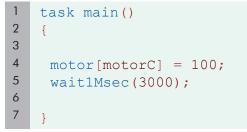


Setup

Your robot is ready to go! All that's left is for you to tell it what to do by sending it a program. A program is a set of commands that tell the robot what to do and how to react to its environment. Once written, a program must be transferred ("downloaded") to the robot before it can be run.

This is the program you will download onto the NXT.



**1.** Normally, you would type this program directly into ROBOTC. For your convenience, however, there is an already-completed copy provided in the Sample Programs folder. Follow the steps below to open this program.

	en and Compile		· ? <b>\</b> ?		1a. Open Sample Program Select File > Open Sample Program to find the saved program
0   	Exer	t or ation ar nd	NXT Button Advanced NXT Compass Sensor NXT Compass Sensor Driver NXT Compass Sensor Driver NXT Draw Spiral NXT File Searching NXT File Searching NXT Large Font NXT Mindsensors Motor MOX NXT Motor Examples NXT Motor Examples	NxtDisplaySpeedTest     NxT-G Move Block Ba     PCF8754     RandomTest     RPGReader     Stalled Motor Check	<b>1b. Select Training Sample:</b> Open the Training Samples fol to find the "MotorC Forward"
	Look in: 🗲	Training Samples		〕 ♪ ▷ Ⅲ.	Ic. Select the program           Select the "MotorC Forward"           program from the Training           Samples Folder.
	My Network		flotorC Forward C Files (".rcc,".c,".cpp;".nqc;".h,".nqh)	V Ope Canc	Broos "Open" to open the area

ROBOTC



# **Download Program**

#### Checkpoint

The program should appear in the right-hand pane of the window.

File Edit View Robot Window	Help	
🗅 📽 🖬 👗 🖬 💼 🗠	a 🖨 🕯	?
🖶 Battery & Power Control	1	task main()
C Constructs	2	(
🛓 Display	3	
Motors	4	<pre>motor[motorC] = 100;</pre>
E Sensors	5	wait1Msec(3000);
🗄 Sound	6	
🗈 Timing	7	þ
🗄 User Defined	8	

**2.** Download the program to the robot by first turning it on, then using the "Compile and Download" command from the "Robot" menu.

	<b>2a. Turn NXT on</b> Press the orange square on your NXT brick if it is not already on.
Constructs Constr	2b. Compile and Download Select Robot > Compile and Download Program to download the MotorC Forward program.

### ROBOTC

# **Download Program**

#### Checkpoint

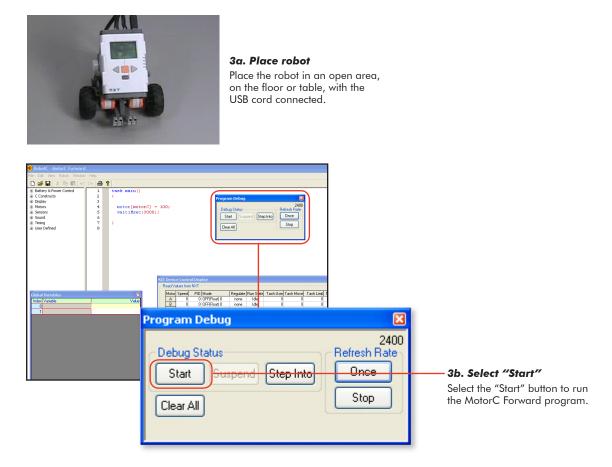
Setup

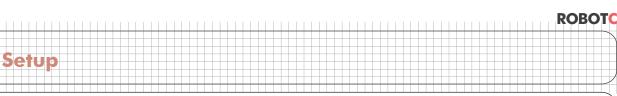
Several new windows should appear. If you get an error, make sure that the robot is turned on and plugged in to the computer with the USB cable, then try again.

😌 RobotC - MotorC Forward							
File Edit View Robot Window	Help						
🗋 🎬 🖬 👗 🛍 🛍 🗠	A 4	?					
Battery & Power Control Constructs Constructs Display Mators Sectors Sound Timing User Defined	1 2 3 4 5 6 7 8	<pre>task main() (     wotor[moto     wait1Msec] )</pre>		Program Del Debug Stat Stat Clear AJ		2400 Referent Rate Direc Stop	
Global Variables		XI Value	NXT Device Control D Read Values from N2 Motor Speed F A 0 B 0 C 0	-	ve Idle ve Idle	Tach Usel Tach Move T 0 0 0 0 0 0	ach Limit Tach 0 0
			Sensor Type S1 Raw Valu S2 Raw Valu S3 Raw Valu S4 Raw Valu	modeRav 1023 modeRav 1023	751 S 1023 S 1023 B 1023 S	Tariable Value ymc Type synchNone ymc Turn 0 lattesy 7.63V leep Time 60 min folume 2	Reset Devis
			Set Values into NXT Motors Speed A	inget Rot Mode	Reg	Sensors Type 1	Mode



**3.** Place the robot on an open area on the floor or table. In the Program Debug window, press the button labeled "Start". The ROBOTC debug windows appear when the download is complete.

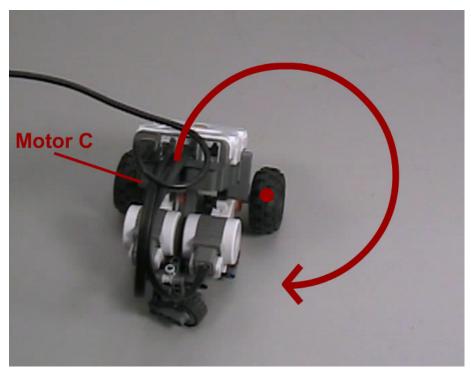


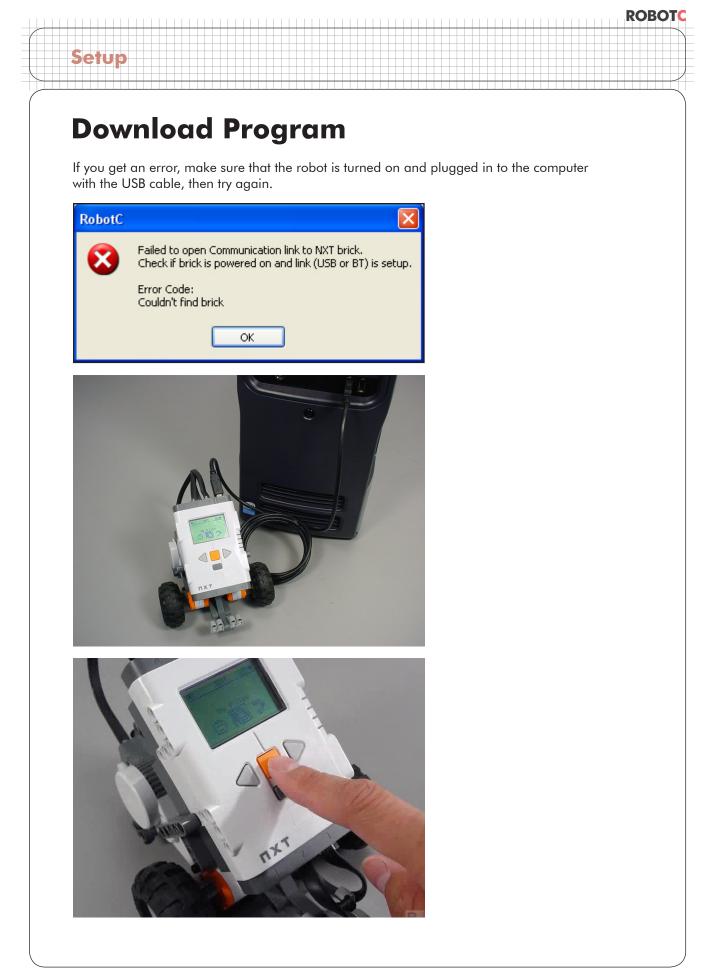


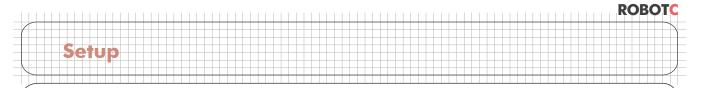
## **Download Program**

#### Checkpoint

The program we just downloaded told the robot to run one of the motors for three seconds. This causes the robot to move in a circle or perform a pivot turn.







## **Download Program**

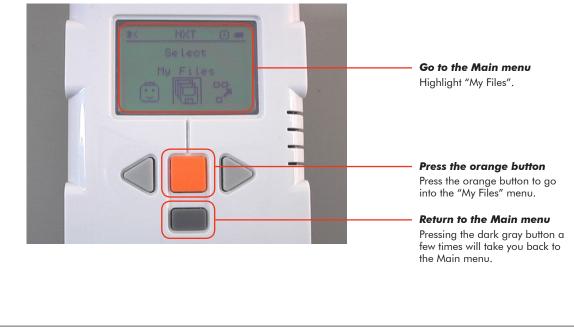
#### End of Section.

The program must be loaded onto the robot while it is plugged in to the PC, but it can run either attached, or unattached.

To run it unattached, first unplug the USB cable.



Make sure your NXT is on, and take a look at your robot's screen. You should be seeing the main menu, and "My Files" should be displayed. Press the orange button.



### ROBOTC

### **Download Program**

Setup



**Select "Software Files"** Press the orange button again to go into the "Software Files" menu.



#### Select your program

Navigate to your program using the right and left arrow buttons. When you find the name of your program, press the orange button.



**Run the program** Press the orange button one more time to run the program.



**Observe the robot** The robot should now move in a circle.