

## Installing & Using the Calling Four Discwasher Game Port Extender

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The information given in the following article is not accurate. I have tested this card in my Ile, and the following information is valid:

1. Thread the cords for the peripherals you wish to use with the Discwasher through the slot openings in the back of your computer.
2. Connect each peripheral to one of the 4 connectors on the Discwasher (labelled 0, 1, 2 3).
3. Once you have all your cables connected to the Discwasher, insert the Discwasher card into Slot 7 of your computer.
4. Connect the rainbow ribbon cable from the Discwasher (To Game Port) to the game port on your computer. Make sure all pins are inserted properly as they easily bend and break!
5. Once you have the Discwasher installed, connected to your computer's game port connector and your peripherals attached, thread the indicator box out the back of your computer, then close the computer up. Position the indicator box in a convenient, visible place.
6. With a DOS 3.3 disk in your computer, boot the computer to DOS.
7. At the DOS prompt, enter the following command: `POKE -16144,n` {where "n" is the number (0, 1, 2, 3) of the peripheral device you wish to use} and then press RETURN. This will set the Discwasher to use the peripheral you selected (connected to port 0, 1, 2 or 3).
8. Remove the DOS boot disk, insert your game/software disk and issue the following command at the DOS prompt: `PR#6` to boot your game/software.

The Discwasher will continue to use the number port you selected above until you turn your computer OFF or issue the `POKE -16144,n` command again to set it to a different port.

The following article from the New York Times is provided as additional reference only.

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PERSONAL COMPUTERS

## PERSONAL COMPUTERS; SPLITTING THE APPLE, FOUR WAYS

By ERIK SANDBERG-DIMENT

ON the whole, I find myself burrowing within the innards of the Apple IIe more than I do inside other personal computers. In part, these forages occur because more Apple-compatible gadgetry and software are on the market than any other varieties. But they are also a result, in large measure, of the way in which the trackball and other game-port-connected accessories are attached. For want of a simple plug on the computer's case, one must pop open the top of the Apple and insert a card or a plug on the main computer board itself to connect an accessory or add to the computer's capabilities.

Ferretting among computer chips and expansion slots is, surprisingly enough, a task at which even novices become adroit. Even so, it is not what most consumers have in mind when they first buy a computer. Besides, it is all too easy to bend one of the 16 thin little pins on, for example, a joy stick plug, which must fit perfectly into the game socket if the appended device is to work. It is particularly easy to botch the job when one has become overconfident.

Now along comes a game port expander, from Discwasher. It is an add-on board that fits into one of the expansion slots within the Apple, and to it, in turn, you can connect up to four controlling devices; for example, a joy stick, a trackball, a touch tablet and a paddle or, when software becomes available for it, one of those electronic rodents called a mouse.

That is a lot of connecting, but once it is done, it is done forever. There is no more unplugging the computer, popping off the cover, disconnecting one peripheral and connecting another every time you want to switch. Instead, you insert Discwasher's Calling Four card into slot number seven of the Apple's main board, which is no problem at all if your Apple is accompanied by its manual. A connector from the expansion card then plugs into the spot where the joy stick, say, would normally plug into the computer, and the joy stick plug goes into the new card, along with those of any three other controllers you might want to use.

The Calling Four card has a little four-light indicator which, if you slip its cable through the back of the computer, can be fastened just about anywhere on the console or display monitor by means of an attached double-sided tape. The four red lights, labeled zero through three in computer fashion, indicate which controlling device is active.

To switch from one controller to another, all you need to do, or so I thought, is to type in a single command. True, only a single command is involved, but there are preliminaries to be attended to, and here the manual accompanying Calling Four begins to let the novice down. Before you can give the command to switch controllers, you have to load a disk that comes with the Apple and contains both the operating system DOS 3.3 and the computer language Basic. THEN, too, under the heading "Applications Software," the manual tells us that while number seven is the preferred slot for installing the Calling Four card, any slot can be used if necessary. The manual then goes on to list the appropriate command for each slot number. For someone who merely wants to slip a disk into the drive and run a program, however, being told to enter a computerese command like "POKE -16144(3) CR" may be confusing. Being greeted - as he will be - with that ubiquitous and annoying response from the computer, "syntax error," is needlessly frustrating.

A "poke" statement allows you to put a specific value into one of the Apple's 65,536 memory locations. In the case of the command "POKE -16144(3) CR," you are entering the value three, representing the last of your four controller attachments, into location 16,144. If you do not use the "poke" statement, the value in this memory location will remain zero, meaning that the first of your four controllers will be the active one.

But apart from Discwasher's insistence on labeling the four potential controllers zero through three rather than the normal human one through four, its instructions for using the "poke" command in Calling Four are both unclear and wrong.

They are unclear, at least for the average beginner, because a command ending with "CR" rather than the instruction to press return is meaningless unless explained. They are wrong because the square brackets in the printed command simply do not work. One must use the standard parentheses.

Once everything is straightened out, the Calling Four card seems to function well; and for those who write their own software, it provides a convenience in that the specific "poke" command needed can be included in a given program. If it is an accounting program using a mouse, the control for that device will then be automatically activated. If it is a graphic program best utilizing a touch tablet, that will be the functioning tool.

Most people, however, will be using canned programs, and they will still have to first run the Apple DOS disk, then type in the "poke" command, then insert the disk for the actual program to be run.

Nevertheless, using the Discwasher game port expander is simpler than opening up the Apple to exchange connectors physically, and while it does seem an overly elegant electronic solution to a problem more easily solved mechanically - a set of four switches could do essentially the same thing - Calling Four is a device that will no doubt appeal to a lot of people.

Calling Four is available at \$69.95 from Discwasher, P.O. Box 6021, 1407 North Providence Road, Columbia, Mo., 65205, 314-449-0941.

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