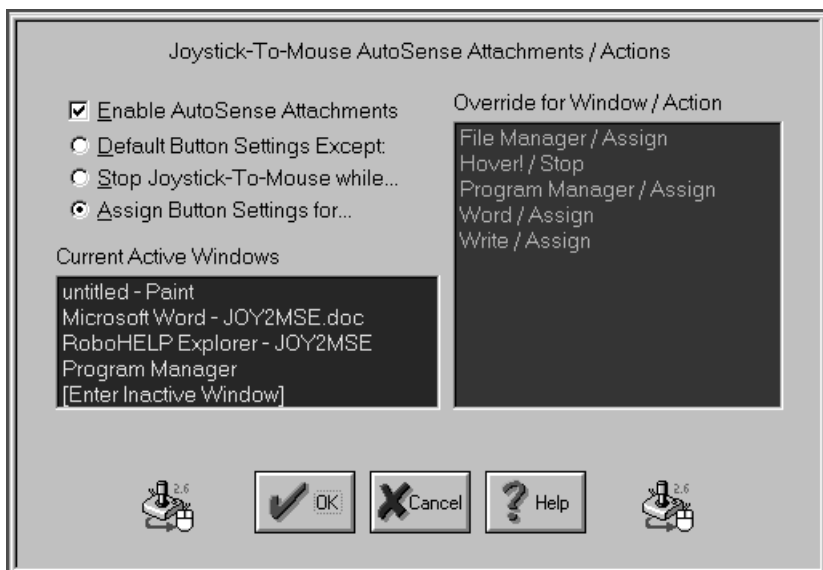
Enable Y Axis as button

When enabled, these allow you to transform X/Y axis motion into button actions (e.g. Driving Wheels/Pedals, etc.). You have the option of selecting the same or 2 different button actions based on direction (e.g. forward/backward / left/right), and you can set the sensitivity that triggers this button action for each direction.

AutoSense Attachments/Actions

This is an Advanced Setting Option.

Click on a control or button for detailed help, or review descriptions below.



AutoSense Attachments allow you to assign a different set of Button Settings for each Application. This way, when the application becomes the Active Window, a different set of Button Settings ideally configured for the application will be in effect, improving your productivity. You may also assign the Stop action, which will disengage, or Stop Joystick-To-Mouse while the designated Window is the Active Window. This may be useful for games or other programs that utilize the Joystick within Windows.

Enable AutoSense Attachments

When this option is Enabled, the AutoSense attachments are enabled. When AutoSense is enabled, each Window name in the Override list is matched against the Current Active Window. If there is a match, then the Action is activated. This will cause Joystick-To-Mouse to Assign the configured Button Settings for the Active Window, or Stop Joystick-To-Mouse action. If there is no match for any Window listed, then no action occurs.

If the AutoSense Attachments are disabled, the Override list is not used.

IMPORTANT NOTE: This has a direct affect on system performance due to the nature of the implementation in Joystick-To-Mouse. For reasonably fast systems, there should be no degradation of performance for a small Override list. On slower systems, or for a large listing of Override attachments, system performance may suffer. There is a maximum of 100 Override Windows.

Default Button Settings Except:

This default setting allows you to edit the current Override list. You may edit Button Assignments, or delete existing entries.

Stop Joystick-To-Mouse while...

This setting allows you to select from the Current Active Window list, or Enter an Inactive Window name, and Assign the Stop Joystick-To-Mouse Action.

Assign Button Settings for...

vThis setting allows you to select from the Current Active Window list, or Enter an Inactive Window name, and Assign different Button Settings.

Current Active Window:

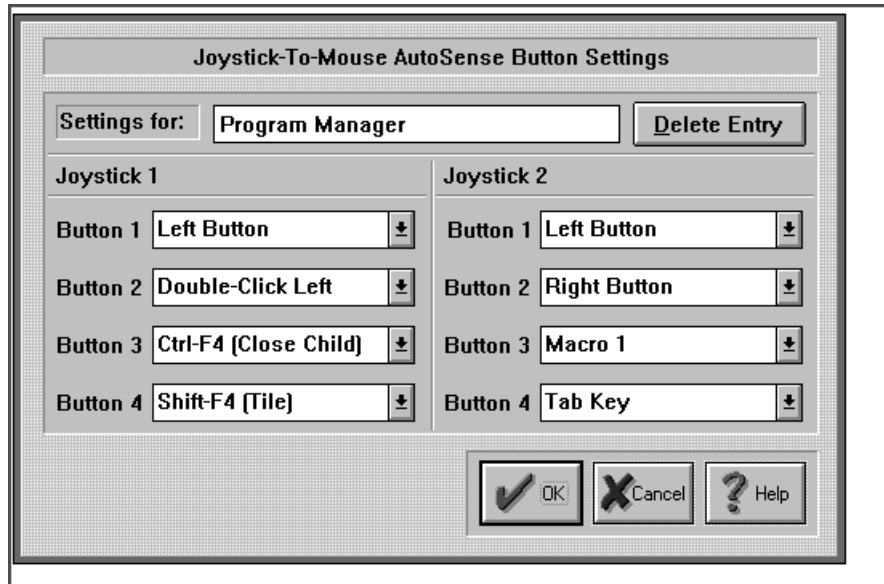
This is a listing of the Current Active Windows, or currently open Applications. You may select from this list, or select [Enter Inactive Window] to enter the name of a window/program that does not appear in the list.

Override for Window / Action

This is a listing of the AutoSense Attachment Windows & the Action they will trigger within Joystick-To-Mouse when they become the Active Window. By Selecting from this list, you may Edit Button Assignments, or Delete the Window / Action from the Override list.

AutoSense Settings

This is an Advanced Setting Option.



Settings for:

This is the Window Name that will trigger Joystick-To-Mouse to override the normal Button Settings with the Button Settings configured here. You may Edit / Change the name of the Window.

Delete Entry

You may delete the Window Name from the Override list by selecting this button. You will be asked to confirm the delete action.

Button Settings

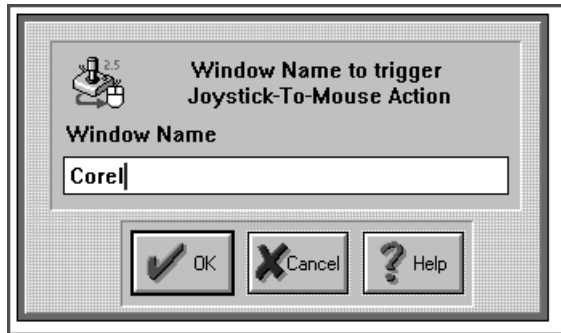
These are the Button Settings that will be in effect when the Window Name entered becomes the active Window.

Joystick-To-Mouse has the ability to assign different actions to the Joystick Buttons. Joystick-To-Mouse allows up to 4 button settings per joystick. Button settings for joystick buttons that do not exist will not affect anything. Use the drop-down list to view all available button settings, and select which action should be triggered when the corresponding button is pressed on the Joystick.

AutoSense Window Name

This is an Advanced Setting Option.

This is an Advanced Setting Option.

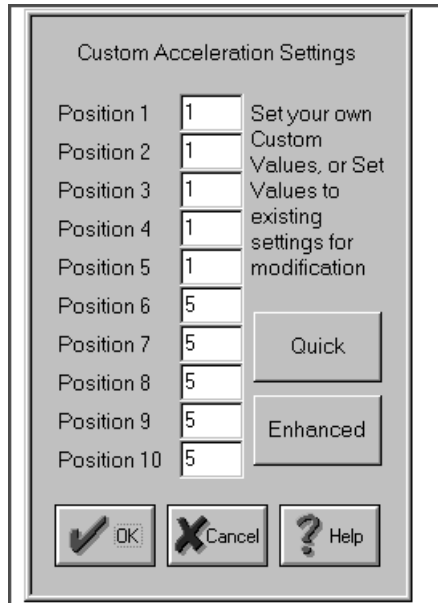


Window Name to Trigger Joystick-To-Mouse Action

The Window Name appears within the Caption (Top) Bar of the Window. There must be an exact match of letters - Upper case / Lower case are ignored. The number of characters entered here determines the number of characters used to when Joystick-To-Mouse looks at the Window Name of the active window. If the Actual Window Name is longer than the Window Name entered here, the entire length of the Active Window Name will be searched for an occurrence of the Window Name entered. Note that if you enter only an M then ANY Window that has an M or m will match - you should enter the Name so it is long enough to be distinctive and only match with the intended Window. The Name match must be exact, so make sure to remove any specific application information / document names from the Window Name entered.

Custom Acceleration Settings

Click on a control or button for detailed help, or review descriptions below.



The Relative Mode Speed Setting allows for Speeds between 1 and 10. When the Custom Acceleration Method is selected, these speeds are used as references into the Custom Acceleration Settings configured here. This allows custom speed curves relating to the off-center position of the Joystick. Note that in most cases, the Relative Mode Speed should be at its maximum to allow use of all the settings, and to allow the smoothest speed curve.

IMPORTANT NOTE: If the Relative Mode Speed Setting is only 5, then only the first 5 values take on meaning - higher settings here will be ignored.

Position 1 to Position 10

These are the speed values that result (and are actually used) when the Custom Acceleration Method is selected, and Cursor Acceleration is Enabled. As the Joystick moves off-center, the Speed is calculated, and then this look-up table is used. The value entered here is the actual Cursor motion speed. For best results, a change then test cycle should be done several times to guarantee suitable cursor motion.

Quick

This sets Position 1 through Position 10 with the values used internally from the Quick Acceleration Method. See Joystick-To-Mouse Notes for more details.

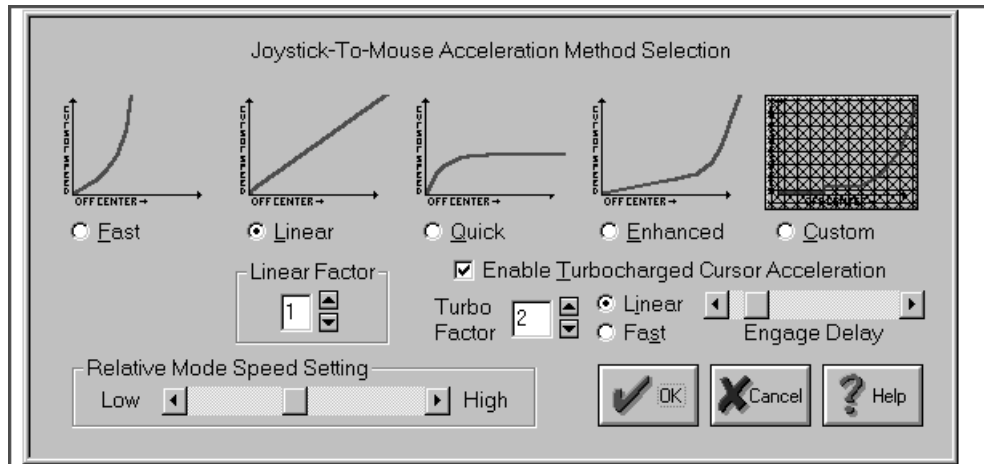
Enhanced

This sets Position 1 through Position 10 with the values used internally from the Enhanced Acceleration Method. See Joystick-To-Mouse Notes for more details.

Advanced Acceleration

This is an Advanced Setting Option.

Click on a control or button for detailed help, or review descriptions below.



When Cursor Acceleration is Enabled, you may select from one of five Acceleration Methods. The Custom Method allows you to create your own Acceleration Curve. Refer to Joystick-To-Mouse Notes for more details. The Turbocharged Cursor Acceleration enables true acceleration, but controls over of its effects have been provided. All of these options were included to allow a great deal of user control as to how the joystick performs & how its motion affects the cursor motion. With patience & testing, the ideal performance required to suit your needs can be achieved.

Cursor Acceleration Enabled

When On, Cursor Acceleration is enabled and the cursor action is determined by the settings configured in Acceleration Method. When Off, no additional enhancements affect the cursor motion.

Fast Acceleration Method

This method multiplies the calculated speed by itself, creating an effective speed curve that resembles a parabola. For example, speeds of 1, 2, 3, etc. with no Acceleration, will cause speeds of 1, 4, 9, etc. to be used when the Fast Acceleration method is selected.

Linear Acceleration Method

This method multiplies the calculated speed by the Linear Factor. Speeds of 1, 2, 3, etc. with no Acceleration will result in speeds of 2, 4, 6, etc. with a Linear Factor of 2, and 3, 6, 9, etc. with a Linear Factor of 3 when the Linear Method is selected.

Quick Acceleration Method

This uses a pre-programmed speed look-up table to rapidly move the cursor when the Joystick is moved off-center, and then limit its top speed.

Enhanced Acceleration Method

This uses a pre-programmed speed look-up table to slowly move the cursor when the Joystick is moved off-center, and then greatly increase its speed as the Joystick moves to its extreme values.

Custom Acceleration Method

This uses a pre-programmed speed look-up table which can be modified by the user. There are several advanced concepts required to use this option to its fullest. When selected, click on the Custom Graph Button to open Custom Acceleration Settings. Refer to Joystick-To-Mouse Notes for more details.

Relative Mode Speed Setting

This setting allows you to select the speed (from Low to High). This only will affect the mouse cursor motion when operating in the Relative Mode. The speed setting affects the cursor motion differently if Acceleration is enabled. The setting ranges from a Low of Speed 1 to a High of Speed 10.

Linear Factor

This is enabled when the Linear Method of Acceleration is Selected, and disabled otherwise. This is the factor that is used to determine the actual speed of the cursor as the Joystick moves off-center. See Linear Method above.

Enable Turbocharged Cursor Acceleration

This option implements a true-acceleration (change in velocity over time) when On. This uses the effective speed and several factors to increase the effective speed as direction in the same motion continues. Note Cursor Acceleration must be enabled for this feature to be used - Choose Linear Method and set Linear Factor to 1 to bypass Acceleration Curves.

Turbo Factor

This setting is used internally to scale the actual acceleration. Low numbers (e.g. 1, 2) result in a smoother increase as acceleration factors into the speed of the cursor. Higher numbers result in more dramatic speed increases.

Linear / Fast

The 2 methods modify the way the actual acceleration is incorporated into the actual cursor speed. Linear is smoother, and Fast is more dramatic. The end results are affected by how far the Joystick is off-center.

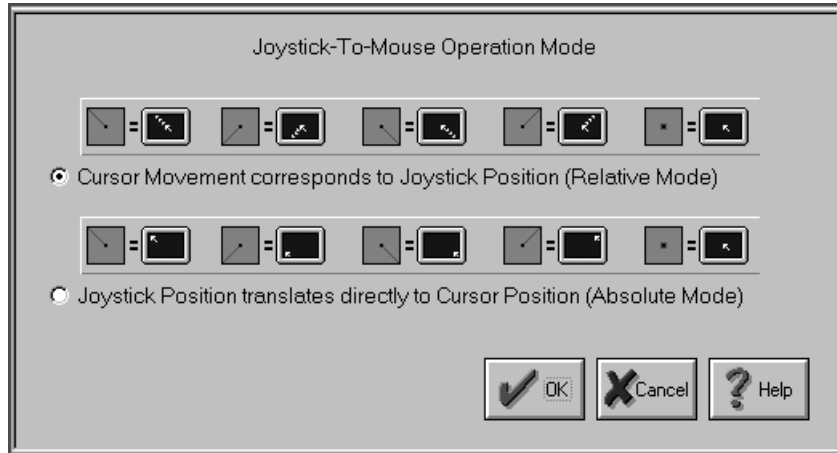
Engage Delay

This setting indicates how long the cursor must be moving in the same direction before the Turbocharged effects begin to change the speed. If set at the far left, there is no delay. The delay is increased as the indicator is moved to the right.

Operation Mode

This is an Advanced Setting Option.

Click on a control or button for detailed help, or review descriptions below.



There are 2 operating modes for Joystick-To-Mouse.

The Relative Mode of operation translates the joystick position to the relative speed of the mouse cursor. When centered, there is no mouse cursor movement. As the joystick is moved off-center, the speed of the mouse cursor moves in relation to the joystick position. As the joystick is moved further off-center, the speed of the mouse cursor increases. If the joystick is moved forward, the mouse cursor moves up toward the top of the screen. If the joystick is moved in a backward direction, the mouse cursor moves down on the screen. Left & Right correspond directly to the screen motion. See Joystick Sensitivity for configuring the Relative Mode of operation for your application.

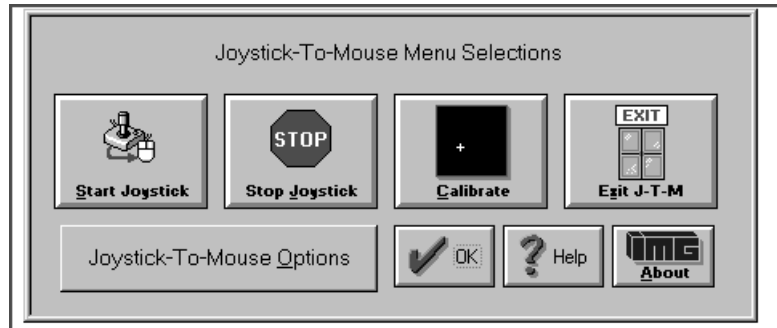
The Absolute Mode of operation ties the mouse cursor directly to the position of the joystick. When the joystick is in the center position, the mouse cursor is in the center of the screen. When the joystick is in the upper-left position, the mouse cursor will be in the upper-left area of the screen. When the joystick is in the lower-right position, the mouse cursor will be in the lower-right area of the screen. The joystick position corresponds exactly to the position of the mouse cursor on the screen.

The button operation is set in the Button Settings portion of Joystick-To-Mouse.

Chapter 5. Operator Menu

Operator Menu

This is the Main Menu when operating Joystick-To-Mouse as an Operator. Click on a button for detailed help on each selection, or review descriptions below.



Start Joystick can be selected to Start / Begin Joystick-To-Mouse Operation.

Stop Joystick can be Selected to Stop / End Joystick-To-Mouse Operation.

Calibrate Joystick can selected to Calibrate the Joystick (based on the Calibration Method selected in Program Options.)

Exit Joystick-To-Mouse can be selected to Exit Joystick-To-Mouse and Close the Joystick-To-Mouse Program.

Joystick-To-Mouse Options Button can be selected to enter the Supervisor Password to gain access to the configuration portions of Joystick-To-Mouse. When the user does not have the permission to re-configure the options within Joystick-To-Mouse, the password should not be provided to them, but kept only by the system administrator.

Start Joystick

This option will start the joystick operation of Joystick-To-Mouse. Depending on the settings, the mouse cursor will be controlled from the joystick, and the buttons on the joystick will perform the appropriate actions as set in Button Settings.

When Joystick-To-Mouse is On, no other program in Windows can use the Joystick. The On state is indicated by the Icon Name changing to Joystick-To-Mouse ON. While Joystick-To-Mouse is On, the mouse will still operate, and the mouse must remain connected for proper operation of Joystick-To-Mouse. During training or evaluation, another individual may assist the Joystick-To-Mouse user with the mouse. If

Joystick-To-Mouse is used as the primary mouse cursor interface, you may wish to flip the mouse over, or remove the ball from the mouse or trackball.

Joystick-To-Mouse has 2 operating modes, accessible when Advanced Settings are available. For more details, see Operation Mode.

If you cannot Start the joystick, review troubleshooting Troubleshooting for options.

See Joystick-To-Mouse Joystick-To-Mouse operation for default operation settings.

Stop Joystick

This option will stop operation of the joystick. If Joystick-To-Mouse is set to Off, other programs in Windows can use the joystick. The Off state is indicated by the Icon Name changing to **Joystick-To-Mouse OFF**.

When Joystick-To-Mouse is Off, the mouse may be used to operate the mouse cursor, point & click, etc.

Calibrate Joystick

To Calibrate the Joystick, from the Joystick-To-Mouse menu, Click on the Calibrate button.

When you click on the Calibrate button, Joystick-To-Mouse will allow you to select which Calibration Method you wish to use to test/verify or re-calibrate your joystick / game controller.

Joystick-To-Mouse Custom Calibration

If you have successfully installed your joystick according to the manufacturer's instructions, click on Joystick-To-Mouse Custom Calibration to fine tune operation within Joystick-To-Mouse.

Standard Windows Calibration

If not, you should verify / re-calibrate your already installed joystick with the Standard Windows Calibration process. You will be asked to move the joystick to its four corners (top-left, bottom-left, etc.). This process will record the extreme coordinates so the software can properly measure the joystick position. Wizard's Helpers are available to walk you through the Windows Joystick Calibration.

Unfortunately for the user, there is little consistency in the various versions of Windows for how the joystick is handled. Control Panel icon names have included "Joystick", "Game Controllers", and "Gaming Options." Once into the Control Panel Applet, there are also inconsistencies. For newer version of Windows, Calibration can be handled via the Properties of a selected Controller. For USB connected joysticks & controllers, often

calibration does not need to be performed more than once. If you have a game port (analog) joystick, calibration may need to be done on a regular basis.

During calibration, you can also test the joystick to verify its operations and which buttons are available to you.

From time to time, you may wish to calibrate your joystick especially if you notice any of the following:

- You cannot reach the edge of the screen (Absolute Mode)
- The cursor moves when the joystick is centered (Relative Mode)
- The cursor moves at different speeds when going up & down, or left & right

If you constantly need to calibrate the joystick, you may wish to set the Automatically Calibrate Option on in Program Options .

When Joystick-To-Mouse is first run it is necessary to Calibrate the Joystick to establish values for the joystick.

To Calibrate the Joystick, Joystick-To-Mouse cannot be On.

Controller ID

Joystick-To-Mouse requires the Controller ID to be 1 (or primary joystick device). If you have only 1 device installed, then this will be the default. However, if you install more than one joystick, or have multiple devices connected, then the IDs may be mixed around. Joystick-To-Mouse will indicate a problem if it cannot start the joystick, and give you the option to open the Control Panel applet where you can modify the controller ID. In Windows XP, this is handled in the Advanced Dialog, where you can select the preferred device (the preferred device is set to be on Controller ID 1).

IMPORTANT NOTE:

The slider trim adjustment controls on the joystick itself could be the cause of what appears to be improper calibration. Refer to Troubleshooting for more details on joystick calibration.

Exit Joystick-To-Mouse

From the Joystick-To-Mouse menu, select Exit to stop Joystick-To-Mouse operation, and close the Joystick-To-Mouse program. Joystick-To-Mouse verifies the selection.

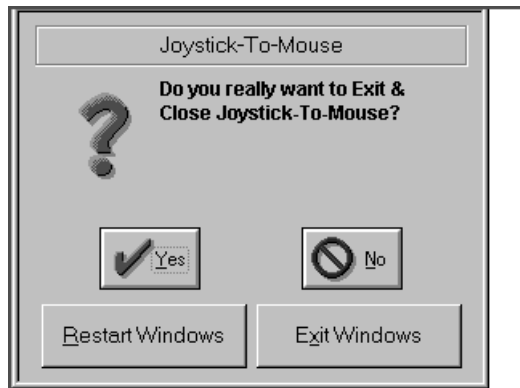
This is the standard Exit Dialog:



Select Yes to Close Joystick-To-Mouse and end Joystick-To-Mouse operation.

Select No to return to normal operation of Joystick-To-Mouse.

This is the Advanced Exit Dialog - Program Options, Display & Cursor Options, Exit Display.



Select Yes to Close Joystick-To-Mouse and end Joystick-To-Mouse operation.

Select No to return to normal operation of Joystick-To-Mouse.

Select Restart Windows to restart Windows and re-initialize all Windows Settings.

Select Exit Windows to End the current Windows session and return to DOS (operating system).

The Supervisor may disable the Exit Button completely within the Operator Menu.

Joystick-To-Mouse Options

When Minimum Options (User Mode) is selected in Program options , the Joystick-To-Mouse Menu becomes the Operator Menu. In order to gain access to the configuration portion of Joystick-To-Mouse a Password is required (Supervisor Password). When the user does not have the permission to re-configure the options within

Joystick-To-Mouse, the password should not be provided to them, but kept only by the system administrator (Supervisor).

If the Password is correctly entered, the Supervisor will have access to the Normal Menu, and have the ability to modify all Joystick-To-Mouse options. Once the OK button is selected from the Normal Menu, the Menu will revert back to the Operator Menu until the Password is entered again.

The Default Password is the four character word PASS. If the Operator mode will be used, it is recommended that the Supervisor change the password (8 character maximum), and write down and save the new password in a safe & convenient place.

To Change the Password, simply type in the Current Password, then select the Change Password button. You will be asked to type in the new password once, and then again to verify. If the new Password is correctly entered & verified, it will be registered as the new password, and be in effect from that point forward.

If there are problems with the Password, or it is lost or forgotten, review Joystick-To-Mouse Notes for information about the Initialization file encryption & ability to reset the Password. Also, if there are reasons to add even more security to the User Mode, refer to Joystick-To-Mouse Notes for additional options available to the Supervisor.

To end the Operator operation / User Mode, the Supervisor must select the Standard Mode, or Advanced Mode within Program options.

Part III. Joystick-To-Mouse Technical Documentation

Advanced User Notes, Technical Documentation, File Information, and various Other Information about Joystick-To-Mouse.

Chapter 6 - Advanced User Notes details additional product information, Final Release Notes, Technical Notes, Developer information, and Customer Suggestions.

Chapter 7 - Joystick-To-Mouse Initialization File Documentation details settings and options for Joystick-To-Mouse, and covers other technical aspects and options available.

Chapter 8 - Files & File Notes & Installation Information lists all files, general information, location, along with usage details. Additional Installation Information is also included here.

Chapter 6. Advanced User Notes

Final Release Notes

2.80 Release 6

The 2.80 Release 6 resolves issues caused by Microsoft removing support for older MM_JOY1MOVE, MM_JOY1BUTTONDOWN multimedia messages in v2004 update to Windows 10.

Version 2.80 Release 6 - 6/6/2022

2.80 Release 5

The 2.80 Release 5 was interim patch release to address Windows 10 v2004 update that prevented proper operation of Joystick-To-Mouse.

Version 2.80 Release 5 - September 9, 2020

2.80 Release 4

The 2.80 Release 4 resolves compatibility conflict with My-T-Soft Basic / MacroBat.

Version 2.80 Release 4 - November 17, 2014

The 2.80 Release 3 includes the IMG Data Manager 1.39, Manifest updates, license updates.

Version 2.80 Release 3 - November 7, 2014

2.80 Release 2

The 2.80 Release 2 license updates for the IMG Personal License.

Version 2.80 Release 2 - February 14, 2014

2.80 Release

The 2.80 Release contains updates to support Windows 8.

Version 2.80 Release - September 17, 2012

2.70 Release 5

The 2.70 Release 5 contains license manager updates.

Version 2.70 Release 5 - September 17, 2012

2.70 Release 4

The 2.70 Release 4 contains support for User Account Control in Windows Vista / Windows 7, maintenance updates, license updates, and synchronizes the release schedule with the IMG Products DVD. Note there is no Release 2 or 3.

Version 2.70 Release 4 - November 24, 2009

2.70 Release

The 2.70 release provides only a few new features: Ability to use axis movement as triggers (button actions triggered via X or Y axis motion), and support for Windows Vista and Windows 7. The update also includes the IMG License Manager, IMG Download Manager, and HTML/PDF Help.

Version 2.70 - July 16, 2009

2.60 Release

The 2.60 release provides an updated Win32 release for support of all Win32 versions of Windows: Windows 95 / 98 / Me / NT / 2000 / XP. For these versions, help & the manual are included in the single file JTM.HLP.

Support for Windows 3.x is included and any notes for 2.51 apply to the 16-bit version (JOY2MSE.EXE).

New features include:

- support for multiple monitors (Windows 98/Me/2000/XP)
- Support for Buttons 9-32 on Enhanced Joysticks
- Support for Slider Control (Z axis), and Rudder Control
- Z / Rudder options: Horizontal & Vertical scroll, Fine Tune X & Y position, Mouse Wheel
- Support for POV (Point of View hat)
- Additional Button options - X buttons, Ignore, Mouse Wheel, Move Cursor, etc.
- NT/2000/XP Service to allow operation when in secure modes
- DriftGuard option to help when joysticks are not calibrated correctly
- New help dialogs for Joystick setup & configuration
- Additional Help & notes added

Version 2.60 - September 26, 2002

2.51 Release

2/25/97 - International Contacts updated

The 2.51 release addresses minor usability issues, dialog presentation, and program flow.

Modifications for 2.51 include:

- Addition of improved Windows 95 Double-Click method
- Ability to disable Wizard's Helpers

Version 2.51 - 11/25/96

2.50 Release

The 2.50 release encompasses all of the feedback, suggestions, ideas, criticisms, wants, needs, and product enhancements that we have created and received from users over the past year. Enjoy!

Modifications for 2.50 include:

- Graphical menus
- Supervisor / Operator Modes with Password
- Redesigned option dialogs
- Joystick-To-Mouse Calibration / diagnostic
- DOS based diagnostic program
- Acceleration curves
- User modifiable (Custom) Acceleration curves
- "Turbocharged" Cursor Acceleration
- Presets for Joystick / User Types
- Auto-Sense button assignments for Applications
- Auto-Sense Stop Joystick-To-Mouse operation
- Enhancements for Windows 95
- Detailed / Context-sensitive On-line Help System
- Cursor axis inversion options
- Cursor wrap (screen-wrap) Option
- User adjustable Center range sensitivity
- Optional Calibration methods
- Additional Window Display options

Version 2.50 - 10/25/96

2.40 Release

Modifications for 2.40 include:

- Addition of special handling for Analog Joysticks to relieve drifting and asymmetric joystick operation
- Addition of Auto-Center option for Analog Joysticks
- Addition of Joystick Motion Threshold setting to increase or decrease sensitivity to joystick motion
- Addition of joystick position display to aid in calibration, operation, and initial settings

- Addition of dwell timer to automatically send a button press when joystick is left motionless after move
- Command Line parameter of "2" or "JOYSTICK2" forces Joystick-To-Mouse to use only the second joystick

Version 2.40 - 1/01/96

2.30 Release

Modifications for 2.30 include:

- Changes to SETUP.EXE and Joystick-To-Mouse to add Windows 95 compatibility.
- The Joystick drivers for Windows 3.1 have been moved into the JOYSTICK subdirectory. On certain systems the uncompressed files would be deleted on the floppy disk because of naming issues. See file notes below.
- On some non-Microsoft Video card drivers the SETUP.EXE will cause a system error (GPF). Try using a lower resolution or less colors (i.e. 16 instead of 256) during the setup portion, or use the default video drivers that came with Windows, or contact your video card manufacturer for their latest screen drivers.

Version 2.30 - 9/30/95

2.20 Release

Modifications for 2.20 include:

- Operation of Button Menu Shortcuts / Changes to Menu Dialogs
- Changes of several default settings based on testing results
- Button Settings are now normally available instead of Advanced
- Changes to calculations to allow for Center Range buffer

Version 2.20 - 8/18/95

2.10 Release

This is a tested & finalized release. Please report any problems or inconsistencies so they can be recorded.

Version 2.10 - 7/31/95

Important User Notes

Joystick-To-Mouse WAS NOT intended to emulate the Windows mouse interface in its entirety. Although Joystick-To-Mouse appears to operate just as the mouse does, due to its design, certain applications may not function properly with Joystick-To-Mouse.

Special software considerations have been made to make Joystick-To-Mouse as flexible as possible.

Joystick-To-Mouse WAS intended to allow a user to run Windows entirely from a joystick instead of the mouse.

Joystick-To-Mouse dates back to Windows 3.1, and there are now 2 main types of hardware interfaces for joysticks - Analog or Gameport joysticks, and Digital or USB joysticks. Note that there are some "Digital" joysticks that connect via the gameport. In order to address comments for each type of joystick, the terms Analog and Digital will be used.

As a rule of thumb, if you have a 15-pin connector on the joystick, it is most likely an Analog joystick (unless it is marked as Digital). If it has a USB connector, then it is a Digital joystick.

In order to operate Windows with Joystick-To-Mouse automatically, you may wish to do the following:

During Setup, select the option to install the Joystick-To-Mouse icon into the "StartUp" Group. This will automatically run Joystick-To-Mouse when Windows begins. From the Joystick-To-Mouse window, select the "Program Options" and set the "Automatically start joystick operation when program begins" to On. These settings will allow the joystick to operate the mouse cursor whenever Windows is run. "Automatically Starting" is the default setting on the distribution media.

For Analog (or any joystick that connects through a 15-pin gameport) Wave files in Windows may affect the joystick values reported to Windows. If you see erratic operation at startup, or during actual use, and it happens during wave file playback (system sounds, etc.) you may wish to disable these, or make the user aware of the conflict.

Macro File Notes

The 2 macro files are named MACRO1.KMF and MACRO2.KMF. Originally, these files were saved in the installation location, and are still installed and exist in this location. As of Windows Vista, a normal user cannot write to files located in the \Program Files area. The solution Microsoft used was to create a virtual store located at \Users\[username]\AppData\Local\VirtualStore\Program Files. So when the files are accessed by Joystick-To-Mouse, this VirtualStore area is the actual location used for the files named MACRO1.KMF and MACRO2.KMF. Since these files don't exist when first installed, and the original files cannot be opened, the default entries are now coded in the Joystick-To-Mouse executable. Since the defaults can be changed by the user, and this VirtualStore location is private for the user, no other changes were made in the program for these user specific files. So if there is ever a need to identify where the information is stored for these macros, the VirtualStore area for the current user must be accessed.

Joystick-To-Mouse Operation & Release Notes

These notes document some of the known limitations with Joystick-To-Mouse as of this release, and other anecdotal information. Most information is no longer relevant.

Note: This information is preserved for reference, and to remind everyone of the history of Windows and this product.

The following sections are included under this heading:

- WINDOWS 3.0 USERS
- WINDOWS NT USERS
- DOS USERS
- SYSTEM MODAL DIALOG BOXES
- TECHNICAL NOTES
- WIZARD'S HELPERS
- IMG JOYSTICK-TO-MOUSE SERVICE
- MACRO BUILDING NOTES

WINDOWS 3.0 USERS

We strongly recommend you upgrade to Windows 3.1 or Windows 95!! Contact your local software dealer or Microsoft regarding upgrade information.

Joystick-To-Mouse may operate under Windows 3.0, but it is not recommended or supported. Note that some features will not operate properly.

WINDOWS NT USERS

There are issues with the joystick support files & interface into this version of Windows (it was never really intended as a game / multimedia platform). Because of this, joystick support may be an issue. See Help and Joystick-To-Mouse Operation, Known issues. This is a supported, but not recommended version.

DOS USERS

Joystick-To-Mouse will not run in DOS, and will not run if the DOS application is full screen while in Windows. In limited testing, Joystick-To-Mouse does appear to operate DOS applications in a window. Joystick-To-Mouse is intended primarily for Windows applications, and may not be acceptable for DOS programs.

SYSTEM MODAL DIALOG BOXES

Windows 3.x - Joystick-To-Mouse does not Operate when there is a System Modal Message or Dialog Box. This is because no standard application accepts input when there is a System Modal Input Active. See Technical Notes below.

TECHNICAL NOTES

Joystick-To-Mouse is a standard Windows Application but does require special drivers for the joystick. In Windows 3.x, the driver IBMJOY.DRV and its calibration portion (JOYSTICK.CPL) are provided with the distribution software. Please note that these are provided free of charge (refer to JLICENSE.TXT). As a standard Windows Application, certain software may be incompatible with Joystick-To-Mouse. Any application that does not allow other windows to run (multi-tasking) will cause the joystick to lose its ability to operate the mouse, although the mouse will still operate.

IBMJOY.DRV, JOYSTICK.CPL Note:

In Windows 95 and later, these do not apply, and are not installed in the Windows System directory, but default to the Joystick-To-Mouse installation directory. These are for Windows 3.x ONLY, and you may delete them if desired. You must use the drivers shipped with Windows, or that came with your joystick.

Joystick-To-Mouse is not a "driver" in the Windows sense. This is an important distinction because it imposes some limitations, but also provides important benefits. Because it is not a driver, operation during System Modal dialog boxes does not occur, and there are various other operation limitations. However, being above the driver level and acting as a standard application, Joystick-To-Mouse software is compatible with ALL joysticks, mouse, keyboard, etc. driver software that conforms to Microsoft standards and essentially enhances existing system software with its capabilities. For specific details and special implementations, please contact Innovation Management Group, Inc. directly (see below).

Joystick-To-Mouse does REQUIRE that a mouse driver be installed, and Windows will require that a mouse be connected to properly install the driver each time Windows is run. Joystick-To-Mouse should work with all keyboard and mouse drivers that are compatible with the ones that ship with Microsoft Windows.

Options in the mouse driver (whether those that came with Windows, or from a third-party) will operate properly with Joystick-To-Mouse. Swapping mouse buttons, double-click speed, and any mouse button assignments will work properly while using Joystick-To-Mouse. Other options that affect the mouse tracking, acceleration, etc. however, will not. This is because of the relationship between the hardware drivers (of the mouse) and the Windows environment. If using Joystick Button Settings other than Left & Right buttons, it is strongly suggested that any mouse button settings in the mouse driver be set to off.

Some joysticks enable "Auto-fire." In all cases, while using Joystick-To-Mouse, this should be set to off.

WIZARD'S HELPERS

The Joystick-To-Mouse Wizard's Helpers were originally done for Windows 95. We never imagined there would be so much inconsistency with the joystick applets as Windows versions continue to be released. With the 2.60 release we chose to continue these guides, but there are limitations, and this feature should not be considered part of the core Joystick-To-Mouse software. They may be disabled by clearing the checkbox when asked "Display Wizard's Helpers" or by creating and running the following registry entry:

REGEDIT4

```
[HKEY_CURRENT_USER\Software\Innovation Management  
Group\Joystick-To-Mouse\Settings] "WizardsHelper"="0"
```

Registry Update Instructions: Highlight the REGEDIT4 and any entries, then select Edit | Copy. Open notepad, select Edit | Paste. Save the file as UPDATE.REG (default My Documents). Use Windows Explorer to open My Documents, then double-click on UPDATE.REG. If asked, select Yes to update the registry.

These guides use Window captions, titles, and words to try & monitor the flow within the control panel applet, so these will probably only operate with any utility in English versions of Windows.

IMG JOYSTICK-TO-MOUSE SERVICE

The IMG Joystick-To-Mouse service is provided to allow basic Joystick-To-Mouse operation when not logged in (i.e. the Windows logon screens, Welcome screen in Windows XP) In NT and 2000, this service operates without any issues. In Windows XP, Fast User switching can create a problem at the Welcome screen. See Help and Joystick-To-Mouse Operation, Known issues.

The MANAGE.EXE utility provides a mechanism to install, start, stop, or remove this service. This utility is used during install / un-install to "manage" the service. The service is installed by default. This utility will ONLY work with the IMGJTM.EXE service, it is not a general purpose utility.

During installation, you should be an administrator of the system to ensure proper installation of this service.

Typing MANAGE.EXE with no command line, will display help for this utility.

These are the following supported uses:

```
MANAGE INSTALL C:\WINNT\JOY2MSE\IMGJTM.EXE
```

This will install the service with the Service Manager. The 1st parameter is INSTALL, and the 2nd parameter is the well formed path & file name of the service.

MANAGE START

This will start the service. This can also be performed from the Services icon in Control panel.

MANAGE STOP

This will stop the service. This can also be performed from the Services icon in Control panel.

MANAGE REMOVE

This will remove the service from the Services Manager.

While the service is running, it will monitor the joystick for motion. If Joystick-To-Mouse is not already running (i.e. a user is logged on running Joystick-To-Mouse), the motion will be controlled by the service, and it will be very basic. None of the settings in Joystick-To-Mouse will affect the cursor motion. Upon ANY button press, a left-click down/up event will occur as if ALL the buttons were set to Left Button. If Joystick-To-Mouse is already running, the service will let Joystick-To-Mouse control the position of the mouse cursor.

MACRO BUILDING NOTES

The following double-characters are reserved in Build-A-Macro:

@@ - Signifies an Alt keystroke to follow

e.g. @@f = [Alt-Down]f[Alt-Up]

~~ - Signifies a Ctrl keystroke to follow

^^ - Signifies a Shift keystroke to follow

\$\$ - used internally for internal macro uses

You may not use these character combinations in your macros, unless you use them as outlined. For example, you may quickly create a macro for File, New ([Alt]-F, N) by entering "@@fn" and clicking OK. However, using the Reserved words in brackets is the preferred method.

Joystick-To-Mouse Developer Utilities

Included with the 2.60 release, is JTMUTIL.ZIP. This is copied into the Installation directory, or can be found on the distribution media.

It is recommended that you create a folder (e.g. JTMUTIL), copy the zip file into it, then unzip the files. There is a JTMUTIL.TXT file that discusses some of the utilities and implementation ideas.

The kit includes the following:

JTMSPEED.C (source file for ALL utilities)

JTMSPEED.RC (Resource file)

JTMUTIL.DSW (Workspace for for MS Visual C++ 6)

Other support files

Compiled executables including:

JTMSPD??.EXE - Change speed on the fly (0 - 10)

JTMRESET.EXE - Reset JTM Speed from saved configuration

JTMBTN??.EXE - Emulate a button press via software

JTMON.EXE - Start Joystick-To-Mouse

JTMOFF.EXE - Stop Joystick-To-Mouse

JTMCLOSE.EXE - Close Joystick-To-Mouse

As with all developer info, it is assumed that being provided the source code is all that is required, since you can simply review the source to learn the "nuts & bolts".

A few notes:

The Speed utilities were done at the request of a customer, and the requirement was to disable the acceleration setting for these speeds. For more complete control, you can modify the Registry for the Current User, and use the JTMRESET call.

The emulate button utilities don't support the keystroke macros, because these are handled externally by Macrobat.

If there are other ideas for utilities, please let us know. These are the most basic ones we could think of.

Application Notes

APPLICATION NOTES

Windows 8 Notes

Special use executables: Included in the installation folder are three executables for Joystick-To-Mouse - JOY2MSE.exe, JOY2MSE.highestAvailable.exe, and JOY2MSE.requireAdministrator.exe. Depending on the configuration of User Account Control (UAC) and the specific needs of an individual user, there can be situations where one of the optional executables may be more appropriate. If necessary, rename

JOY2MSE.exe to JOY2MSE.asInvoker.exe, then rename the desired optional executable to JOY2MSE.exe. These contain requested execution levels in the manifest for handling by the system. Due to User Interface Privilege Isolation (UIPI) concerns, these will allow operation for different applications and special usage situations. For example, if a application is elevated to Administrator, Joystick-To-Mouse may not operate as desired if running as the default "asInvoker" execution level. By using the "highestAvailable" or "requireAdministrator" executables, Joystick-To-Mouse will be elevated when the process is started.

Paintbrush

Publisher: Microsoft

Version: Windows 3.1

Windows: 3.1

The program simply does not conform to the Windows standards, and Joystick-To-Mouse cannot operate within the painting area. The program does not allow other programs to run while a mouse button is depressed for paint operations. If necessary, use a real paint program.

2.50 Note: While testing to alleviate this problem, it was discovered that once the painting operation was begun (i.e. Mouse button down (to draw)), Paintbrush did not return control to the Windows operating environment. The 3.1 version maintains control and does not allow other applications to operate until the painting operation is complete (Mouse button up)). This is considered bad-behavior within Windows (or any multi-tasking, or pseudo-multi-tasking environment), and Microsoft has updated and fixed this "bug" in their Windows 95 release.

Microsoft Access

Publisher: Microsoft

Version: 2.0

Windows: 3.1

In testing, the Up-button message apparently does not get received by button controls in the Access environment, although Windows control buttons (Minimize, Maximize, Close, etc.) do operate properly. This probably revolves around the timing & "object" events highly integrated within Access - why this should affect an external application, or the up-button message sent from Joystick-To-Mouse may be attributed to the GetAsyncKeyState API, or something else within the Access application.

Chapter 7. Joystick-To-Mouse Initialization File Description

Joystick-To-Mouse Initialization File Description

JOYSTICK-TO-MOUSE INITIALIZATION FILE DESCRIPTION (JOY2MSE.INI)

Below are the default (as shipped) settings for the Initialization file for Joystick-To-Mouse. Comments are provided to assist the user. Most settings are handled within the application. Additional sound files can be added as noted below. Note that a significant number of settings are used with the Relative mode setting only.

HKEY_CURRENT_USER Registry Entries - To allow multiple users with different settings, many of the settings are stored in the registry for the current user. This is the approach Joystick-To-Mouse uses to establish & use the registry.

At Joystick-To-Mouse start, the Registry is checked for:

```
[HKEY_CURRENT_USER\Software\Innovation Management  
Group\Joystick-To-Mouse] "Version"="2.80"
```

If this is not present, it will be created, and all of the settings stored in the Registry will be established. From that point forward, the registry will be used for all personal settings (indicated with the setting below as ;REG - personal)

If it is present, the registry will be read, and will be used for all personal settings.

There is an override - see DoNotUseRegistry setting below.

Warning

This documentation of settings covers changes over 27 years and not all settings are in use or relevant in the current release. If there are specific technical issues that can't be resolved by the reference information here, please contact IMG Technical Support.

Note: Certain settings (Presets, etc.) are saved back to the INI, even if the registry is in use. In versions of Windows with a limited user and User Account Control, this saved file will not be saved in the installation folder, but in a Virtual location for the current user. See \Users\[User Name]\AppData\VirtualStore\Program Files\Joystick-To-Mouse for the INI and Macro files.

[Settings]

FirstStart=1

REG - personal

FirstStart forces the calibration of the Joystick when the program is first begun - if there was no previous installation of the joystick, this is required to begin using Joystick-To-Mouse.

OperationMode=2

REG - personal

OperationMode=1 is the absolute mode, where the joystick's position corresponds directly to the mouse cursor position. OperationMode=2 is the relative mode, where the joystick's position affects the mouse cursor's movement.

Joystick=1

REG - personal

Joystick=1 or Joystick=2 indicates which joystick affects the mouse cursor. If there is only one joystick, then it must be Joystick=1

NOTE: All joystick buttons are available regardless of this setting. This means that up to 8 different button settings can be used for various actions. Note that the gameport only has 4 distinct "button" connections. The implementation in Joystick-To-Mouse encompasses the capabilities of the Joystick Driver to report Joystick events. In almost all cases, Joystick=1 is the proper setting for Joystick-To-Mouse.

AutoStart=1

REG - personal

AutoStart=1 indicates that the joystick operation will begin when the program begins. AutoStart=0 means the Joystick-To-Mouse is set to off (inactive) when the software begins.

AutoCalibrate=0

REG - personal

AutoCalibrate=1 indicates that calibration should be run each time the program begins. AutoCalibrate=0 forces the user to select the calibration option.

NOTE: For the Relative mode of operation, it may be necessary on some systems to run the calibration utility (although not actually go through the calibration portion). The default calibration routine is the one provided by Microsoft. Any program (including Joystick-To-Mouse) that uses the Joystick in Windows requires this driver, or one that is compatible.

2.50 NOTE: Due to various inconsistencies with joysticks, and driver initialization, 2 new Calibration Methods were introduced.

See CalibrateMethod below.

AutoAssumeCenter=1

REG - personal

IMPORTANT: This value depends on the setting of AnalogJoystick! Also, if the Operation Mode is Absolute, this setting is ignored. If AnalogJoystick=1 then this setting uses the calculation with AnalogCenterFactor as described below. The default is AutoAssumeCenter=1. If AutoAssumeCenter=0, then the CenterRangeX and CenterRangeY should be increased dramatically to "soften" the response of the joystick while at center position. If AnalogJoystick=0, then the following applies: If AutoAssumeCenter=1 then the center position of the joystick at Start Joystick (or Auto-Start) will be used to calculate an offset, and this value will continue to be used throughout Joystick-To-Mouse operation from that point on. The default should be AutoAssumeCenter=0 if AnalogJoystick=0.

IconOffScreen=0

REG - personal

IconOffScreen=1 moves the minimized icon off screen so it does not appear in the lower left of the screen at start-up. The program can still be accessed, etc. by the Task Manager. If IconOffScreen=0 then the program will behave as a normal windows application when minimized. This setting does not apply in Windows 95.

IconOnTop=0

REG - personal

IconOnTop=0 means the icon will act as a normal icon on the desktop. IconOnTop=1 means the icon will be a "topmost" window, and be visible above all normal windows. Note the IconOffScreen must be 0 to make this setting effective. This setting does not apply in Windows 95.

Advanced=0

REG - personal

Advanced=0 disables the advanced settings of Joystick-To-Mouse. Advanced=1 allows the user to access all of the dialog boxes and settings for Joystick-To-Mouse. Most of these settings require a good understanding of Windows, joysticks, and other issues. This is primarily for accomplished or "power" users who need more control of the Windows operating environment.

IntelligentCursor=1

REG - personal

IntelligentCursor=1 indicates that Intelligent cursor positioning will be used for Dialog boxes, and results in the mouse cursor to automatically position itself on the default control of standard Windows dialogs. IntelligentCursor=0 disables this action.

AutoWrapX=0

AutoWrapY=0

REG - personal

These settings are tied together via the "Display & Cursor Options" within Joystick-To-Mouse. If set to 1, then the cursor will not use the screen edge as a boundary, and will "wrap" to the opposite side. This will allow continuous motion in the movement direction. For special situations, these settings can be edited within this initialization file for horizontal (X) or vertical (Y) motion. If these are edited manually, the option should not be accessed within Joystick-To-Mouse.

TimeSlice=0

REG - personal

This indicates how many timer ticks (increments) the software will wait before moving the mouse cursor (when the joystick is off center).

Relative Mode Only

2.50 Notes: The WindowsTimerInterval has been included that affects the timer ticks for more control from the end-user. It is important to realize that Windows does not support very fine timer ticks below 20 ms. Also, various special features rely on the timer ticks to monitor the Windows environment (AutoSense, Wizards's Helpers, etc.) and they may be affected if this is too high, or the WindowsTimerInterval is too long.

SpeedX=5

SpeedY=5

SpeedFactor=300

REG - personal

The three speed factors are used to calculate the X & Y velocity in the following manner:

- For a 640 x 480 display

(Position Off Center X {-320 to 320} - Center Range X) times SpeedX

SpeedFactor

Position Off Center Y {-240 to 240} - Center Range Y) times SpeedY

SpeedFactor

2.50 Note: The SpeedX and SpeedY settings, in addition to what is documented above, take on additional meanings when acceleration, and Turbocharged acceleration are used. Refer to the Acceleration discussions in this document for more details.

Relative Mode Only

CenterRangeX=100

CenterRangeY=100

REG - personal

The Center Range indicates how far the joystick has to be off center before a velocity will be registered within the program. The larger the values, the less sensitive the joystick will be. However, if they are too large it may prevent the joystick from operating.

2.50 Note: This setting is accessible via the Joystick-To-Mouse Calibration dialog, or from Advanced Settings: Joystick Options, from the Advanced Settings, Joystick Settings dialog. Relative Mode Only

Multiply=1

REG - personal

2.50 Note: This setting has changed its internal meaning from previous versions.

If Multiply=1 then acceleration is enabled, based on the AccelerateMethod value (see below).

If Multiply=0 then the calculated speed is used, and no acceleration is used.

Relative Mode Only

AccelerateMethod=2

LinearFactor=2

REG - personal

There are 5 different Acceleration Methods available within Joystick-To-Mouse. These are indicated approximately by the graphical displays for the Acceleration Method within Joystick-To-Mouse. They are not true acceleration! The following method has been developed based on physical testing & human factors, and the goal of providing the right "feel" to the joystick as an interface approach of moving the cursor pointing device within Windows. In all cases, each method establishes 10 distinct values. Based on the Relative Mode Speed (SpeedX or SpeedY above), the Joystick when moved off center can generate a value between -Speed and +Speed over the entire range of the Joystick. If the Speed is set to 5, then the range (mapped onto the full range of the Joystick as calibrated) will be -5 to +5 in each direction(X,Y). If Speed is 10, then the range is -10 to +10. If "Acceleration" is enabled (Multiply=1), then the reported speed value is used to look up in the table as indicated by the Acceleration Method, and the resultant velocity is used to move the Cursor.

Special Notes:

Custom - the custom setting allows the user to modify these 10 values, providing complete control over the Joystick response curve. As a convenience, the pre-programmed ;values of the Quick & Enhanced curves may be retrieved, for ;reference, or modification. Important Note: To use all 10 ;values, the Relative Mode Speed must be maximum (i.e. 10)!

Linear - The linear method takes the reported speed value and multiplies it by the Linear Factor, e.g. a Linear Factor=1 results in no change at all (same as Multiply=0); where 2 causes 1,2,3 to be 2,4,6; 3 causes 1,2,3 to be 3,6,9; etc.

Relative Mode Only

InvertX=0

REG - personal

If InvertX=1 then the calculated internal motion is reversed around the X, or horizontal axis. Internally this takes the negative value of the current motion amount calculated (i.e. if the value is 4, it becomes -4, and if it is -3 it becomes 3).

If InvertX=0, then no modification is done.

Relative Mode Only

InvertY=0

REG - personal

If InvertY=1 then the calculated internal motion is reversed around the Y, or vertical axis.

If InvertY=0, then no modification is done.

Relative Mode Only

NoDiagonal=0

REG - personal

OneButton1=0

OneButton2=1

OneButton3=9

OneButton4=10

TwoButton1=0

TwoButton2=6

TwoButton3=9

TwoButton4=10

REG - personal

These are the values that indicate what action the joystick button will perform when pressed. Note that most joysticks only have 1 or 2 buttons. Also note that there are only 4 total buttons supported by the standard Game Port, however the Joystick Drivers in Windows provide for all of the above values. In order to maintain compatibility to other devices that interface via the Joystick driver, support for 8 buttons has been provided. The number corresponds to an internal list of entries shown in the list boxes in the button settings portion of the program.

This is the list of settings & button descriptions:

- 0 "Left Button"
- 1 "Right Button"
- 2 "Middle Button"
- 3 "Toggle Left Button"
- 4 "Toggle Right Button"
- 5 "Toggle Middle Button"
- 6 "Double-Click Left"
- 7 "Double-Click Right"
- 8 "Double-Click Middle"
- 9 "Macro 1"
- 10 "Macro 2"
- 11 "Enter Key"
- 12 "Escape Key"
- 13 "Tab Key"
- 14 "Space Bar"
- 15 "BackSpace Key"
- 16 "Up-Arrow"
- 17 "Down-Arrow"
- 18 "Left-Arrow"
- 19 "Right-Arrow"
- 20 "Insert"
- 21 "Delete"
- 22 "Home"
- 23 "End"
- 24 "Page Up"
- 25 "Page Down"
- 26 "F1 (Help)"
- 27 "F2"
- 28 "F3"
- 29 "F4"
- 30 "F5"

- 31 "F6"
- 32 "F7"
- 33 "F8"
- 34 "F9"
- 35 "F10 (Menu)"
- 36 "F11"
- 37 "F12"
- 38 "Shift Key Toggle"
- 39 "Ctrl Key Toggle"
- 40 "Alt Key Toggle"
- 41 "Ctrl-Ins (Copy)"
- 42 "Shift-Ins (Paste)"
- 43 "Shift-Del (Cut)"
- 44 "Ctrl-Del (Clear)"
- 45 "Alt-Backspace (Undo)"
- 46 "Alt-F4 (Close Window)"
- 47 "Alt-Tab (Next App)"
- 48 "Alt-Esc (Find App)"
- 49 "Alt-Space (Sys. Menu)"
- 50 "Alt-Y (Yes)"
- 51 "Alt-N (No)"
- 52 "Shift-Tab"
- 53 "Shift-F4 (Tile)"
- 54 "Shift-F5 (Cascade)"
- 55 "Ctrl-F4 (Close Child)"
- 56 "Ctrl-Tab (Select Child)"
- 57 "Ctrl-Esc (Task List)"
- 58 "Ctrl-Space"
- 59 "Ctrl-Backspace"
- 60 "Ctrl-Enter"
- 61 "Ctrl-Home"
- 62 "Ctrl-End"

63 "Ctrl-Page Up"
64 "Ctrl-Page Down"
65 "Ctrl-Up"
66 "Ctrl-Down"
67 "Ctrl-Left"
68 "Ctrl-Right"
69 "Toggle Motion / Keys"
70 "X1 Button (Backward)"
71 "X1 Button Toggle"
72 "X2 Button (Forward)"
73 "X2 Button Toggle"
74 "Wheel Down"
75 "Wheel Up"
76 "Ctrl-X (Cut)"
77 "Ctrl-C (Copy)"
78 "Ctrl-V (Paste)"
79 "Ctrl-W (Close)"
80 "Ctrl-Z (Undo)"
81 "Ignore Button Press"
82 "Move Cursor Left (X)"
83 "Move Cursor Right (X)"
84 "Move Cursor Up (Y)"
85 "Move Cursor Down (Y)"
86 "Wheel Down (Spin)"
87 "Wheel Up (Spin)"
88 "Toggle Speed"
89 "Toggle Speed/Click"
90 "Windows Key"
91 "Application Key"
Alternate=0
Version 2.51 & previous only

The Alternate setting is used for single button double-click in Windows 95. This should be set to 0 for Windows 3.1, 3.11, etc. and set to 1 for Windows 95. Dependent on the user, settings, the system, applications, and other drivers in the system, this may be changed and tested with the end-user. Please note that in testing, with Alternate=0, Windows 95 will never receive a double-click if a joystick button is set to a mouse button. In some cases this may be preferred, especially since the right button menus, etc. in Windows 95 can open applications from icons. 2.51 Note: Alternate=2 may be also be used in Windows 95. This preserves the original approach by delaying the up-button event. This does cause a slight-delay which could be noticed by the user. In testing, the new approach (Alternate=1) operates cleanly, and does not create any side-effects. It is the preferred and recommended setting.

DoubleClick50ms=5

Version 2.51 & previous only

This setting is only used when Alternate=1 or Alternate=2.

Valid settings are 1-20.

The range of 3 - 8 is probably optimum for most users. For Alternate=1, this is the number of 50 millisecond increments to count down while waiting for another down button press. If the user does press the button while this value is set, then a double-click message will be generated by Joystick-To-Mouse. This effectively results in a click, click, double-click sequence being sent to a control. In testing, this seems to correspond more closely to the way the mouse clicks are interpreted in Windows 95. Note that settings below 3 may not allow enough time to consistently generate a double-click.

For Alternate=2, this is the number of 50 millisecond increments delayed before sending the up button message through after the down button message has been sent. In Windows 95 it is this period where another down button message will generate a double-click. However, the setting will cause a delay in usage, and can result in an unintuitive interface, because if the mouse cursor has moved before the up button event message has been sent, various windows controls may not operate as assumed by the user.

RightOffset95=7

REG - personal

This is only used in Windows 95 when the Intelligent Cursor option is enabled (IntelligentCursor=1). If the user has set one of the joystick's buttons to be a right mouse button, then the cursor will move right and down on the screen (in pixels) the amount set here when a popup menu appears after the right button click. Valid values are 3 - 20.

This is useful in highlighting the Open selection when launching icons from Explorer, etc.

JoystickThreshold=120

REG - personal

This is the current Threshold value required before a joystick move message is generated by the driver software. The higher the value, the further the joystick must be moved to

generate a new value. If too high, then no amount of motion will generate a joystick move message, and Joystick-To-Mouse will not operate properly, if at all. Lower values increase sensitivity, but if it is set too low, spurious values may result, and operation may be inconsistent.

JoyMaxThreshold=2000

REG - personal

This is the maximum threshold value available from the Joystick Motion Threshold Scroll Bar control. If the value is too high, or greater than the maximum values the joystick can generate, then no motion will be generated, and it will effectively hinder Joystick-To-Mouse operation. The default value is 2000.

AnalogJoystick=1

REG - personal

This setting is referred to as Use Adaptive Internal calculations within Joystick-To-Mouse (Advanced) | Joystick. This setting indicates that special handling & value manipulation is performed, due to the low precision of most standard analog joysticks. AnalogJoystick=0 performs a linear calculation based on joystick values, and should be used only for precision joysticks or digital joysticks.

AnalogCenterFactor=120

REG - personal

This setting is only used if AnalogJoystick=1

This is used internally to calculate the Center range where joystick values do not generate motion during relative mode operation. The calculation is $\text{CenterRangeX} * \text{AnalogCenterFactor}$. This value is subtracted from center on both sides of center for both axes, and any joystick values in this range are ignored, resulting in velocities of 0. The default value is 120. Larger values increase the required motion to generate cursor motion.

MaxCenterFactor=270

REG - personal

This setting is used to define the upper value possible for setting the CenterRangeX and CenterRangeY within the Joystick-To-Mouse Custom Calibrate & Joystick

Option dialogs.

DisplayValues=0

REG - personal

This setting is for checking the actual values reported by the joystick to Joystick-To-Mouse. The default is DisplayValues=0. If DisplayValues=1, then the X and Y coordinates reported by the joystick will be shown on the upper left corner of the

screen display. This could be useful for fine tuning the calibration, or to verify operation, orientation, etc. of the joystick.

2.50 Note: The Joystick-To-Mouse Calibration dialog is the preferred approach to dealing with joystick values, testing, and diagnostics.

Also, the following values allow additional "debugging": DisplayValues=2 displays the above, with the calculated Internal

Velocity values.

DisplayValues=3 displays the above, and actual velocity values used to move the cursor within Windows.

DisplayValues=4 displays all of the above with gameport values reported by the hardware.

DisplayValues=5 displays all of the above with an internal Timer Tick counter (for monitoring system time ticks).

EnableDwell=0

REG - personal

This setting enables or disables the automatic button press timer. This setting is only available during relative mode operation.

If EnableDwell=0, then the dwell timer will not be used, and there will be no automatic operation of button presses. If EnableDwell=1, then the DwellTime below (in units of 50 ms) will generate an automatic button press (Button 1) when the joystick is left idle for the dwell time period.

DwellButton=1

REG - personal

This setting allows the override of the default button press for the automatic button press / dwell timer.

2.50 Note: These settings are accessible via the Advanced Button Settings Dialog.

The following values are valid:

1 = Joystick 1, Button 1 (default)

2 = Joystick 1, Button 2

3 = Joystick 1, Button 3

4 = Joystick 1, Button 4

5 = Joystick 2, Button 1

6 = Joystick 2, Button 2

7 = Joystick 2, Button 3

8 = Joystick 2, Button 4

DwellTime=10

REG - personal

This is the number of time periods that are required to pass while the joystick is idle, before an automatic button press is generated. The default value is 15. This corresponds to 750 ms, or 3/4 of a second. This is affected by the WindowsTimerInterval setting.

CalibrateMethod=2

REG - personal

The following is for Version 2.51 and previous. In the Win32 2.60 version, this setting is not used externally. The user selects the Calibration method from the Calibration Method dialog when Calibrate is selected.

There are three Calibration Methods:

CalibrateMethod=1 is the default Windows / Control Panel based calibration procedure. Although different in Windows 3.1 and Windows 95, the concept & capabilities are similar.

CalibrateMethod=2 is the "Reset to previous Calibration" method. It was found in testing within Windows 3.1 that drift and other problems could be resolved by running the calibration routine, and simply selecting OK - no calibration or testing was required. To accommodate installations where this sequence of events was required for consistent operation, this method was implemented. It does not apply in Windows 95, which seems more consistent in its calibration settings. The length of time before the dialog is OK'ed is indicated by the CalibrateWait setting below.

CalibrateMethod=3 is the Joystick-To-Mouse Custom Calibration dialog. Key Joystick settings and visual display indicate what is actually happening. It was included primarily for Advanced users and for technical support issues.

CalibrateWait=20

REG - personal

The CalibrateWait is the number of timer intervals that the Windows 3.1 Calibration dialog is displayed before the Automatic Enter Key is sent.

DisplayOpening=1

REG - personal

This setting indicates whether the Joystick-To-Mouse Opening Logo is displayed or not. DisplayOpening=1 displays the logo, DisplayOpening=0 disables the logo.

DisplayWindow=0

REG - personal

This setting is a hold over from development versions. All of the Joystick-To-Mouse user interface is driven by the menu & option dialogs, but hidden behind it all is an actual "Window". The default is off, or DisplayWindow=0. For additional visual feedback, set

DisplayWindow=1 to display the Joystick-To-Mouse window with logos. This is the Advanced, Program options | Display & Cursor Options | Display background window

DisplayExit=0

REG - personal

This setting is an Advanced Setting available from Display & Cursor Options.

DisplayExit=1 indicates the Exit Joystick-To-Mouse Exit Dialog will include Restart Windows & Exit Windows Options. The default is DisplayExit=0, which simply displays Yes or No buttons.

DisplayPopups=1

REG - personal

This setting indicates whether the small Quick Help windows will be displayed while hovering over the dialog controls. This is accessible from the Display & Cursor Options. 1 indicates the help will be displayed, while 0 indicates that there will be no Quick Help.

WarpSpeed=1

REG - personal

WarpSpeed=1 indicates that TurboCharged cursor acceleration is enabled, and WarpSpeed=0 disables this type of acceleration. The TurboCharged acceleration is true acceleration (change in velocity over time), but is affected by various settings, and should not be considered by the definition (see below). These approaches to the acceleration were done to enhance the "feel" of the joystick as the primary input device.

WarpFactor=2

REG - personal

This is a factor used in applying the acceleration. Larger numbers means the acceleration is affected more pronounced.

WarpMode=2

REG - personal

This is if the Acceleration is applied Linearly (adding over time), or Fast (multiplying over time). Because the velocity is not true velocity (i.e. the acceleration method / acceleration curve values), the TurboCharged acceleration was modified to enhance the end result.

WarpMode=1 indicates Linear approach, and WarpMode=2 indicates Fast approach.

WarpDelay=3

REG - personal

This is the engage delay, i.e. how long while moving in current direction until the affect of the "TurboCharger" is engaged.

WarpMult=4

REG - personal

This is the internal multiplication factor when WarpMode=2.

KeyButton1=5

KeyButton2=7

KeyButton3=6

KeyButton4=8

KeyButton5=0

REG - personal

The KeyButton settings indicate which Keystroke will be sent for the corresponding direction.

KeyButton1 is for the up position.

KeyButton2 is for the left position.

KeyButton3 is for the down position.

KeyButton4 is for the right position.

KeyButton5 is for the Override Button 1 option.

The keystrokes correspond to the 0 based list found in the Joystick Key Assignments for the Toggle Motion / Keys button setting. When in use, the Joystick-To-Mouse operates normally until the button set to Toggle Motion / Keys is pressed. Once pressed the joystick will now send keystrokes based on the settings above, and the KeyMode setting below.

KeyOverride=0

REG - personal

If KeyOverride=1 then the Button 1 Setting (OneButton1) is overridden when the Mode is toggled to the Keys mode. The Setting of KeyButton5 is used instead - this was included for 2 button Joysticks and applications that have the need to use another keystroke, and would normally have the Button 1 set to Left Button while in Motion Mode. The default is KeyOverride=0.

KeyMode=4

REG - personal

This setting indicates whether the keystroke action will be single-shot, or continuous while the joystick is moved in the appropriate direction. KeyMode=1 indicates that Up/Down motion & Left/Right motion will trigger a single-shot keystroke.

KeyMode=2 indicates that Up/Down motion will cause continuous keystrokes, and Left/Right motion will trigger a single-shot keystroke.

KeyMode=3 indicates that Up/Down motion will trigger a single-shot keystroke, and Left/Right motion will cause continuous keystrokes.

KeyMode=4 indicates that Up/Down & Left/Right motion will cause continuous keystrokes.

The single-shot locks out additional keystrokes for the particular direction. Either the Joystick must be centered, or pulled in the opposite direction to allow another keystroke to be sent.

The continuous keystrokes are sent according to the timer period (WindowsTimerInterval) setting.

QuickSet=20,40,60,60,60,60,1,1,2,2

EnhancedSet=3,3,4,4,10,40,1,1,2,2

CustomSet=3,3,4,4,10,40,0,0,0,0

REG - personal

The above are the settings for the customized acceleration curves. Note that the custom settings can be edited & changed within Joystick-To-Mouse when the Custom acceleration method is selected.

AdvancedJoystickCaps=1

REG - personal

This is an override for all the AJC* settings below. The Advanced Joystick Capabilities include the Z Axis, Rudder, POV hat, and buttons 9-32. If this AdvancedJoystickCaps=1, then all these are enabled or disabled individually, if AdvancedJoystickCaps=0 then none of these settings are referenced during Joystick-To-Mouse operation.

AJC_Buttons=1

REG - personal

This is the setting to enable Buttons 5-8, and 9-32. The original joystick API only allowed for 4 buttons, so this override affects Joystick-To-Mouse monitoring of the buttons 5-32. If AJC_Buttons=1 then the buttons are monitored. If AJC_Buttons=0, then they are ignored.

AJC_POV=1

REG - personal

When AJC_POV=1, the Point of View (POV) hat is monitored. If AJC_POV=0, then it is ignored. When AJC_POV=1 and the POV is moved, the following mapping occurs:

POV Up (315, 0, 45 degrees) sends Mouse Wheel Up motion (as if you are scrolling the Mouse Wheel up)

POV Down (135, 180, 225 degrees) sends Mouse Wheel Down motion (as if you are scrolling the Mouse Wheel down)

POV Left (270 degrees) sends X1 button (Backward)

POV Right (90 degrees) sends X2 button (Forward)

AJC_POV=2 swaps Up/Down & Left/Right

AJC_POV=3 maps the POV directions to the Arrow Keys (Up/Down/Left/Right)

AJC_Rudder=1

REG - personal

The AJC_Rudder=1 setting indicates the rudder is monitored. If AJC_Rudder=0, then the rudder position is ignored.

When enabled, there are 8 operation modes as indicated:

0 "Horizontal Scroll"

1 "Vertical Scroll"

2 "Mouse Wheel"

3 "Fine Tune X Position"

4 "Fine Tune Y Position"

5 "Mouse Wheel (+ Auto)"

6 "Fine Tune X (+ Auto)"

7 "Fine Tune Y (+ Auto)"

AJC_Rudder_Op=3

REG - personal

When AJC_Rudder=1, this is the Operation Mode selected in Joystick-To-Mouse and used when the Rudder is moved.

AJC_ZAxis=1

REG - personal

The AJC_ZAxis=1 setting indicates the Z axis is monitored. If AJC_ZAxis=0, then the Z axis position is ignored.

The operation modes are the same as indicated in AJC_Rudder

AJC_ZAxis_Op=4

REG - personal

When AJC_ZAxis=1, this is the Operation Mode selected in Joystick-To-Mouse and used when the Z Axis is moved.

AJC_Button09=81

AJC_Button10=81

AJC_Button11=81

AJC_Button12=81

AJC_Button13=81

AJC_Button14=81

AJC_Button15=81

AJC_Button16=81

AJC_Button17=81

AJC_Button18=81

AJC_Button19=81

AJC_Button20=81

AJC_Button21=81

AJC_Button22=81

AJC_Button23=81

AJC_Button24=81

AJC_Button25=81

AJC_Button26=81

AJC_Button27=81

AJC_Button28=81

AJC_Button29=81

AJC_Button30=81

AJC_Button31=81

AJC_Button32=81

REG - personal

These are the settings for Buttons 9 through 32. By default the action is "Ignore button press" See the list of button settings under OneButton1, etc. above.

Operator=0

REG - personal

If Operator=1 then Joystick-To-Mouse will begin operation in the operator mode

The menu changes to the minimum options available, and a "supervisor" password is required to access Joystick-To-Mouse options. The default is Operator=0, and this should only be used in special installations. See StartActive, StopActive, etc. below for more details on securing the Operator Mode.

Password=5F828294

REG - personal

The above corresponds to the password "PASS" and if the password is changed within Joystick-To-Mouse and lost or forgotten, the above should be dropped into the existing JOY2MSE.INI file to reset the password to "PASS". The password is encoded at a basic level, and it should not be considered "high-security"!

WatchDogTimer=0

REG - personal

This is a debugging tool to see if a particular application does not release control back to the system. Windows is supposed to be a cooperative multi-tasking environment, but applications can take over the entire system, effectively stopping other tasks, such as Joystick-To-Mouse. The default is WatchDogTimer=0, and should be left alone.

WatchDogTimer=1 enables certain actions within Joystick-To-Mouse, but this is not for use by the end-user.

WindowsTimerInterval=20

REG - personal

For completeness, the timer interval is included here. The setting is in milliseconds, but settings below 20 will probably not be accurate, as the Windows Application Timer capabilities run out at about 18ms. There may be installations where changing this into the 100-200 range could be useful in some cases. Note that this is integral to the Joystick-To-Mouse application and its design. In most cases it should not be changed.

If the setting is changed, all delays and certain features will be affected.

Important settings impacted by a change to this setting are:

Dwell

DriftGuard (start delay)

Acceleration

Wizard's Helpers

Mouse Wheel, automated events

DisplayPopups

etc., etc.

StartActive=1

StopActive=1

CalibrateActive=1

ExitActive=1

REG - personal

These 4 settings are only used within Operator Mode (Operator=1). They allow the Supervisor the ability to disable the 4 available button Selections (Start Joystick, Stop Joystick, Calibrate, and Exit). If set to 1, then the button is active, if set to 0, then it is

disabled. If all 4 are set to 0, then the only options available to the user would be the Options (which requires the password), OK (which closes the limited menu), Help (which displays the on-line help), and About, which lists the copyrights, etc. of Joystick-To-Mouse. If very secure operation is necessary, it may be advisable to delete the JOY2MSE.HLP file, or replace it with a different help file entirely to prevent the Operator from accessing additional information via the menu dialog.

Sound=12

REG - personal

Sound=0 means that sound is set to off. If sound is set to a number above 0, it means the appropriate sound will be played. 1 is the default PC speaker beep, 2-7 are the default Windows wave files as set in the WIN.INI, and 8 and above indicate one of the wave files in the [Sounds] section below.

WizardsHelper=1

REG - personal

WizardsHelper=1 is the default setting. This enables the Wizard's Helper throughout Windows 3.x and Windows 95. If there is a some reason that these Wizard's Helpers should be disabled (conflict, different Joystick drivers, etc.), then WizardsHelper should be set to 0.

PopupDelay=10

REG - personal

This is the internal delay used before the Popup Help is displayed. The counter begins every time the cursor stops moving. If the counter reaches 0, and the cursor is over a control or button where Popup Help is available, the help is displayed. Larger values cause a longer delay period. See WindowsTimerInterval.

FirstPass=1

REG - personal

This is the indication that Joystick-To-Mouse has not shown the Password when the User Mode is selected, and the Joystick-To-Mouse Options button is pressed from the User Mode Menu. When set to 1 a Message is displayed telling the first user (hopefully the System Administrator) that the default password is "PASS". It is then set to 0 and not used. If Setup re-installs Joystick-To-Mouse, it will be set back to 1.

DoNotUseRegistry=0

This is a global, INI only setting

This setting was added in 2.60 to accommodate both modes of working with settings - using the JOY2MSE.INI file, or using the Current User registry settings.

If DoNotUseRegistry=0, then the registry IS used, and the INI is read once, only if registry values need to be established.

If DoNotUseRegistry=1, then the registry IS NOT used, and the JOY2MSE.INI file holds all settings for all users on the system.

EnableActions=0

This is a global, INI only setting

Prior to 2.60, this was saved under the [Actions] section

This setting is used to enable or disable Actions.

Preset=1

This is a global, INI only setting Prior to 2.60, this was saved under the [Presets] section The Preset setting indicates which of the Presets is selected. The Preset0001, Preset0002, etc. listing provides all of the user modifiable settings so that the complete configuration can be saved, and selected at a later date.

DriftGuard=1

This is a REG ONLY - personal setting

The DriftGuard feature sets a timer everytime Joystick-To-Mouse is started. If the cursor ends up in one of the 4 corners of the screen during this startup timer, then Joystick-To-Mouse will be turned off, and a dialog will be shown offering instructions on how to handle cursor drift. It is possible that in normal usage, this may become annoying, therefore this setting may be cleared by updating the registry:

REGEDIT4

```
[HKEY_CURRENT_USER\Software\Innovation Management  
Group\Joystick-To-Mouse\Settings] "DriftGuard"="0"
```

Registry Update Instructions: Highlight the REGEDIT4 and any entries, then select Edit | Copy. Open notepad, select Edit | Paste. Save the file as UPDATE.REG (default My Documents). Use Windows Explorer to open My Documents, then double-click on UPDATE.REG. If asked, select Yes to update the registry.

ShowDemoSplash=1

This is a REG ONLY - personal setting

This is used by Joystick-To-Mouse to toggle which splash screen should be used - a licensed version, or demo version splash. It is handled internally by Joystick-To-Mouse, and this setting depends on whether or not Joystick-To-Mouse is licensed. Changing this setting will only affect the very next time Joystick-To-Mouse is run, since it is updated at start and end based on the license. Note that Joystick-To-Mouse must be licensed, then run and closed to clear the demo splash.

This is a global section, INI only settings

[Sounds]

OnSound=ambbrdg5.wav

This setting is the sound played when the program begins. You may use any wave file, or set OnSound= to not play a sound when the program begins.

Sound0001=ding1.wav,Ding

Sound0002=plunk.wav,Plunk

Sound0003=pop.wav,Pop

Sound0004=sonic.wav,Sonic

You may add or delete sound as necessary by following the number convention indicated. You may include the path to the sound. If there is no path, then the default directory for Joystick-To-Mouse is assumed. The information after the comma is the name that will appear to the user within the application (when selecting sounds). NOTE: Longer sounds may cause gaps in the operation, dependent on the speed of the system, the sound adapter, etc. The only "safe" sound on some systems may be the default speaker beep.

This is a global section, INI only settings

[Presets]

A reference list of which settings are saved in the preset is listed below.

Preset0001=CH Flightstick

Preset0002=CH F-16 Combatstick

Preset0003=CH F-16 Flightstick

Preset0004=CH Virtual Pilot Pro

Preset0005=Dexxa Joystick

Preset0006=Forte VR Headset

Preset0007=Genius Joystick

Preset0008=Gravis PC Pro Joystick

Preset0009=Gravis Grip Pad

Preset0010=Gravis PC Gamepad

Preset0011=InterAct PC Flight Force Pro

Preset0012=InterAct PC Pro Pad 4

Preset0013=InterAct PC Raider

Preset0014=InterAct PC Program Pad

Preset0015=InterAct V3 Advanced FX Racing Wheel

Preset0016=Joystick-To-Mouse Advanced

Preset0017=Logitech Wingman Joystick

Preset0018=Logitech Wingman Extreme Joystick

Preset0019=Microsoft Sidewinder Standard
Preset0020=Microsoft Sidewinder 3D Pro
Preset0021=MSC Cobra Joystick
Preset0022=QuickShot Avenger
Preset0023=QuickShot Interceptor
Preset0024=QuickShot Skyhawk
Preset0025=QuickShot Skymaster
Preset0026=QuickShot Squadron Commander
Preset0027=RJ Cooper's SAM Joystick
Preset0028=Standard USB Joystick
Preset0029=Standard Gameport Joystick
Preset0030=Suncom Technologies Night Force
Preset0031=Thrustmaster
Preset0032=Thrustmaster F-16 FLCs
Preset0033=Victormaxx VIR One
Preset0034=Vivitar WJ2000 Infrared Joystick

The following lists the settings that are preserved within a preset:

FirstStart
OperationMode
Joystick
AutoStart
AutoCalibrate
AutoAssumeCenter
IconOffScreen
IconOnTop
Advanced
IntelligentCursor
AutoWrapX
AutoWrapY
TimeSlice)
SpeedX
SpeedY

SpeedFactor
CenterRangeX
CenterRangeY
Multiply
AccelerateMethod
LinearFactor
InvertX
InvertY
NoDiagonal
OneButton1
OneButton2
OneButton3
OneButton4
TwoButton1
TwoButton2
TwoButton3
TwoButton4
RightOffset95
JoystickThreshold
JoyMaxThreshold
AnalogJoystick
AnalogCenterFactor
MaxCenterFactor
DisplayValues
EnableDwell
DwellButton
DwellTime
CalibrateMethod
CalibrateWait
DisplayOpening
DisplayWindow
DisplayExit

DisplayPopups
WarpSpeed
WarpFactor
WarpMode
WarpDelay
WarpMult
KeyButton1
KeyButton2
KeyButton3
KeyButton4
KeyButton5
KeyOverride
KeyMode
QuickSet[0]-[9] (10 entries)
EnhancedSet[0]-[9] (10 entries)
CustomSet[0]-[9] (10 entries)
AdvancedJoystickCaps
AJC_Buttons
AJC_POV
AJC_Rudder
AJC_Rudder_Op
AJC_ZAxis
AJC_ZAxis_Op
AJC_Button09
AJC_Button10
AJC_Button11
AJC_Button12
AJC_Button13
AJC_Button14
AJC_Button15
AJC_Button16
AJC_Button17

AJC_Button18
AJC_Button19
AJC_Button20
AJC_Button21
AJC_Button22
AJC_Button23
AJC_Button24
AJC_Button25
AJC_Button26
AJC_Button27
AJC_Button28
AJC_Button29
AJC_Button30
AJC_Button31
AJC_Button32

This is a global section, INI only settings

[Actions]

Action0001=File Manager / Assign,0,21,11,6,0,1,9,13,

Action0002=Hover! / Stop

Action0003=Program Manager / Assign,0,6,55,53,0,1,9,13,

The Actions section defines the settings for the AutoSense feature. EnableActions=1 enables the AutoSense feature. Note that this will affect system performance, and adding many different applications to the Action List may slow down the system considerably! EnableActions=0 disables AutoSense, and none of the Action Settings are used within Joystick-To-Mouse.

The Action0001, Action0002, etc. listing provides up to 100 application settings - the text before the slash (/) defines the name of the Window. It matches these settings against the Window name as established by the Application. It will match up to the length of the text entry here. A single trailing space is ignored. For example, entering a "W" would match ALL windows that start the Window Name with a "W". The Window name is displayed in the Caption bar within Windows. The 2 Actions are Assign & Stop.

Assign - will re-assign button settings as defined within Joystick-To-Mouse. The 8 values correspond to the same list of button settings (as in OneButton1, OneButton2, etc. above). The trailing comma is important! In all cases, accessing these through Joystick-To-Mouse is recommended. Stop - this will Stop Joystick-To-Mouse Operation (i.e.

Joystick-To-Mouse OFF) while the window is active. This is useful for games or other applications that may use the joystick device. Once another Window becomes active, the Joystick-To-Mouse operation will begin automatically (i.e. Joystick-To-Mouse ON).

This is a global section, INI only settings

[External]

ControlPanel1=CONTROL.EXE JOY.CPL,,0

ControlPanel2=CONTROL.EXE JOY.CPL,,1

ControlPanel3=CONTROL.EXE SYSDM.CPL,Add New Hardware,1

ControlPanel4=CONTROL.EXE SYSDM.CPL,Add New Hardware,2

ControlPanel5=CONTROL.EXE MMSYS.CPL,,4

These are the various entry points into the various control panel applets for handling the joystick in the various versions of windows. They should not be modified except under direction from Joystick-To-Mouse support.

MaxValue=65280

HighMaxForce=65000

LowMaxForce=500

HighMid=35000

LowMid=30000

HighEnhance=62000

LowEnhance=3000

These are internal settings used to control various actions within the enhanced settings. These should not be modified except under direction from Joystick-To-Mouse support.

POVRight=9000

POVDown=18000

POVLeft=27000

POVUp=0

POVRange=1000

These are the settings used for the POV actions, in degrees x 100 These are the default settings, with the Range used to handle continuous readings (most joysticks use discrete, fixed values).

ButtonAccelDelay=20

This is a count down used when the buttons are set to move the cursor (X or Y). This handles the 2 steps used during motion to increase the speed. Changing the value lower

increases the speed quicker, higher, the longer it will take to increase speed. To disable the acceleration, set Multiply=0.

Chapter 8. Joystick-To-Mouse Files and Installation Information

Joystick-To-Mouse Files & File Notes & Installation Information

Joystick-To-Mouse Files

JOYSTICK-TO-MOUSE FILE NOTES

Located in the Joystick-To-Mouse Installation Directory:

JOY2MSE.EXE - The Joystick-To-Mouse executable (asInvoker)

JOY2MSE.asInvoker.EXE - The Joystick-To-Mouse executable (asInvoker)

JOY2MSE.highestAvailable.EXE - The Joystick-To-Mouse executable (highestAvailable)

JOY2MSE.requireAdministrator.EXE - The Joystick-To-Mouse executable (requireAdministrator)

JOY2MSE.INI - Joystick-To-Mouse Initialization file

JOY2MSE.ORG - Joystick-To-Mouse Initialization file (as installed original)

JOY2MSE_RUN.EXE - Ease of Access interface file

JTMADMIN.EXE - Ease of Access registry setup/remove

JTMADMIN64.EXE - 64-bit version of JTMADMIN.EXE

IMGJTM.EXE - IMG Joystick-To-Mouse Service (old/not used)

IMGUTIL.EXE - IMG Utility (install, un-install)

IMGVERS.DLL - IMG Version library for version of Windows

- HELP*.html, HELP\IMAGES*.png - Joystick-To-Mouse Help

LICENSE.EXE - IMG License Manager

LICENSE2.EXE - IMG License Manager read-only/asInvoker

LICENSE.LIC - License File

LICENSE.ORG - License File (as installed original)

KEYBRD01.KMF - Keyboard macro descriptions for Macro capability

MAC00001.KMF - MacroBat support file

MACRO1.KMF - Macro String 1 macro (encoded)

MACRO2.KMF - Macro String 2 macro (encoded)

MANIFEST.TXT - Manifest of installed files

MACROBAT.EXE - Joystick-To-Mouse support, Macro Batch Utility

MANAGE.EXE - Control (console) manager for Joystick-To-Mouse Service

README.TXT - Installation text file

UNZIP32S.DLL - Unzip support library (install)

AMBBRDG5.WAV - Start up wave file

DING1.WAV - Ding

POP.WAV - Pop

PLUNK.WAV - Plunk

SONIC.WAV - Whoosh

- MANAGER\ESTABLISH.EXE - this is a post installation utility that establishes or updates the IMG Download Manager and IMG License Manager files as outlined below.

Located in \Program Files\Common Files\Innovation Management Group\Download Manager directory:

- IMGCLEAN.EXE - used to complete uninstall of software, required for Control Panel Add/Remove Programs

- IMGDLM.EXE - The IMG Download Manager - Installed by MANAGER\ESTABLISH.EXE

- IMGNET.DLL - The IMG Download Manager Library - Installed by MANAGER\ESTABLISH.EXE

Located in \Program Files\Common Files\Innovation Management Group\License Manager directory:

- LICENSE.DLL - library used by the IMG License Manager and IMG Download Manager

Older Joystick-To-Mouse Files

Note: This information is preserved for reference, and to remind everyone of the history of Windows and this product. This product had to deal with the down-down-up-up double-click issue in Windows 95, and that should never be forgotten.

For Windows 3.x, 16-bit files are required. For all other versions of Windows, 32-bit files are used (Win32). If applicable, the categories are indicated next to the file. Note that some data files are used by both 16-bit & 32-bit versions.

The following files are REQUIRED for proper operation of Joystick-To-Mouse:

- JOY2MSE.EXE (Windows 3.x)
- MYTJLIB.DLL (Windows 3.x)
- BWCC.DLL (Windows 3.x)
- JOY2MS32.EXE (Win32)
- MACROBAT.EXE (Win32)
- IMGJTM.EXE (Win32)
- MANAGE.EXE (Win32)
- IMGUTIL.EXE (Win32)
- IMGVERS.DLL (Win32)
- LICENSE.EXE (Win32)
- LICENSE.LIC (Win32)
- KEYBRD01.KMF
- MAC00000.KMF (Win32)
- MACRO1.KMF
- MACRO2.KMF
- JOY2MSE.INI
- JOY2MSE.HLP (Windows 3.x)
- JTM.HLP (Win32)
- JTM.CNT (Win32)

The following files are REQUIRED for proper operation of your joystick (located the WINDOWS\SYSTEM directory):

- IBMJOY.DRV
- JOYSTICK.CPL

NOTE: This applies only to Windows 3.x

The following files comprise the DOS based Joystick Diagnostic that can be used to verify proper joystick installation at the hardware level of the computer. They are not required for proper operation, and are located in the installation directory.

- JD.EXE - DOS based Joystick Diagnostic utility
- JD.TXT - Basic information about the JD.EXE utility

NOTE: These files will operate in Windows 3.x, 95/98/Me. In Windows NT/2000/XP, it will depend on the system configuration. These files poll the game port from a DOS based machine. In some virtual machines in more advanced versions of Windows, these

files may still operate properly. Since the advanced versions use a Hardware Abstraction Layer to insulate the hardware from the software, these files really offer no additional info in these environments.

The following files include textual information with important and useful information about Joystick-To-Mouse, but are not required for operation:

- JOY2MSE.WRI - On-Line manual (Windows 3.x)
- JTMNOTES.WRI - Technical Notes, This File

The following files are wave files for sounds. They are not required for operation, but the corresponding sounds will not be played if the files do not exist in the installation directory.

- AMBBRDG5.WAV
- DING1.WAV
- POP.WAV
- PLUNK.WAV
- SONIC.WAV

The following files are included with the distribution media but are not installed onto the hard drive.

- SETUP.EXE - Program to Install & Un-Install Joystick-To-Mouse
- SETUP.INI - Initialization file for Setup Program
- LICENSE.TXT - End-User License Agreement for Joystick-To-Mouse
- METER.DLL - Library for Installation meter control
- VER.DL_ - Version Library for Installation
- LZEXPAND.DL1 - File De-Compression Library for Installation

Located in the JOYSTICK subdirectory on the distribution media.

- OEMSETUP.INF - Information file for Joystick driver
- JLICENSE.TXT - End-User License Agreement for Joystick Driver
- JOYSTICK.TXT - Information about the Joystick Driver

Located in the Windows System Directory (Windows 3.x):

IBMJOY.DRV - Joystick Driver for IBM compatible computers

JOYSTICK.CPL - Joystick calibration applet (Control Panel)

NOTE: These only apply to Windows 3.x.

INSTALLATION INFORMATION

The following is for Windows 3.x. For Windows 95 and later, it is strongly recommended you use the SETUP.EXE program to ensure a proper installation.

This section is for users intimately familiar with DOS and Windows and is provided to document system changes.

The following information is included to document the changes made to a system by the Joystick-To-Mouse Setup program. The product may be installed manually with this information by using the EXPAND command (EXPAND.EXE is located in the Windows subdirectory), and referencing the files and their locations above (JOYSTICK-TO-MOUSE FILE NOTES).

The default Joystick-To-Mouse subdirectory is a subdirectory of the default Windows directory called JOY2MSE. On most systems this would be C:\WINDOWS\JOY2MSE.

To install Joystick-To-Mouse manually, you must do the following:

While at the DOS command prompt -

- Create the default directory
- Change into the new directory
- Expand the required files from the distribution media into the current directory (e.g. EXPAND A:JOY2MSE.EX_ JOY2MSE.EXE)
- Change to the Windows system directory and copy the JOYSTICK.CPL and IBMJOY.DRV files from the distribution media.
- Make the following changes to the CONTROL.INI file (located in the Windows subdirectory)
- Section Heading & Line entry [drivers.desc]
ibmjoy.driv=Driver for Joystick
[Userinstallable.drivers]
joystick=ibmjoy.driv
[related.desc]
joystick=
- Make the following changes to the SYSTEM.INI file (located in the Windows subdirectory)
- Section Heading & Line entry
[drivers]
joystick=ibmjoy.driv

```
[ibmjoy.drv]
```

```
Axes=2
```

NOTE: Not in Windows 95 - you must use the drivers shipped with Windows 95.

Windows must be started from the DOS prompt to implement the changes to the system.

While in Windows...

From the Program Manager, create a group, or select the group where you want to install the Joystick-To-Mouse icon (if you place the icon in the StartUp group, it will automatically run every time Windows is run). Then select File, New, then Program item, and enter the Description as "Joystick-To-Mouse", and then enter the installation subdirectory along with JOY2MSE.EXE (e.g.

C:\WINDOWS\JOY2MSE\JOY2MSE.EXE) in the Command line, then click OK.

The joystick driver may be added (if required) through the Control Panel's Drivers Applet.

The OEMSETUP.INF file is included with the IBMJOY.DRV so Windows can setup the driver. To do so, click on the Drivers icon while in Control Panel, then click on Add, then select the proper drive & directory. On the floppy, the driver IBMJOY.DRV & its associated Control Panel applet JOYSTICK.CPL are located in the JOYSTICK subdirectory. When using the Control Panel to add a new driver, enter A:\JOYSTICK (or B:\JOYSTICK) as the path.

Joystick-To-Mouse Command Line Options

This section documents the available Command Line options. Typically this is appended to the startup command (Target), i.e. "C:\Program Files\Joystick-To-Mouse\JOY2MSE.exe SOMEOPTION" in the shortcut.

NOSPLASH

The NOSPLASH option can be placed on the command line / startup shortcut, and this will force the splash screen to be bypassed and not shown.

TOUCHSCREEN

The TOUCHSCREEN option can be placed on the command line / startup shortcut, and this will force the check for the physical mouse to be bypassed and no warning/failure will occur, so Joystick-To-Mouse can be run on a system without a physical mouse.

Note: When Joystick-To-Mouse is started via the "Run at Start Screen" option, the JOY2MSE_RUN.exe is used to launch Joystick-To-Mouse, so using this command line is not possible. As an Administrator, if a file named TOUCHSCREEN.INI is created (file contents are not used, only the files existence) in the same folder as

JOY2MSE.exe (e.g. \Program Files\Joystick-To-Mouse), then this will act as if the command line option is used.

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