



Apple Joystick Ile and IIC User's Instructions

The Apple IIc



Meet your new Apple Joystick. Push the stick, press the buttons, and you can manipulate games and graphics programs with ease. Ready? Follow these instructions carefully.

Installing the Joystick

1. Switch off the power and unplug the power cord from your Apple //e or Apple //c computer.
2. On the back of your computer, locate the game paddle port.
 - The Apple //e game paddle port is labeled with a picture of hand controllers and is located on the left side of the computer back panel.
 - The Apple //c game paddle port is indicated with a picture of a joystick and is the first port from the left on the computer back panel.
 - Plug the Joystick into this port as illustrated in Figure 1. The connector only fits one way.

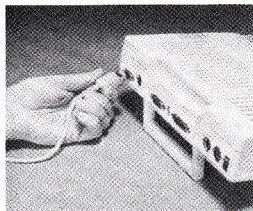
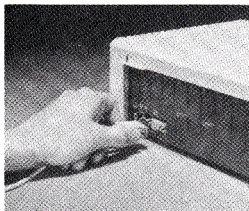


Figure 1. Plugging the Joystick into the Apple //e (Left) and the Apple //c (Right)

3. Tighten the screws into your computer so that the plug will not work loose during operation.
4. You are now ready to adjust the joystick.

Adjusting the Joystick

The joystick is a precision device which allows you to send continuous information to your Apple IIe or Apple IIc computer in the form of two scales of values ranging from 0 to 255. These numbers are read and used by the program you select. The joystick, in combination with the program, allows you to locate any point within this range.

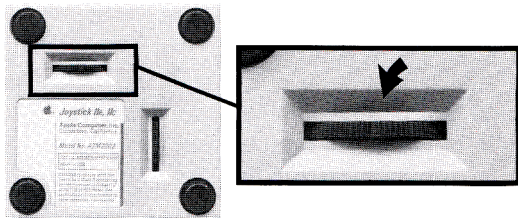
Your joystick, is self-centering. This means that when you push the stick in any direction and let it go, it will return to the center position.

Approximately Centering the Stick

Many games and graphics programs do not require that the center position of the joystick correspond to the center of the value range.

You may prefer to make a quick adjustment and approximately center the stick. To do this, simply rotate the thumbwheels until the largest notch in each wheel is in center position as you see in Figure 2.

Figure 2. Rotating the Thumbwheels (Notch Centered)



Accurately Centering the Stick

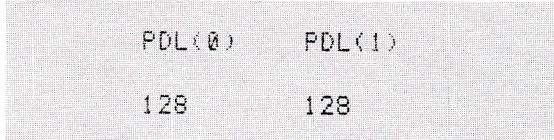
Some games and graphics programs require exact adjustment of the joystick so that the stick, in center position, corresponds to the center of the 0-255 range. Follow these steps if you are using such a program.

1. Insert the DOS 3.3 or ProDOS™ System Master Disk into your disk drive and turn on your computer.
2. Make sure that the stick is in center position.
3. Type in this Applesoft BASIC program and run it.

```
10 HOME
20 VTAB 6: PRINT "PDL(0)  PDL(1)"
30 IF PEEK ( — 16287) > 127 THEN
    INVERSE
40 VTAB 8: PRINT PDL(0); : NORMAL :
    PRINT " "
50 IF PEEK ( — 16286) > 127 THEN
    INVERSE
60 VTAB 8: HTAB 10: PRINT PDL(1); :
    NORMAL : PRINT " "
70 GO TO 30
RUN
```

The screen will show two columns labeled PDL(0) and PDL(1) with numbers beneath each. Figure 3 shows you an example of what the screen display should look like; the numbers in each column will vary.

Figure 3. Screen
Display



4. Hold the joystick so that the cable end is away from you. Follow this sequence; it will demonstrate the range of the joystick. Move the stick all the way toward the cable end, and column PDL(1) will read \emptyset . Move the stick all the way away from the cable end, and PDL(1) will read 255. Correspondingly, when you move the stick all the way to the left, column PDL(0) will read \emptyset , and when you move it all the way to the right, this column will read 255.
5. Return the stick to center position. Rotate the thumbwheels on the underside of the joystick until both numbers on the screen read as close to 128 (the mid-point of the \emptyset -255 range) as you can make them.

About the Buttons

The buttons are simple off/on input devices which may be used to run a game, draw a line, or even fire a missile, depending upon the program you choose. Go ahead, experiment! The button nearest the Apple logo is switch \emptyset and the other is switch 1.

**For the
Programmer:**

Information on programming your joystick for specific applications can be found in the *Applesoft BASIC Programmer's Reference Manual*.

Now you're ready for hours of fun. Enjoy your new Apple Joystick!

**Radio and
Television
Interference**

The equipment described in this manual generates and uses radio frequency energy. If it is not installed and used properly, that is, in strict accordance with these instructions, it may cause interference to radio and television.

This equipment has been tested and complies with the limits for a Class B computing device in accordance with the specifications in Subpart J, Part 15, of the FCC rules. These rules are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that the interference will not occur in a particular installation.

You can determine whether your computer is causing interference by turning it off. If the inter-

ference stops, it was probably caused by the computer. If your computer does cause interference to radio or television reception, you can try to correct the interference by using one or more of the following measures:

- Turn the TV or radio antenna until the interference stops.
- Move the computer to one side or the other of the TV or radio.
- Move the computer farther away from the TV or radio.
- Make certain the computer and the TV or radio are on circuits controlled by different circuit breakers or fuses.

If necessary, you should consult your dealer or an experienced radio/television technician for additional suggestions. You may find the following booklet prepared by the Federal Communications Commission helpful: “**How to Identify and Resolve Radio-TV Interference Problems**”. This booklet is available from the U.S. Government Printing Office, Washington, DC 20402, Stock Number 004-000-00345-4.

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