

## Setup

# Firmware

You have installed ROBOTC and built the REM bot, but the robot is not yet able to understand ROBOTC programs. You must first download firmware onto your NXT. Firmware is the operating system for your robot. Once loaded on the brick, the firmware will allow the NXT to load and run ROBOTC programs.

You will need:

1. Your NXT
2. A computer with ROBOTC installed
3. A USB connector cable (A-B, included with 9797 base set)

1. Plug one end of the USB cable into your NXT, and the other into your computer.  
If the robot is not on press the orange button on your NXT brick.



### 1a. Connect the USB cable

Plug one end of the USB cable into your robot, and the other into your computer to allow communication between them.



### 1b. Turn NXT on

Press the orange square on your NXT brick to turn your robot on if it is not already.

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2. Open up the ROBOTC program. To start ROBOTC go to the Start Menu, Programs or All Programs, RobotC and finally choose "RobotC for Mindstorms".

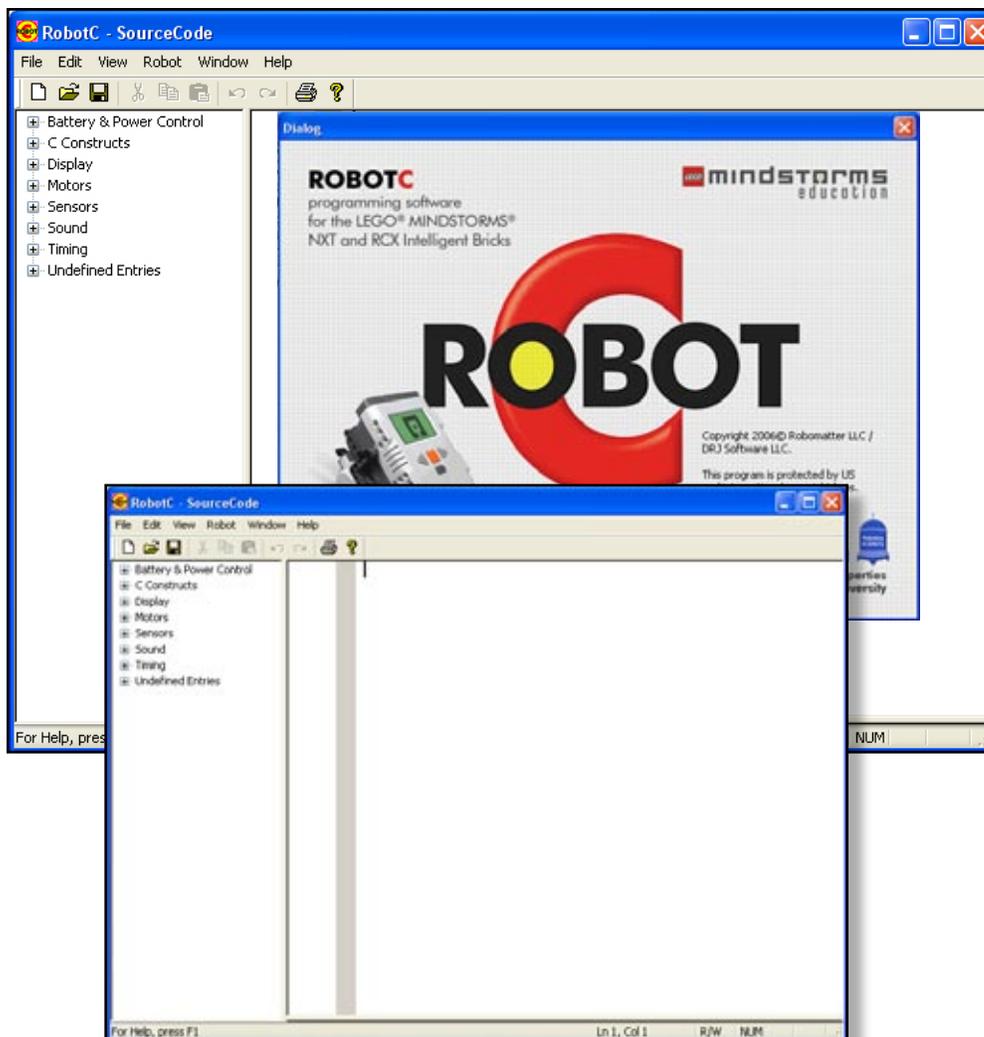


#### 2. Open ROBOTC for Mindstorms

Select the Start Menu > Programs or All Programs > RobotC > RobotC for Mindstorms to open up the ROBOTC program.

### Checkpoint

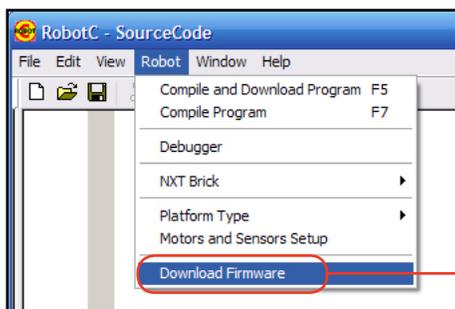
This what your screen should look like. The ROBOTC Dialog box will disappear after a few seconds. What is left is the main ROBOTC window.



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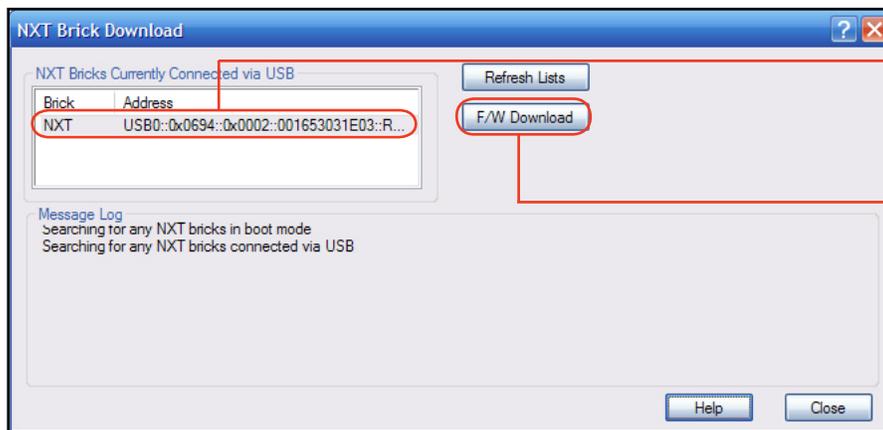
3. Go to the “Robot” menu, then select “Download Firmware”.



### 3. Download Firmware

Select Robot > Download Firmware to open up the NXT Brick Download menu.

4. The NXT Brick Download menu will appear. In the white box in the upper left, you will see your NXT’s name and device address. Make sure the line for your NXT is selected, then click on the “F/W Download” button.



### 4a. Select NXT

Select your NXT in the window. Normally, there will only be one listed.

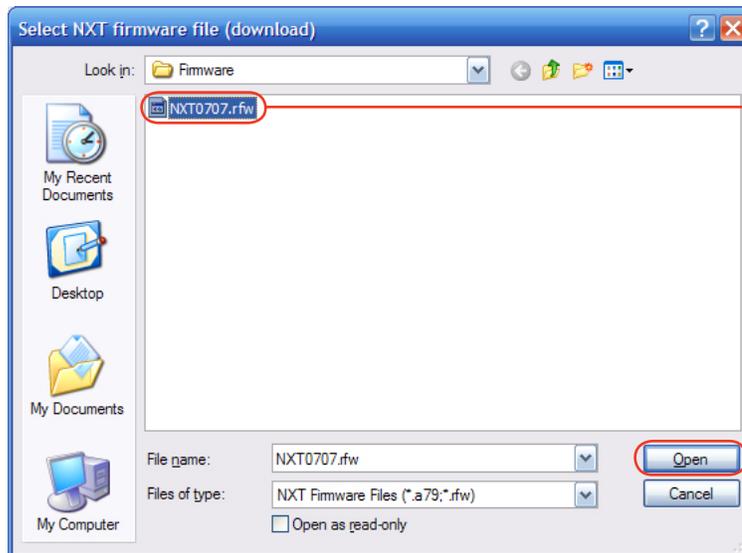
### 4b. Select F/W Download

Select “F/W Download” to download the firmware to your NXT brick.

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5. A list of available firmware files will appear. If there is only one firmware file listed, select it. If there is more than one, choose the firmware file (.rfl) with the highest number. Click "Open" to begin downloading the firmware.



**5a. Select the (.rfl) file**

Select the firmware file to download to your robot. If more than one is shown, select the one with the highest number.

**5b. Select Open**

Once you have selected the file, click "Open" to begin downloading the firmware.

### End of Section

The message log will show the progress of the firmware download. Your robot will appear to turn off while the firmware is being loaded. When the process is complete, you will see a line at the end of the log stating, "Firmware download completed".

