FLIGHTSTICK PRO™ FOR MACINTOSH

JETSTICK™ FOR MACINTOSH

User Manual
Version 1.0

a. The FLIGHTSTICK PRO for Macintosh (Figure 1) and the JETSTICK for Macintosh (Figure 2) are joysticks for the Apple Macintosh (Mac) family. They connect to the Apple Desktop Bus (ADB) of the Mac. Each can control the mouse cursor or emulate keypresses. The FLIGHTSTICK PRO offers four programmable buttons, which include a trigger and three fire buttons. In addition it offers a throttle control and an eight way switch which are also programmable. The JETSTICK offers a trigger and one fire button which are programmable.

b. In the basic mode each joystick emulates a mouse. Each either moves the mouse cursor in relative mode (i.e., the cursor starts to move in the direction the stick is pointed) or they can control the cursor in absolute mode (i.e., releasing the stick to the center position will center the mouse cursor on the screen, likewise pulling it to upper left corner will place the cursor in the upper left corner of the screen). Additionally, each offers emulation of the keyboard by translating stick movement into keypresses.

c. The joysticks can be used simultaneously with a keyboard, mouse, and other ADB devices.

d. The joysticks come with a Control Panel file that allows the setting of various parameters such as speed and key codes. Settings can be saved for several hundred different programs. When a pro-
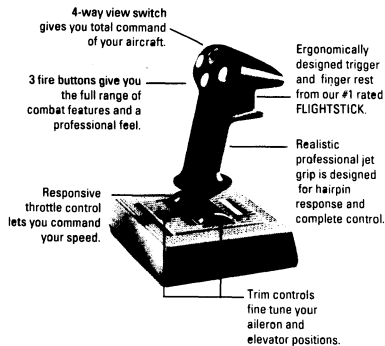

4-way view switch gives you total command of your aircraft.

3 fire buttons give you the full range of combat features and a professional feel.

Ergonomically designed trigger and finger rest from our #1 rated FLIGHTSTICK.

Realistic professional jet grip is designed for hairpin response and complete control.

Responsive throttle control lets you command your speed.

Trim controls fine tune your aileron and elevator positions.

Figure 1 - The FLIGHTSTICK PRO

Button #2

Button #1

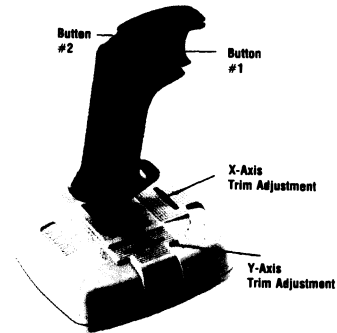X-Axis Trim Adjustment

Y-Axis Trim Adjustment

Figure 2 - The JETSTICK

gram is started for which settings exist, the settings will be automatically activated.

e. System requirements: Any Macintosh with ADB except Mac 128, 512, 512e and MacPlus; System 6.0.7 or later (also 7.x). Also compatible with the Apple PowerMacintosh. Minimum memory for System 7.x should be 4MB.

PACKAGE CONTENTS

a. The joystick package contains:

1 FLIGHTSTICK PRO or 1 JETSTICK
1 Diskette containing the Control Panel
    software
1 User Manual

CONNECTING THE JOYSTICK

a. Switch off your computer.

Note: ADB devices should only be connected to the Mac when it is switched off, otherwise your Mac or the joystick might be damaged!

b. Insert the joystick ADB plug into a free ADB socket on your Mac or keyboard.

Note: The joystick has an ADB cable with a feed through plug that allows for the insertion of the connector of another ADB device.

c. If there is no free socket on your Mac or keyboard you may insert the joystick connector anywhere between two ADB devices (e.g., between the keyboard and the mouse).

d. Switch on your Mac. If the connection has been done successfully, you will be able to control the cursor with the joystick.

INSTALLING THE SOFTWARE

a. The supplied diskette contains the files:
    — Flightstick Pro Control Panel or Jetstick
        Control Panel
    —Flightstick Pro Prefs or Jetstick Prefs
b. For System 7.x
    (1) Select all of the above files and drag them onto the System Folder icon on your hard disk.
    (2) The system will ask you if some of the files should be copied to specific locations in the System Folder. Click on "OK" so that the system will place the files in the correct places. The Control Panel files will be copied to the "Control Panels" folder. For convenience you may move the Prefs file into the "Preferences" folder but it works also if it is in the System Folder.
c. For System 6
    (1) Select the Control Panel and Prefs files and drag them into your System Folder.

d. Restart your computer. During start-up one of the symbols in Figure 3 should appear on the screen to indicate that you have correctly installed the software.

FLIGHTSTICK PRO   JETSTICK
Figure 3 - Symbols denoting correct joystick installation

e. Troubleshooting
(1) Should the software not be able to detect the joystick, the same symbol will be crossed out on the screen. If this is the case, check all cable-connections.

(2) If no symbols appear on the screen, the software has not been correctly installed. It may either be in the incorrect folder (e.g., the Control Panels folder in the System Folder under System 7 and in the System Folder under System 6) or the System Folder you installed it in is not used for starting the machine.

f. If you now move the joystick in any direction, the cursor will move in the same direction. Forward/backward movements of the joystick correspond to upward/downward movements of the mouse, and left or right movements correspond to the equivalent mouse movements.

g. Now open the Control Panel under the Apple menu. You will find a new device named Flightstick Pro or Jetstick there.

a. To avoid setting the joystick parameters for each individual program, you can associate and save settings for a specific program via the Control Panel.

b. When you open the Control Panel, you will see the dialog box found in Figure 4. If you have a color or gray scale monitor with 256 or more colors or shades, you will get a slightly different dialog box with a 3D design.

Figure 4 - The Control Panel (with System 7.x)

c. Dialog box description for the Control Panel

(1) List Box - contains all programs for which settings exist. When you select an item on the list by clicking on it the joystick settings saved for this item are activated except for screen resolution and loudness. Changes made to the selected setting are stored automatically. The first three items on the list have special meanings. They are always present and cannot be deleted.

(a) ◊ ◊ ◊ ◊ ◊ ◊ - a scratch setting not assigned to any program. You can try out new settings here without changing existing settings. When the Control Panel is opened, the settings for this item are always identical to those of the second item— **Unknown**.

(b) <<Unknown>> - a setting loaded for any program that has no specific setting assigned.

(c) <<Finder>> - contains settings for the Finder.

(2) **Relative...** button - works in conjunction with whichever setting is selected in the List Box. The check (√) in the button indicates that the joystick is in the Relative Mouse Mode. When this button is clicked, the Relative Mouse Mode dialog box appears (Figure 5). See "Modes" for further information.

(3) **Keys...** button - works in conjunction with whichever setting is selected in the List Box. The check (√) in the button indicates that the joystick is in the Keyboard Mode. When this button is clicked, the Keyboard Mode dialog box appears (Figure 7). See "Modes" for further information.

(4) **Absolute...** button - works in conjunction with whichever setting is selected in the List Box. The check (√) in the button indicates that the joystick is in the Absolute Mouse Mode. When this button is clicked, the Absolute Mouse Mode dialog box appears (Figure 6). See "Modes" for further information.

(5) **Options...** button - works in conjunction with whichever setting is selected in the List Box. Allows you to change the settings for screen resolution and speaker volume. When this button is clicked, the Systems Settings dialog box appears (Figure 12). See "System Settings" for further information.

(6) **New applic.** button - allows you to connect current active settings with any application. When you click this button, an open dialog box appears from which you can select a program for which these settings are to be saved. The new settings are always a clone of the ones activated when you click on this button. Settings for up to 200 different programs can be stored.

(7) **Delete** button - used to delete an item from a list.

(8) **Im-/Export** button - used to import and export settings (see paragraph 11).

(9) **On/off switch** - used to switch the joystick off completely for a setting.

(10) **Sound** popup menu - allows a sound to be chosen which will be played when its settings are loaded at the start of a program.

(11) **Graphic image** - clicking this will provide more detailed information on CH Products and product development.

(12) **Automatic Load** option - when this box is checked (default), settings are loaded automatically when a program is started.
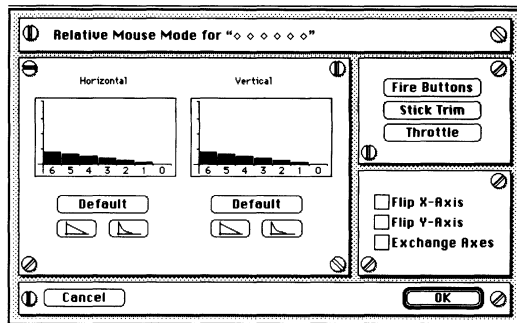
MODES

a. The Relative Mouse Mode

(1) In the Relative Mouse Mode movements of the joystick result in movements of the cursor. Steering the joystick slightly up results in a slow cursor movement upwards, while a greater deflection results in faster cursor movement.

(2) When you click on the Relative... button on the Control Panel the dialog box in Figure 5 appears and allows you to set various parameters for the joystick.

Figure 5 - The Relative Mouse Mode dialog box

(3) Dialog box description for the Relative Mouse Mode

(a) **Flip X-Axis** box - allows you to invert the orientation of the X-axis (left/right) of the joystick.

(b) **Flip Y-Axis** box - allows you to invert the orientation of the Y-axis (up/down) of the joystick.

(c) **Exchange Axes** box - allows you to exchange the X-axis movement for the Y-axis movement and vice versa.

(d) **Fire Buttons** button - allows you to modify the settings of the fire buttons for the setting you selected on the Control Panel and noted at the top of the dialog box after "Relative Mouse Mode for." See "Fire Buttons" for more information.

(e) **Stick Trim** button - allows you to check and/or center the trim of the stick. See "Stick Trim" for more information.

(f) **Throttle** button - allows you to change throttle settings. See "Throttle" for more information.

Nore: Mode Dialog boxes for the Jetstick will not contain a "Throttle" button.

(g) **Horizontal Default**/Linear graph/Curve graph buttons - allows you to define the speed of the cursor movement in the X-axis in relation to the deflection of the joystick. This is done by clicking on a column and dragging it to the desired value. Higher numbers equate to higher speeds. The buttons manipulate these values. To read the scale, the column on the left relates to full deflection of the joystick either left or right, while the columns as you move to the right relate to lesser amounts of deflection of the joystick.

(h) **Vertical Default**/Linear graph/Curve graph buttons - allows you to define the speed of the cursor movement in the Y-axis in relation to the deflection of the joystick. This is done by clicking on a column and dragging it to the desired value. Higher numbers equate to higher speeds. The buttons manipulate these values. To read the scale, the column on the left relates to full deflection either up or down of the joystick, while the columns as you move to the right relate to lesser amounts of deflection of the joystick.

(i) **Cancel** button - allows you to cancel all changes and leave the dialog box. (Can also be done by using the command key in combination with the period). Performs the same function for all dialog boxes.

(j) **OK** button - allows you to accept and store all changes then leave the dialog box. (Can also be done by pressing the return key). Performs the same function for all dialog boxes.

b. The Absolute Mouse Mode

(1) In the Absolute Mouse Mode every position of the stick has a corresponding screen position. For example, steering and then stopping the joystick slightly up and right results in a cursor movement up and right. When you stop moving the joystick, the cursor will freeze in that position. If you allow the stick to return to center, the cursor will return to the center position.

(2) When you click on the Absolute... button on the Control Panel the dialog box in Figure 6 appears which allows you to set various parameters for the joystick.

(3) Dialog box description for the Absolute Mouse Mode

(a) **Flip X-Axis** button - same as in Relative Mouse Mode

(b) **Flip Y-Axis** button - same as in Relative Mouse Mode

(c) **Exchange Axes** button - same as in Relative Mouse Mode

(d) **Fire Buttons** button - same as in Relative Mouse Mode

(e) **Stick Trim** - same as in Relative Mouse Mode

(f) **Throttle** - same as in Relative Mouse Mode

(g) **Accel. Curve** popup menu - allows you to specify whether to use a linear or parabolic relation between deflection of the joystick and the cursor position. The parabolic settings give a higher resolution in the joystick positions closer to the center and thus allows a more delicate control of the joystick.

(h) **Hurricane Eye** popup menu - compensates for the cursor tremble (which would make the mouse unusable) which is associated with the analog joystick inaccuracy due to 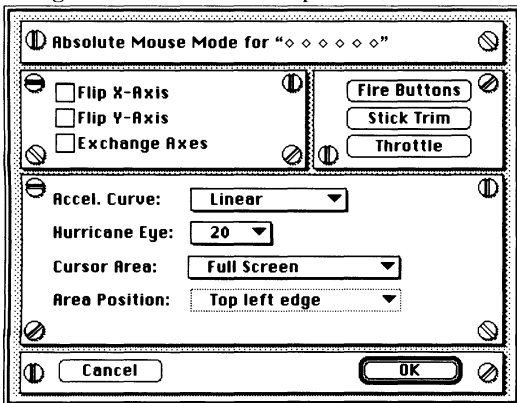analog to digital conversion. To compensate, this menu allows you to define a "don't move range" specified in pixels out from the screen center. Within this area the cursor does not move. If you steer out of this hurricane eye, the cursor moves normally. A value of 20 is recommended.

(i) **Cursor Area** popup menu - defines the pixel area in which the cursor will work. Some older games are only able to accept smaller areas such as 512 pixels horizontally and 384 vertically. Specifically for Falcon MC, set the numbers in Other Size... to 320 horizontal and 200 vertical.

(j) **Area Position** popup menu - available only when the **Cursor Area** popup menu is other than Full Screen. Provides reference positions for the cursor area if less than the full screen. For example, Top Left Edge means that the cursor area is moved to the upper left portion of your screen.

c. The Keyboard Mode

(1) In the Keyboard Mode the stick movement is translated into key presses. If for instance you move the stick to the left and hold it, the keycode for left will be generated and the Mac will see a key pressed for the time you hold the stick in that position.

(2) When you click on the **Keys...** button in the Control Panel, the dialog box in Figure 7 appears which allows you to change key settings.

(3) You can assign keys to every direction. To do so, simply click on the key that you want to change. It will then be surrounded by a dotted frame and awaits your input. You can now press a

Figure 6 -The Absolute Mouse Mode dialog box

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single key, a combination of a key and a modifier key (e.g., shift, control, alt), or the mouse button.

(4) Dialog box description for the Keyboard Mode

(a) **Change All** button - Used when all key settings are to be changed. Each direction is selected in turn and requires that a key setting be input. This sequence cannot be interrupted.

(b) **Combinations** box - Used to specify whether two different keys are to be generated when the joystick is moved diagonally. If this option is not selected, the diagonal directions are grayed out. If this option is selected, then a diagonal movement of the joystick will generate a single key stroke.

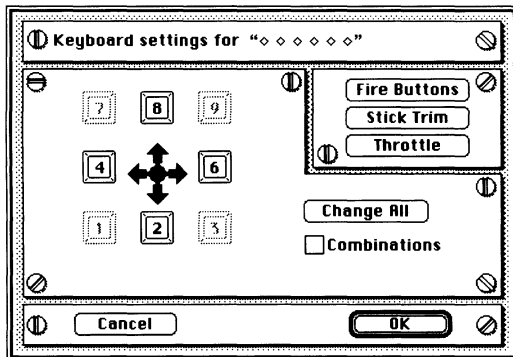(c) **Fire Buttons** button - same as in the

Relative Mouse Mode.

(d) **Stick Trim** button - same as in the Relative Mouse Mode.

(e) **Throttle** button - same as in the Relative Mouse Mode.

FIRE BUTTONS

a. The Fire Buttons dialog is accessed from the Relative Mouse Mode, Absolute Mouse Mode, or Keyboard dialogs, and is always the same.

b. This dialog allows you to control the actions of the fire button(s), the trigger, and the eight way switch (for the Flightstick Pro only). These control items are displayed graphically in the dialog as seen in Figure 8 for the FLIGHTSTICK PRO and Figure 9 for the JETSTICK.
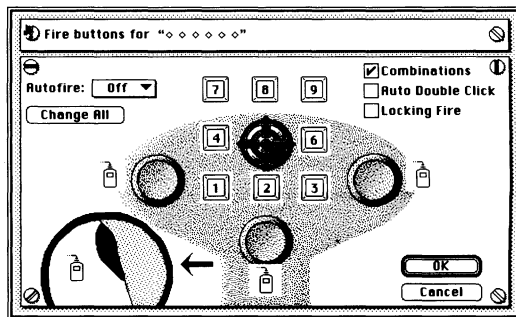
Figure 7 - The Keyboard Mode dialog box

Figure 8 - Fire Buttons dialog box for
FLIGHTSTICK PRO

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c. Besides key definitions you can specify three options for buttons programmed to generate a mouse click.

d. Dialog box descriptions for Fire Buttons

(1) **Autofire** popup menu - depending on the setting 1 to 15 mouse clicks per second are produced as long as the fire button is pressed. When set to "Off" the buttons function like a normal mouse button.

(2) **Combinations** box - same as in the Keyboard mode.

(3) **Auto Double Click** box - if this option is selected, pressing the fire button of the joystick for a period of time results in a double click. The time period is controlled by the number in the **Autofire** popup menu.

(4) **Locking Fire** box - this changes the fire button into a toggling switch. Each press of the fire button switches it from a "mouse pressed" to "mouse released" and vice versa.
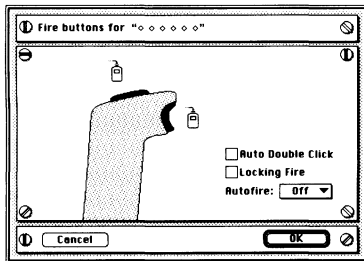

Figure 9 - Fire Buttons dialog box for JETSTICK

STICK TRIM

a. The Stick Trim dialog is accessed from the Relative Mouse Mode, Absolute Mouse Mode, or Keyboard dialogs, and is always the same.

b. This dialog allows you to trim the joystick prior to use. Figure 10 shows the dialog box. When entering this dialog, the joystick is in the absolute mouse mode and there is no "hurricane eye."

c. To trim the joystick, use the two trim controls on the base of the joystick to center the cross cursor in the middle of the dialog. Select **OK** or press return when complete.

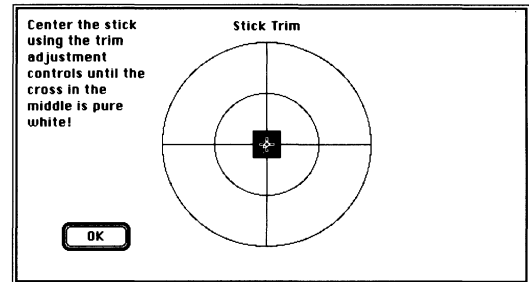*Note:* *Slight cursor jitter is normal, so an accuracy of about two pixels is acceptable.*

Figure 10 - Stick Trim dialog box

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a. The Throttle dialog is accessed from the Relative Mouse Mode, Absolute Mouse Mode, or Keyboard dialogs, and is always the same.

b. This dialog (Figure 11) allows you to control the actions of the throttle which is located on the left side of the FLIGHTSTICK PRO base. You can assign key strokes to the movement of this control.

c. There are two general modes for the throttle:

(1) Trigger mode - moving the throttle control beyond 2/3rd up or below 1/3rd down results in a continuing key press until you move back towards the center.

(2) Incremental mode - in this mode several key strokes are generated when moving the control up or down. The number of key strokes generated over the full travel can be set using the slider. Values 1 to 99 are possible in the Absolute Mouse Mode, and 1 to 14 in the Relative Mouse Mode. In the incremental mode you can also define special keys which correspond to the end-point positions of the throttle.

d. Dialog box descriptions for the Throttle

(1) **Backwards** - key stroke or mouse click that is generated when the throttle is moved backwards.

(2) **Forwards** - key stroke or mouse click that is generated when the throttle is moved forward.
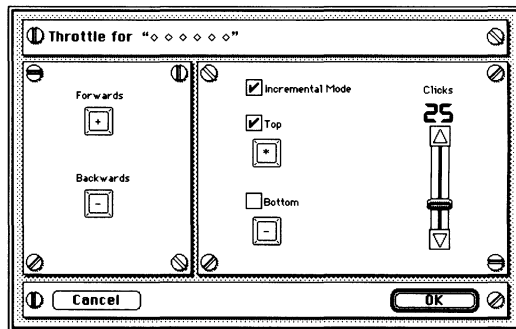

Figure 11 - Throttle dialog box

(3) **Incremental Mode** box - when checked puts the throttle in the incremental mode as described above.

(4) **Bottom** - allows you to set a key that corresponds to the bottom (i.e., full aft) position of the throttle. Available in Incremental mode only.

(5) **Top** - allows you to set a key that corresponds to the top (i.e., full forward) position of the throttle. Available in Incremental mode only.

a. By selecting the **Options** button in the Control Panel, you will enter a dialog box (Figure 12) which enables you to set parameters that do not affect the joystick. These are screen resolution colors and sound volume.

b. When a setting is selected on the Control Panel, and then the **Options** button is selected, you are able to set up specific system settings for the selected program. These settings will be automatically activated when the program is started and will be reset when the program is finished.

c. The settings are only saved when you quit the dialog with **OK**.
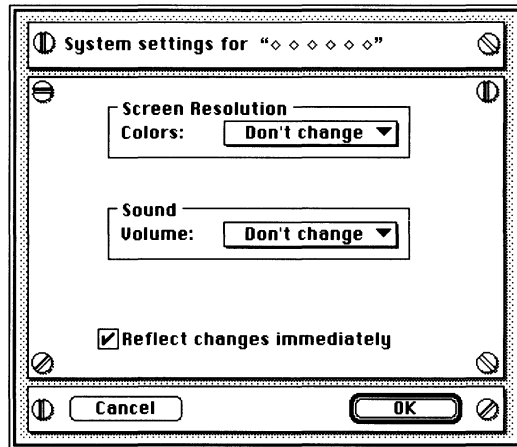

Figure 12 - System settings

d. Dialog box description for System settings.

(1) **Screen Resolution Colors** popup menu - allows you to set a specific screen type or resolution. Since various games function only with a specific screen resolution, this menu provides the options. (i.e., if you set the screen resolution for a game to 16 colors and launch the game, the software will automatically switch the screen to 16 color mode, and then switch it back when you quit the game). See Figure 13 for menu.

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(2) **Sound Volume** popup menu - Allows you to set the sound volume for the program. See Figure 14 for menu.

(3) **Reflect changes immediately** box - Allows you to apply any changes in the above settings to a program that is already running.

Don't change	Don't change
b/w	Sound off
4 greys	1
4 colors	2
16 greys	3
16 colors	4
256 greys	5
256 colors	6
Thousands	7
Millions	

Fig. 13-Colors menu   Fig. 14-Sound menu

IMPORTING AND EXPORTING SETTINGS

a. To import or export program settings you need to enter the Import/Export dialog box (Figure 15) by selecting the **Im-/Export** button on the Control Panel.
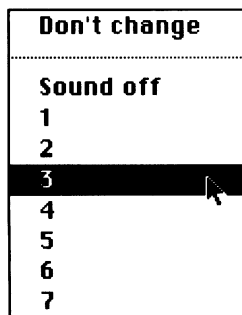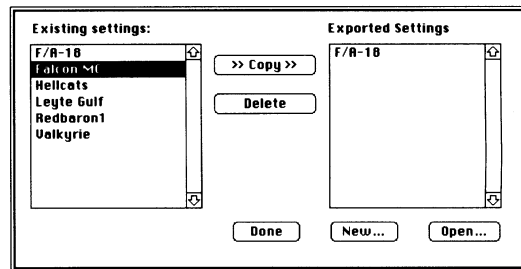

Figure 15 - Im-/Export settings dialog

b. This dialog box works similiarly to the Apple "Font/DA-Mover" found in system 6.x.

c. Before you can copy settings, you must either open or create a file. Any change you make cannot be cancelled.

d. Dialog box descriptions for Importing and Exporting settings

(1) **Existing settings** list - This list box contains all of the settings currently in the Control Panel.

(2) **New settings** list - This list box allows you to specify the name and location of the file that will contain the exported settings. You can export settings to a file so that you can give your settings to a friend, or save them as a backup to your current settings.

(3) **Copy** button - used to copy settings from the Control Panel to an export file. The button will point to the left (<<**Copy**<<) or the right (>>**Copy**>>) depending on which setting has been selected, and thus shows which direction the copying takes place.

(4) **Delete** button - Deletes a setting.

(5) **Done** button - used to exit this dialog box.

(6) **New...** button - used to create a new export file.

(7) **Open...** button - used to open an existing export file.

MISCELLANEOUS NOTES

a. The sound menu is dynamic and displays all "snd" resources of the system, which means that this menu can be expanded by your own sounds. Up to 100 different sounds are supported. Settings are supplied along with some games, but these can be changed, or even deleted, at any time.

b. Each joystick has a small "Init" in its Control Panel which enables settings for individual programs to be set automatically at start-up. This is a program which is executed when the computer restarts. It notes which programs are launched, which program is currently running in the foreground and makes the necessary settings. Of course for this "Init" to function it must not have been disabled by utility programs such as

"init cdev" or the "Extensions Manager." If this is the case, the Control Panel cannot be opened.

c. As long as the Control Panel is open, changing the foreground program or launching programs will not automatically load their settings. The Control Panel always has priority.

d. If you wish to change the setting at the Control Panel between Relative Mouse Mode, Absolute Mouse Mode, and Keyboard Mode without changing the values themselves in any way, then you can avoid the corresponding dialog boxes by holding down the command key when you click on the **Relative** , **Absolute** , or **Keys** button.

a. This section contains a listing of the most frequent problems. Please check the following paragraphs before considering something to be defective.

b. The most common reason for a malfunction is that either the joystick was not connected on the last system start, or your Mac has not been restarted since the installation of the joystick software.

c. If the troubleshooting tips below do not help you, please call CH Products at 619-598-2518 and ask for Technical Support. Additionally, you may contact us on any of the following on-line services:

AppleLink: CHPRODUCTS
CompuServe: 74650,2411
Genie: CH.Products
America OnLine: CHProducts
Prodigy: FBVU54A
National Videotex Network: CHProducts
BBS: 619-598-3224
Internet: chproducts@applelink.apple.com

d. Other problems:

(1) Problem - the joystick does not move the cursor.

Reason - the joystick might be disabled for the program currently in the foreground or it might be in Keyboard mode.

Solution - go to the Control Panel and check the settings.

(2) Problem - after restarting the Mac, none of the joystick symbols are displayed.

Reason - the software was incorrectly installed or switched off by an INIT control program. With System 6.x, the Control Panel file "Flightstick Pro" or "Jetstick" must be in the System Folder. With System 7.x, the "Flightstick Pro" or "Jetstick" file must be in the Control Panel folder which is in the System Folder.

Solution - check (e.g., with "Get Info") whether "Flightstick Pro" is a Control Panel file. If this is not the case, copy the Flightstick Pro software to your hard disk and restart the system. If this does not solve the problem, check whether there is another system folder on the hard disk, from which the Mac is started. The "Flightstick Pro" or "Jetstick" file must be in the System Folder that starts the system.

(3) Problem - when the Mac is (re)started, the crossed-out joystick icon always appears.

Reason - the ADB cables are not correctly connected.

Solution - check that all cables are properly connected and that all input devices (mouse, keyboard, joystick) are functioning as required.

(4) Problem - the cursor moves in a different direction than the joystick movement.

Reason - the settings "Flip X/Y axis" or "Exchange axes" are active.

Solution - deactivate those settings.

(5) Problem - with System 6.x, the joystick is not found in the Control Panel.

Reason - The joystick cannot be found on the ADB by the software.

Solution - check whether all cables are correctly plugged in.

(6) Problem - the Control Panel will not open; the message you receive is "On this Macintosh the Control Panel cannot be used or is defective."

Reason - the last time the computer was started the Control Panel was not in the System File or had been disabled by an INIT manager.

Solution - if you are using the "Extensions Manager" or the "Init CDev" you should check whether the Control Panel has been activated. If so, activate the Control Panel and restart your computer.

(7) Problem - although settings for a particular program exist they are not activated when the program runs.

Reason - Automatic Loading may be deactivated in the Control Panel.

Solultion - open the Control Panel and check whether the Automatic Loading option is on.

(8) Problem - the mouse cursor occasionally jumps to the center of the screen.

Reason - the joystick is in the Absolute Mouse Mode and it is not properly centered, or the Hurricane Eye setting is too narrow.

Solution - go to the Control Panel and trim the stick. If the stick is trimmed and the problem is still present, set the Hurricane Eye to at least 20 or higher.

(9) Problem - the mouse cursor floats across the screen.

Reason - the joystick is in the Relative Mouse Mode and is not properly trimmed.

Solution - go to the Trim Stick dialog and trim the joystick.

SPECIFICATIONS

ADB Model Connector assignments (see figure 16)

Pin 1 - Data
Pin 2 - No Connection/Reserved/Power On (if applicable)
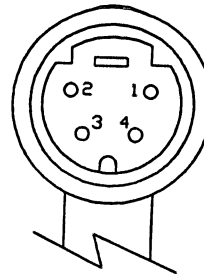Pin 3 - Ground
Pin 4 - Supply (+5VDC)

Figure 16 - ADB connector male cable face

FLIGHTSTICK PRO	
3	Potentiometers @ 100k Ohm Rated @ 2,000,000 cycles
8	Momentary Switches Rated @ 6,000,000 and 10,000,000 cycles Current: 10mA Max Voltage: +5VDC

JETSTICK	
2	Potentiometers @ 100k Ohm Rated @ 2,000,000 cycles
2	Momentary Switches Rated @ 10,000,000 cycles Current: 10mA Max Voltage: +5VDC

WARRANTY

The FLIGHTSTICK PRO and JETSTICK are warranted to the orignial purchaser to be free from defects in materials 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 FLIGHTSTICK PRO or JETSTICK 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 SALEABILITY AND FITNESS FOR A PARTICULAR PURPOSE. CH PRODUCTS IS NOT RESPONSIBLE FOR CONSEQUENTIAL DAMGES." 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 joystick, postage prepaid, with a check for $4.00 to cover shipping and handling, together with a dated proof of purchase to:

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

The software is made available as is, and without warranties of any kind. All warranty claims made on CH Products relating to defects which may be present are expressly excluded where this is legally permissible. CH Products assumes no liability for the correctness, precision, or currency of the software or of its accompanying documentation, nor for the suitability of the software for a specific purpose or for normal market quality. The risk relating to usability or the running characteristics of the software and the accompanying hardware lies with the user of the software. CH Products shall not be liable for the performance of the software or for its functional capability in a multiple users association. The user shall bear the costs for correction of defects, costs for maintenance, repair or improvement work and not CH Products, its dealers, distributors, representatives or employees.

TRADEMARKS

Apple, Apple Desktop Bus, ADB, and Macintosh are registered trademarks of Apple Computer Inc., Cupertino, California.

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.

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.

Warning

This product contains a circuit board which was manufactured with 111-Trichloroethane, a substance which harms public health and the environment by destroying ozone in the upper atmosphere.

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