

# TRACKBALL PRO™



.....  
**User Manual  
Version 1.0**

**TRACKBALL PRO  
OFFERS MORE  
CONTROL AND  
WILL WORK WITH  
VIRTUALLY ALL  
MOUSE-DRIVEN  
SOFTWARE.**



A Joystick  
Technologies, Inc.  
Company

# TRACKBALL PRO™

## User Manual • Version 1.0

### TABLE OF CONTENTS

Introduction .....	2	d. Recommended Switch Settings	
Package Contents .....	2	e. Troubleshooting	
How to Use the TRACKBALL PRO ..	2	f. Pin Assignments	
Cleaning .....	3	Bus Model .....	12
README.TXT (Serial, PS/2, and Bus		a. Compatibility	
Models only).....	3	b. Installing the Bus Card	
Driver Installation (Serial, PS/2, and Bus		c. Mode Selection	
Models only).....	4	d. Recommended Switch Settings	
CHMOUSE.COM (Mouse Driver) ....	4	e. Troubleshooting	
(Serial, PS/2, and Bus Models only)		f. Pin Assignments	
Serial Model .....	5	Sun Microsystems™ Model .....	16
a. Compatibility		a. Compatibility	
b. Connecting the Trackball		b. Connecting the Trackball	
c. Mode Selection		c. Mode Selection	
d. Recommended Switch Settings		d. Recommended Switch Settings	
e. Troubleshooting		e. Pin Assignments	
f. Pin Assignments		ACCESS.bus Model .....	18
PS/2 Model.....	9	a. Compatibility	
a. Compatibility		b. Connecting the Trackball	
b. Connecting the Trackball		c. Mode Selection	
c. Mode Selection		d. Recommended Switch Settings	
		e. Modes of Operation	
		f. Adjusting Cursor Responsiveness	
		g. Pin Assignments	
		Technical Support.....	19
		FCC Notice .....	19
		Warranty .....	20
		Trademarks .....	21

## INTRODUCTION

a. This manual provides information relative to all models of the CH Products TRACKBALL PRO™ (formerly called ROLLERMOUSE™). Those models include:

1. Serial model (IBM) (starts on page 5)
2. PS/2 model (IBM) (starts on page 9)
3. Bus model (IBM) (starts on page 12)
4. Sun Microsystems model (starts on page 16)
5. ACCESS.bus model (starts on page 18)

b. The TRACKBALL PRO provides superior cursor control and performance while maximizing limited desk space. The TRACKBALL PRO has been extensively tested in our manufacturing facility to assure reliable performance.

*Note: Each model of the TRACKBALL PRO is unique and cannot be interchanged for other models.*

## PACKAGE CONTENTS

- a. This package contains the following:
1. One TRACKBALL PRO
  2. One User Manual
  3. One diskette containing the installation software (Serial, PS/2, and Bus models only)

## HOW TO USE THE TRACKBALL PRO

a. The most obvious feature of the TRACKBALL PRO (Figure 1) is the directional cue (ball). The cue may be rolled in any direction providing total cursor control. Moving the cue slowly allows accurate cursor placement when greater precision is required. However, rolling the cue faster triggers the cursor to respond at a far greater rate. This feature (called acceleration) can be used to move the cursor quickly across the screen without excessive rolling of the cue.

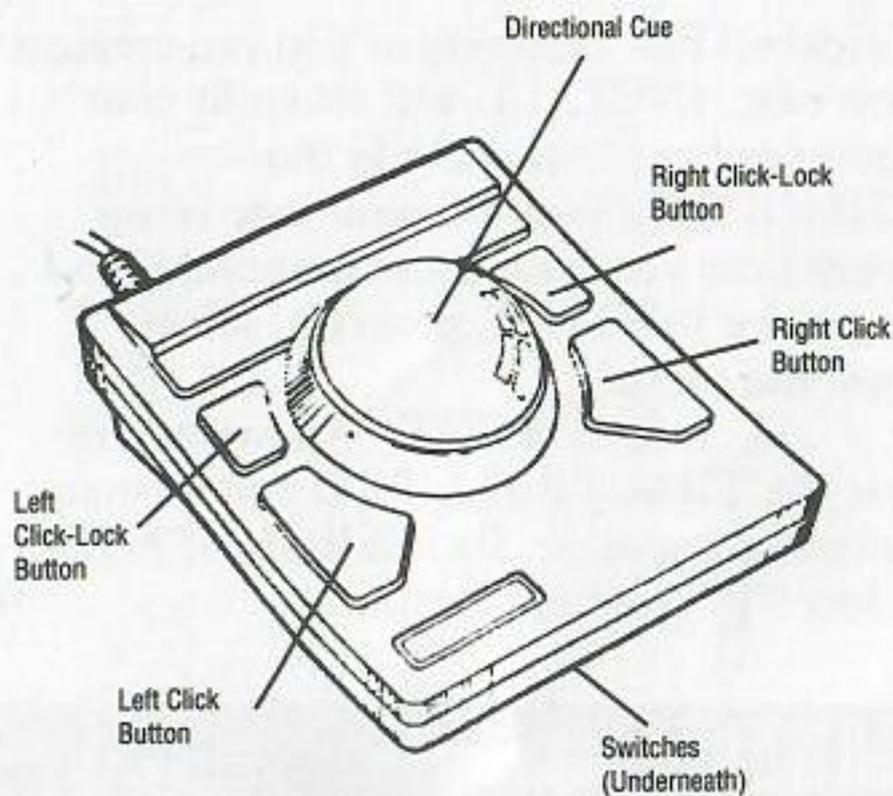


Figure 1 - The TRACKBALL PRO

## CLEANING

Although the TRACKBALL PRO is relatively easy to maintain, it may become necessary to clean the unit. The directional cue, buttons, housing, and internal parts may be cleaned with a **LIGHTLY DAMPENED** cloth (using

water or isopropyl alcohol). Before cleaning, always turn OFF your computer and disconnect the TRACKBALL PRO. Gently clean exposed portions of the cue and thoroughly dry before rotating.

To clean the stainless steel shafts and the ball support points which are located internally, you will need to remove the bottom of the case.

1. Using a Phillips head screwdriver, remove the housing screws and black rubber feet.
2. Lift off the top of the case.
3. Lift out the directional cue and clean the appropriate parts.
4. Reverse the process to reassemble the unit.

**README.TXT [SERIAL, PS/2  
AND BUS MODELS ONLY]**

The diskette enclosed with the Serial, PS/2 and Bus models contains the file README.TXT. This file provides up-to-the-minute information released after the printing of this manual.

## DRIVER INSTALLATION [SERIAL, PS/2 AND BUS MODELS ONLY]

- a. Boot up your computer.
- b. Exit to DOS if not already there.
- c. Put the TRACKBALL PRO diskette into your disk drive and log on to that drive. For example, if you have inserted the diskette into drive A, at the C:\> prompt type A: then press "Enter" and the A:\> prompt will appear.

d. Type **TBPMENU** then press "Enter".

e. You will now see a menu with 3 options. Choose the appropriate option.

1. **README.TXT** - Contains more information concerning driver preferences and settings. It is strongly recommended that you print and/or read this file for your convenience. To view, select "R" from the menu.

2. **INSTALL** - **INSTALL** will copy all TRACKBALL PRO files to the directory of your choice. You will be prompted to install the files to the

Trackball Pro directory or you can create a new one. **INSTALL** will also edit your autoexec.bat file to include the **CHMOUSE** driver for automatic setup every time you boot your computer. To begin the **INSTALL** program, select "I" from the menu.

3. **ROLLTEST** - Allows you to test the TRACKBALL PRO and its many different features. To run **ROLLTEST**, select "T" from the menu.

## CHMOUSE.COM [MOUSE DRIVER] [SERIAL, PS/2 AND BUS MODELS ONLY]

a. When you run "Install" from **TBPMENU**, **CHMOUSE** (among other files) is copied into the directory of your choice. There are many different options to this driver that allow you to personalize **TRACKBALL PRO** to meet your needs. All of these options are explained in the **README.TXT** file. Each option can be set by either editing the **MOUSE.INI** file or with command line / (switches). To

display a summary of the CHMOUSE driver command line options, type **CHMOUSE /?** at the DOS prompt at any time. This assumes CHMOUSE.COM is in the current directory or in your DOS path. If you used the default directory upon installation, it would be as follows:

At C:\> type CD\TBPRO then press "Enter." Next type CHMOUSE /? and press "Enter." Substitute your directory for TBPRO if necessary.

## SERIAL MODEL

### a. Compatibility

1. This model is compatible with the following systems (via the serial port):

- (a) IBM PC/XT/AT/386/486/Pentium and compatibles
- (b) All PS/2 Models or compatibles

### b. Connecting the Trackball

1. Turn OFF all power to the computer.
2. Attach the 9-pin female serial

connector to the available RS-232 (COM 1 through COM 4) serial port on your computer. If your computer has more than one serial port, be sure to note which COM port will be used. COM port addressing is usually defined during installation of the serial port card via jumper selection. (See README.TXT for more information on COM port selection. Select "R" from TBPMENU).

3. Set the Mode Selector switches for desired operating conditions. See "Mode Selection" for further details.

4. Turn ON the power to the computer and wait for boot up.

5. Refer to "Driver Installation" section above.

### c. Mode Selection

1. Mode selection provides a method to customize the TRACKBALL PRO to meet your personal needs. To enable the desired function, select the appropriate switch configuration (see Table I) on the bottom of the unit. Using a pencil or similar tool, slide the appropriate switches ON or OFF.

2. The TRACKBALL PRO may

be configured for any one of three modes. These include the following:

(a) Microsoft™ Mouse emulation

- In this mode, the TRACKBALL PRO uses all four buttons for click and click-lock control.

(1) Click buttons: The two larger buttons behave identical to those of the Microsoft Mouse. That is, they provide two separate and independent button functions. While using the TRACKBALL PRO, it is often necessary to execute an instruction or select an object on the screen. Use the two larger buttons (referred to as primary and secondary) for this.

(2) Click-lock buttons: The two smaller buttons provide click-lock control. These are similar to the Microsoft Mouse buttons, however, they allow the user to select an object and drag it across the screen. When you click-lock the object, it is locked. This feature enables you to rotate the cue without the difficult task of holding down the click button simultaneously. The click-lock feature may be released by pressing the click-lock

button again, or by pressing the larger click button below it.

(3) The click and click-lock features are right or left hand selectable and may be reversed if desired. See Table I.

(b) Mouse Systems™ Mouse emulation - In this mode, the TRACKBALL PRO uses all four buttons to provide three button functions.

(1) The two larger buttons serve as the primary and secondary button functions.

(2) The third button function is assigned to both of the smaller buttons.

(c) Four button mouse

(1) This mode requires special software which provides its own mouse driver and follows the Mouse Systems format. CH Products does not provide these drivers. This option has been provided for compatibility with future drivers.

3. To select the type of mouse emulation, simply put switch #2 in the appropriate position per Table I.

4. The three mouse emulation

modes allow different features for enhancing the TRACKBALL PRO.

These features are described in Table I.

**d. Recommended Switch Settings**  
(see Table I)

Switch 5 - ON

Switch 1/2/3/4/6/7/8 - OFF

**e. Troubleshooting**

1. Turn off power to the computer.
2. Secure all electrical connections firmly.
3. Ensure that the TRACKBALL PRO is plugged into the same serial port that the device driver has been installed to.
4. See "Driver Installation" above to test the TRACKBALL PRO.

5. See the "Technical Support" section at the end of this manual.

6. See the README.TXT file ("R" from TBPMENU).

**f. Pin Assignments**

Pin 1 - Not assigned

Pin 2 - Received data

Pin 3 - Transmitted Data

Pin 4 - Data terminal ready

Pin 5 - Ground

Pin 6 - Not assigned

Pin 7 - Request to send

Pin 8 - Not assigned

Pin 9 - Not assigned

## SERIAL MODEL

Switch #	ON	OFF	Definition
#1	Right/Left Functions Reversed	Normal Operation	ON-Exchanges right & left button functions. OFF-Normal Operation
#2	Mouse Systems Mode	Microsoft Mode	ON-Makes TRACKBALL PRO Mouse Systems compatible OFF- Makes TRACKBALL PRO Microsoft compatible
#3 Microsoft Mode	Disables Top Right Click-Lock Button	Enables Top Right Click-Lock-Button	ON-Top right button acts as lower right buttons. OFF-Enables top right button to perform click-lock function. Release by pressing again.
#3 Mouse Sys. Mode	Assigns 4th Button Function to Top Right Button	Normal 3-Button Operation	ON-Makes top right button the fourth button (requires special driver). OFF-Standard three-button mouse.
#4 Microsoft Mode	Disables Top Left Click-Lock Button	Enables Top Left Click-Lock Button	ON-Top left button acts as lower left button. OFF-Enables top left button to perform click-lock function. Release by pressing again.
#4 Mouse Sys. Mode	Assigns 4th Button Function to Top Left Button	Normal 3-Button Operation	ON-Makes top left button the fourth button (requires special driver) OFF-Standard three-button mouse.
#5	Doubles Cursor's Speed (400 CPI)	Normal Operation	ON-This will double the cursor's speed. Useful on monitors with large screens. OFF-Normal Operation.
#6	Halves Cursor's Speed (100 CPI)	Normal Operation	ON-This will reduce the cursor's speed. Useful when greater accuracy is desired. OFF-Normal Operation
#7    #8	Baud Rate		1200 bps. is the normal communication rate for standard applications. 2400, 4800, and 9600 baud rates are reserved for special applications that require faster communication rates. *Microsoft, Mouse Sys. and CH Products mouse drivers only support 1200 bps.
OFF   OFF	1200 bps Normal		
ON    OFF	2400 bps Special		
OFF   ON	4800 bps Special		
ON    ON	9600 bps Special		

Table I - Serial Model Switch Settings for Mode Selection

## PS/2 MODEL

### a. Compatibility

1. This model is compatible with all IBM PS/2 or compatible systems which have PS/2 compatible mouseports. The PS/2 model only uses the two button Microsoft compatible driver.

### b. Connecting the Trackball

1. Turn off power to the computer.  
2. Attach the 6 pin male connector to the IBM PS/2 mouse auxiliary port on the computer. See your computer manual for auxiliary port identification.

3. Set the Mode Selector switches for desired operating conditions. See "Mode Selection" for further details.

4. Turn ON the power to the computer and wait for boot up.

5. Refer to "Driver Installation" section above.

### c. Mode Selection

1. Mode selection provides a method to customize the TRACKBALL PRO to meet your personal needs. To enable the desired function, select the

appropriate switch configuration (see Table II) on the bottom of the unit. Using a pencil or similar tool, slide the appropriate switches ON or OFF. A typical mode selection setting has switch 5 ON and all other switches OFF.

2. The TRACKBALL PRO may be configured as follows:

(a) Microsoft™ Mouse emulation  
In this mode, the TRACKBALL PRO uses all four buttons for click and click-lock control.

(1) Click buttons: The two larger buttons behave identical to those of the Microsoft Mouse. That is, they provide two separate and independent button functions. While using the TRACKBALL PRO, it is often necessary to execute an instruction or select an object on the screen. Use the two larger buttons (referred to as primary and secondary) for this.

(2) Click-lock buttons: The two smaller buttons provide click-lock control. These are similar to the Microsoft Mouse buttons, however, they allow the user to select an object and drag it across

the screen. When you click-lock the object, it is locked. This feature enables you to rotate the cue without the difficult task of holding down the click button simultaneously. The click-lock feature may be released by pressing the click-lock button again, or by pressing the larger click button below it.

(3) The click and click-lock features are right or left hand selectable and may be reversed if desired. See Table II.

**d. Recommended Switch Settings  
(see Table II)**

Switch 5 - ON

Switch 1/2/3/4/6/7/8 - OFF

**e. Troubleshooting**

1. Turn off power to the computer.
2. Secure all electrical connections firmly.
3. Ensure that the TRACKBALL PRO is plugged into the PS/2 mouse auxiliary port and not the keyboard port. Refer to the computer instruction manual for auxiliary port identification.
4. See "Driver Installation" above to test the TRACKBALL PRO.
5. See the "Technical Support" section at the end of this manual.
6. See the README.TXT file. Select "R" from TBPMENU.

## PS/2 MODEL

Switch #	ON	OFF	Definition
#1	Right/Left Functions Reversed	Normal Operation	ON-Exchanges right & left button functions. OFF-Normal Operation
#2	No Operation	No Operation	This switch is undefined at this time.
#3	No Operation	No Operation	This switch is undefined at this time.
#4	No Operation	No Operation	This switch is undefined at this time.
#5	Doubles Cursor's Speed Speed (400 CPI)	Normal Operation	ON-This will double the cursor's speed. Useful on monitors with large screens. OFF-Normal Operation
#6	Halves Cursor's Speed Speed (100 CPI)	Normal Operation	ON-This will reduce the cursor's speed in half. Useful when greater accuracy is desired. OFF-Normal Operation
#7	Disables Both Click-Lock Buttons	Enables Both Click-Lock Buttons	ON-Top buttons function identically to lower buttons. OFF-Enables top buttons to perform as click-lock buttons.
#8	No Operation	No Operation	This switch is undefined at this time.

Table II - PS/2 Model Switch Settings for Mode Selection

f. Pin Assignments

Pin 1 - Data

Pin 2 - Not assigned

Pin 3 - Ground

Pin 4 - 5 Volts

Pin 5 - Clock

Pin 6 - Not assigned

## BUS MODEL

a. **Compatibility**

1. This model is compatible with all software used by the Microsoft Bus mouse, and requires an IBM PC/XT/AT/386/486/Pentium or compatible, or PS/2 or compatible (via ISA/EISA expansion slot). – Not microchannel machines.

b. **Installing the Bus card**

1. This Bus card is an electronic device sensitive to static electricity. Before handling the card, touch the metal chassis of your computer. Remove the card from the antistatic package. Place the antistatic package on the table then place the card on top of the package.

2. Examine the card for a row of jumpers. These jumpers are numbered IRQ2 through IRQ5 and directly correspond to an IRQ (interrupt) setting. Each position consists of two metal pins. To select an IRQ setting, connect the two pins by using the supplied small plastic jumper clip. If your computer is PC/XT compatible, you should have the clip on IRQ 2. If it is an AT compatible, including 386, 486, and Pentium machines, you should have the clip on IRQ 5. The Bus card cannot share IRQ's so if some other adapter card is using this address, it must be changed.

3. Turn OFF all power to the computer and unplug from the power source.

4. Remove the cover of the computer and locate an available 8 or 16 bit ISA/EISA expansion slot. Read the computer instruction manual for special adapter card installation instructions.

*Note: It is extremely important that all peripheral cards be properly installed. Incorrect installation can cause severe damage to your computer. If you have any doubt*

*computer. If you have any doubt about the proper installation of this product, obtain expert assistance.*

5. Carefully remove the existing expansion slot backplate cover. Then gently insert the BUS card and tighten the appropriate locking screw.

6. Replace the cover to the computer and attach the TRACKBALL PRO to the Bus card.

7. Set the Mode selector switches for desired operating conditions. See "Mode Selection" for further details.

8. Turn ON the power to the computer and wait for boot up.

9. Refer to "Driver Installation" section above.

### **c. Mode Selection**

1. Mode selection provides a method to customize the TRACKBALL PRO to meet your own personal needs. To enable the desired function, select the appropriate switch configuration (see Table III) on the bottom of the unit. Using a pencil or similar tool, slide the appropriate switches ON or OFF. A

typical mode selection setting has switch 5 ON and all other switches OFF.

2. The TRACKBALL PRO may be configured as follows:

(a) Microsoft™ Mouse two button emulation - In this mode, the TRACKBALL PRO uses all four buttons for click and click-lock control.

(1) Click buttons: The two larger buttons behave identical to those of the Microsoft Mouse. That is, they provide two separate and independent button functions. While using the TRACKBALL PRO, it is often necessary to execute an instruction or select an object on the screen. Use the two larger buttons (referred to as primary and secondary) for this.

(2) Click-lock buttons: The two smaller buttons provide click-lock control. These are similar to the Microsoft Mouse buttons, however, they allow the user to select an object and drag it across the screen. When you click-lock the object, it is locked. This feature enables you to rotate the cue without the difficult task of holding down the click button

may be released by pressing the click-lock button again, or by pressing the larger click button below it.

(3) The click and click-lock features are right or left hand selectable and may be reversed if desired. See Table III.

(b) Microsoft™ 3-button mouse - In this mode, the TRACKBALL PRO uses all four buttons to provide three button functions.

(1) The two larger buttons serve as the primary and secondary button functions.

(2) The third button function is assigned to both of the smaller buttons.

(3) This mode must be supported by special software to get proper operation from the "third" button.

**d. Recommended Switch Settings**  
(see Table III)

Switch 5 - ON

Switch 1/2/3/4/6/7/8 - OFF

#### e. Troubleshooting

1. Turn off all power to the computer.
2. Secure all electrical connections.
3. Make sure no other device is occupying the IRQ you have selected on the BUS card. If there is a conflict, it may be eliminated by changing the IRQ of one of the devices.
4. See the "Driver Installation" section.
5. See the README.TXT file.

#### f. Pin assignments

Pin 1 - +5Volts	Pin 2 - XA
Pin 3 - XB	Pin 4 - YA
Pin 5 - YB	Pin 6 - SW1
Pin 7 - SW2	Pin 8 - SW3
Pin 9 - Ground	

## BUS MODEL

Switch #	ON	OFF	Definition
#1	Right/Left Functions Reversed	Normal Operation	ON-Exchanges right & left button functions. OFF-Normal Operation
#2	3 Button Mode	2 Button Mode	ON- Allows three button mode operation. OFF-Allows two button operation
#3 2 Button Mode	Disables Top Right Click-Lock Button	Enables Top Right Click-Lock Button	ON-Top right button acts as lower right button. OFF-Enables top left button to perform click-lock function.. Release by pressing again.
#4 2 Button Mode	Disables Top Left Click-Lock Button	Enables Top Left Click-Lock Button	ON-Top left button acts as lower left button. OFF-Enables top left button to perform click-lock function. Release by pressing again.
#5	Doubles Cursor's Speed	Normal Operation	ON-This will double the cursor's speed. Useful on monitors with large screens. OFF-Normal Operation
#6	Halves Cursor's Speed	Normal Operation	ON-This will reduce the cursor's speed in half. Useful when greater accuracy is desired. OFF-Normal Operation.
#7	Reverses Vertical Motion	Normal Operation	ON-Reverses the vertical ball to cursor motion. OFF-Normal Operation
#8	Reverses Horizontal Motion	Normal Operation	ON-Reverses the horizontal ball to cursor motion. OFF-Normal Operation.

Table III - Bus Model Switch Settings for Mode Selection

## SUN MICROSYSTEMS™ MODEL

### a. Compatibility

1. This model is compatible with Sun Unix 3.0 and 4.0, Solaris x86, and all Solaris SPARC systems.

### b. Connecting the Trackball

1. Turn off the computer.

2. Attach the round 8-pin male connector of the Trackball to the keyboard mouse port on your computer. See your computer instruction manual for port identification.

3. Set the Mode Selector for desired operating conditions. See Mode Selection for further details.

4. Turn on the computer and wait for boot up.

### c. Mode Selection

1. Mode selection provides a method to customize the Trackball Pro to meet your own personal needs. To enable the desired function, select the appropriate switch or group of switches located on the bottom of the unit (see Table IV). Use a pencil or similar device to slide the switches ON or OFF. (See Table IV for recommended switch settings).

### d. Recommended Switch Settings (see Table IV)

Switch 3/4/5 - ON

Switch 1/2/6/7/8 - OFF

### e. Pin Assignments

Pin 1 - Not assigned

Pin 2 - Ground

Pin 3 - Supply (5 Volts)

Pin 4 - Data

## SUN MODEL

Switch #	ON	OFF	Definition
#1	Right/Left Functions Reversed	Normal Operation	ON-Exchanges right & left button functions. OFF-Normal Operation
#2			No Assigned Function at this time.
#3/#4	Enables Top Click Lock Buttons	Normal Operation (3 Button Mode)	Both ON-Enables top buttons to perform click-lock functions for two lower buttons. Both OFF-Top buttons perform middle mouse button function.
#5	Doubles Cursor's Speed	Normal Operation	ON-This will double the cursor's speed. Useful on monitors with large screens.
#6	Halves Cursor's Speed	Normal Operation	ON-This will reduce the cursor's speed in half. Useful when greater accuracy is desired.
#7/#8			Should remain OFF for Normal Operation.

Table IV - Sun Microsystems Model Switch Settings for Mode Selection

## ACCESS.bus MODEL

### a. Compatibility

1. This model is compatible with any computer with an ACCESS.bus peripheral interface.

### b. Connecting the Trackball

1. Attach the modular-type connector to any available ACCESS.bus port on your computer.

### c. Mode Selection

1. Mode selection provides a method to customize the Trackball to meet your own personal needs. To enable the desired function, select the appropriate switch from the eight located on the bottom of the unit. Use a pencil or other similar object to slide the switches ON or OFF. The eight mode selection switches perform the following functions:

Switch 1:

ON - Click Lock Mode

OFF - 3 Button Mouse Mode

Switch 2:

ON - Normal Polarity

OFF - Reverse polarity left to right, right to left

Switch 3 thru 8:

Not assigned

### d. Recommended Switch Settings (see above paragraph)

Switch 1/2 - ON

Switch 3/4/5/6/7/8 - OFF

### e. Modes of Operation

1. The Trackball has two basic modes of operation:

(a) The Click Lock Mode

(b) The 3 Button Mouse Mode

2. In the Click Lock Mode, the Trackball functions as a two button mouse (left and right). A click on the upper left button locks the lower left button, and the upper right button locks the lower right button. A second click on the upper button or the next click on the lower button releases the corresponding button from the lock position.

3. In the 3 Button Mouse Mode, both upper buttons report as the middle mouse button.

4. To support left handed users, the Trackball has a second mode switch that switches between left and right. In the Reverse Polarity Mode (switch 2 on

bottom of case set to OFF), pressing the right button is interpreted by the computer as a left button event and vice versa.

#### f. Adjusting Cursor

##### Responsiveness

1. The resolution of the Trackball is pre-set at the factory. However, the responsiveness of the cursor may be adjusted by modifying the ACCESS.bus mouse driver .INI file. Consult your ACCESS.bus mouse driver manual for instructions.

#### g. Pin Assignments

Pin 1 - Ground

Pin 2 - SDA

Pin 3 - Supply (5 Volts)

Pin 4 - SCL

may contact us on any of the following on-line services:

CH Products (619)598-3224 (24 hrs)

BBS:

AppleLink: CHPRODUCTS

CompuServe: GO GAMEDPUB

GENie: CH.Products

America OnLine: CHProducts

Prodigy: FBVU54A

Delphi: CHProducts

Internet: CHProducts@aol.com

Internet:chproducts@applelink.apple.com

## FCC NOTICE

Certified to comply with the limits for a Class B computing device pursuant to Subpart B of Part 15 of FCC Rules. See instructions if interference to radio reception is suspected.

**PLEASE NOTE:** In order for an installation of this product to maintain compliance with the limits for a Class B device, you must use shielded cables for the connection of any devices external to this product.

## TECHNICAL SUPPORT

a. For Serial, Bus and PS/2 versions see the README.TXT file.

b. If you have any questions other than those addressed in this manual, please call CH Products at 619-598-2518 and ask for Technical Support. Additionally, you

**WARNING:** This equipment generates and uses radio frequency energy and if not installed and used properly, in strict accordance with manufacturer's instructions, it may cause interference with radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart B of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient the receiving antenna.
- Relocate the computer with respect to the receiver.
- Move the computer away from the receiver.
- Plug the computer into a different

outlet so that the two devices are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful:

"How to Identify and Resolve Radio-TV Interference Problems" U.S. Government Printing Office, Washington DC, 20402, Stock No. 004-000-00345-4.

## WARRANTY

The TRACKBALL PRO is warranted to the original purchaser to be free from defects in material and workmanship for a period of one year from the date of purchase. During this warranty period, CH Products will, at its option, repair or replace, at no charge, any component determined to be defective.

The liability under this warranty is limited to the repair of and/or replacement of the defect or defective part at our

factory, and does not include shipping expenses.

The warranty does not apply if, in the opinion of CH Products, the TRACKBALL PRO has been damaged by accident, abuse, improper usage, or as a result of service or modification by other than CH Products.

**NO OTHER WARRANTIES ARE EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF SALABILITY AND FITNESS FOR A PARTICULAR PURPOSE. CH PRODUCTS IS NOT RESPONSIBLE FOR CONSEQUENTIAL DAMAGES. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.**

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

To obtain warranty services, send the

TRACKBALL PRO, postage prepaid, with a check for \$5.00 to cover shipping and handling, together with a dated proof of purchase to:

CH Products  
Customer Service  
970 Park Center Drive  
Vista, CA 92083  
619-598-2518

## TRADEMARKS

Microsoft is a registered trademark of Microsoft Corporation. ACCESS.bus is a registered trademark of ACCESS.bus Industry Group. Mouse Systems is a registered trademark of Mouse Systems Corporation, Inc. Sun, Sun Microsystems, and Solaris are registered trademarks of Sun Microsystems Inc. PS/2 is a registered trademark of the IBM Corporation.