Running PCT programs

Bill Powers' work *Living Control Systems III : The Fact of Control* is highly recommended.

This is a book that introduces PCT and provides instructions and interpretation of updated and refined demonstration programs. The programs are available for free download at http://www.billpct.org, but you do need the book to get full benefit from them. The programs are superior in many ways to the earlier programs discussed below, but the earlier programs and their documentation are still highly instructive.

Running DOS under Windows XP and earlier versions: See discussion below.

Running DOS under Windows 7, 8, 10, and especially 64-bit versions of same, download and install the DOSbox DOS emulator from http://www.dosbox.com. The site features complete instructions.

Running DOS under Mac and other operating systems: As shown at http://www.dosbox.com under Download, this Open Source group provides emulating programs for some 11 different operating systems.

Running Windows programs on a Mac, see for example http://www.macwindows.com/emulator.html for a list of available emulation programs.

Running Powers' programs using browser: Adam Matić is converting Powers' DOS and Windows programs so you can run them using your browser, with more conversions to come. See www.pct-labs.com/

This discussion refers to programs created by Bill Powers prior to 2008. They can be downloaded from www.livingcontrolsystems.com in zipped program packages that hold the program and its documentation in separate folders: docs and program. When you unzip, ask for subfolders. The documentaton of these early programs yields additional insight for the serious student of PCT.

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A series of programs created to explain, illustrate and simulate Perceptual Control Theory have been created by Bill Powers over time.

DOS programs include demo1 and demo2, arm_one, arm_two (also known as little man one, little man two), crowd, inverted_pendulum, ecoli, square_circle, and 14_degrees_freedom.

Windows (Delphi) programs include crowd and track_analyze, multiple_control_systems, plus a recently updated Delphi version of arm_one and a Delphi version of inverted_pendulum, programmed by Bruce Abbott.

Further developments of some simulations include effects of reorganization. The DOS programs were created in the era of the IBM XT and AT computers. They are small and run fast.

To run these DOS programs under Windows XP, you can double-click on the executable file in any file manager, such as My Computer or Windows Explorer. You can select the executable file and right-click to bring up a menu where you can select "Create Shortcut." You can drag the resulting shortcut to the desktop and you can edit the text that is shown under the MSDOS icon.

Some of these DOS programs generate files, such as tables of random numbers, as part of the execution of the program. These newly generated files overwrite previous files. Therefore, it is important that the files not be write-protected. If you copied these (uncompressed) files from a CD to your hard disk, the files will be write-protected, because you cannot overwrite files on a CD. I have found that when copying or downloading a zip file to my hard disk, then expanding it to the hard disk, the files are not write-protected. That's convenient.

If you have a problem with the program refusing to run, you can display the files in a file manager and check the attributes to make sure that they are not write-protected.

When you open one of these DOS programs, they typically are displayed Full-screen, the way they ran originally on a DOS computer with 480 x 640 resolution.

On a computer running Windows, the PrntScrn key does not work when running a DOS program full screen.

If you want to capture an image of the screen, you can (in most versions of Windows) press Alt+Enter to change the display from Full-screen to a window. An active window, including an active window displaying the DOS program you are running, can be copied to the Clipboard by pressing Alt+PrntScrn. From there, the image on the Clipboard can be pasted into any number of Windows image handling programs.