

BRAIN Quick-Start Guide: Software

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This guide will lead you through software installation, compiling, linking and loading your first BRAIN Wizard program. Each time the BRAIN Wizard is run, new files are created in the IAR Wizard project directory. Please make sure that you install the software prior to connecting your BRAIN to the PC for the first time.

Software Installation:

1. Insert the BRAIN CD into your computer. If the CD doesn't automatically start the installer, open the CD in explorer, right click on the file named autorun.inf and then select install.
2. Use the defaults for each dialog box that appears. This will install the USB drivers, the IAR Workbench design environment and the BRAIN libraries and utilities.

Connect your BRAIN:

1. Connect the supplied USB cable between the BRAIN and your PC. There is no need to turn on the BRAIN for programming. The USB port provides sufficient power to program the BRAIN, but not enough power to run your robot.
2. You should get a "new hardware found" popup on your PC, and the support software should be automatically installed.

Compile your program and download it to the BRAIN:

1. Use Windows Explorer to browse to the folder containing the wizard project. This should be located at My Documents\Best\Brain Projects\wizard.
2. Double click on the file named wizard.eww, this should start the IAR Embedded Workbench IDE and open the wizard workspace.
3. Select the Project->Rebuild All menu item to compile and link the wizard program.
4. Verify that the Build Message window reports no errors.
5. Select Tools-> Boot Load via USB to download the code to your BRAIN.
6. After about 15 seconds, there should be text in the Tool Output Message window confirming that the program was loaded.
7. Disconnect the USB cable from the BRAIN.

Verify that the program works:

1. Hook up motors to channels 1 and 2 and servos to channels 3 and 4.
2. Connect your receiver box to the receiver box connector on the BRAIN.
3. Verify that the BRAIN is turned off (switch oriented towards fuse).
4. Connect the battery to the BRAIN.
5. Turn on your transmitter.
6. Turn on your BRAIN.
7. To test your BRAIN, move the joysticks. You should see the motors and servos move.

This has been an example of compiling, linking and downloading a program generated by the BRAIN Wizard. Programs that you develop on your own will be stored in similar locations on the PC; e.g., My Documents\Best\Brain Projects\my_project.