

How to transfer a Dymola model to the NXT

1. Make sure that you run DymolaLEGO (Dymola20100319.exe) in Windows, that all appropriate flags are set and the appropriate libraries are loaded. See the slides from the tutorial for more information about this.
2. Change working directory to **C:\cygwin\nxtOSEK\samples_c\dymola**.
3. Translate your model.
4. Start **CYGWIN**.
5. Change directory to C:\cygwin\nxtOSEK\samples_c\dymola by typing
cd /cygdrive/c/cygwin/nxtOSEK/samples_c/dymola
6. Compile your model by typing
make all
7. Connect the LEGO-NXT to the computer via the USB-cable.
8. Turn on the NXT. The NXT should make a clicking sound.
9. Transfer the code by typing
./ramboot.sh
If cygwin returns **bash: ./ramboot.sh Permission denied**, change user execution permission by typing **chmod 700 ramboot.sh** and try again.
10. If cygwin complains about the NXT not being connected, check the USB-cable again. If it is indeed connected, check in the upper left corner, under **Devices->USB Devices** and make sure that all **Unknown devices** are checked.

How to pair the NXTs Bluetooth with Windows.

1. Upload any program to the NXT but don't press **RUN**, see the section above.
2. Go to the **Start menu, Connect to, Bluetooth Network Connection**.
3. **Open Bluetooth devices**.
4. Connect the NXT via the USB cable and turn it on by clicking the orange button.
5. Choose **Add...**, check the **"My device is set up and..."** and click **Next**.
6. Choose the found device and click **Next**.
7. Check the **"Use the passkey found in the documentation"** and enter the same Bluetooth passkey as specified in the **dymola_wrapper.c**, the default is **1234**. Press **Next** and you should get a window saying which Incoming and Outgoing COM ports that are assigned to the NXT.
8. In your model, double click on the **Configuration block** and make sure that the Bluetooth port matches the assigned **Outgoing port**.
9. Translate and compile your model again.
10. Upload the program once more. The display on the NXT should read **Start host!**.
11. Start the simulation in Dymola and the display should read **Run NXT**.
12. Press **RUN** and the program should start executing. Stop the program by clicking **Stop simulation** button in Dymola. Press the rectangular button on the robot to stop the robot.