

What is PSP-Nx?

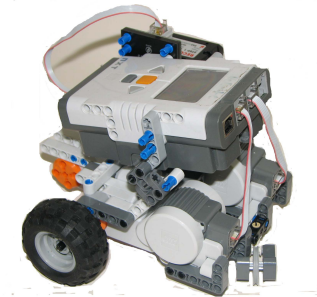
PSP-Nx is a digital interface to SONY® playstation 2 controller for NXT. When used with wireless controller, it acts as programmable remote control for NXT. The controller has two analog joysticks and 16 buttons. Using PSP-Nx interface, values of all 16 buttons and 2 joysticks can be read by the NXT over the wireless link.



Instructions to use the PSP-Nx

Building robot

1. Build a "tank" robot according to the instructions given in Lego Mindstorms Instruction Manual. (The picture to the right is similar to the "tank" robot shown in Lego Mindstorms Instruction Manual)
2. Make sure the Brick is attached to the robot.



Assembling PSP-Nx

1. Connect PSP-Nx-v3 to the Receiver.
2. Ensure the remote control has working batteries. If it does, the light in front of the remote control would be green when you press "Analog".
3. For additional help in setting up your PSP-Nx, please see PSP-NX User Guide:
<http://www.mindsensors.com/pdfs/PSP-Nx-v4-User-Guide.pdf>



Programming the robot to run using EV3-G:

1. Please download and unzip the custom EV3 block from following URL and import it into your EV3-G IDE.

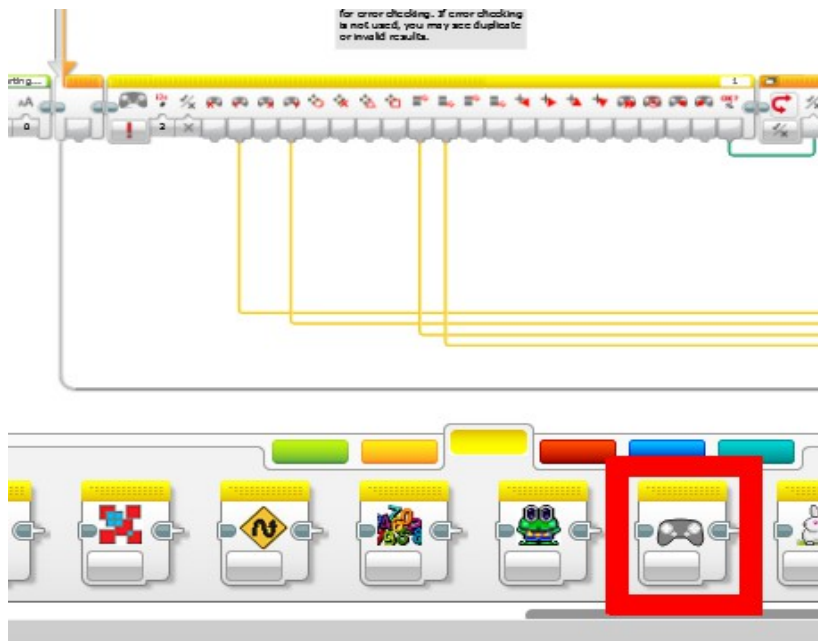
http://www.mindsensors.com/index.php?controller=attachment&id_attachment=160

2. For additional help to import the Block into your NXT-G, use the instructions from the link below:

<http://www.mindsensors.com/content/13-how-to-install-blocks-in-ev3>

3. The software used here is EV3-G, yours might be a different version (with slight differences).

Once the block has been properly imported, it should appear in your sensors palette as seen in the picture below.



4. Using the following link, please download the "**PSP-Nx-v4-Tank-3motor-r01p04.ev3**" file for the program to run your "tank" robot:

http://www.mindsensors.com/index.php?controller=attachment&id_attachment=159

Note: Simply unzip the downloaded file and double click the "**PSP-Nx-v4-Tank-3motor-r01p04.ev3**" to open the program into the NXT-G software.

5. Be sure the PSP-Nx is connected to sensor port 1, the left motor is connected to motor port B, and the right motor is connected to motor port C.

Transferring the program to your EV3 Brick

1. Using the USB cord shown on the right, connect the Brick to your computer.



2. Turn on your Brick by pressing the dark grey button in the middle.



3. The program can be loaded into the EV3 Brick by clicking the "Download" button on your EV3-G IDE.



4. If the program is successfully installed on your Brick, you should see the program "Forward Mount" and "Reverse Mount" in the "PSP-Nx-v4-Tank-..." Files Folder.
 - > Use the left and right buttons to highlight the second tab with the two page icon.
 - > Use the up and down buttons to highlight the "PSP-Nx-v4-Tank-..." and click the middle button to select.
 - > The "Forward Mount" and "Reverse Mount" programs will appear.
5. Use the up and down buttons to highlight "Forward Mount". Run the program by pressing the center button.
6. Now on your Joystick controller, press the "Analog" button. You should now be able to navigate your "tank" robot using your controller. The left joystick will control the left motor and the right joystick will control the right motor.
7. If you are having problems with the direction your "tank" robot is moving (if you press forward and the motor runs backwards) exit the program using the button to the right just underneath the screen. Run the 'Reverse Mount' program.

Programming the robot to run using NXT-G:

1. Please download and unzip the custom NXT block from following URL and import it into your NXT-G IDE.

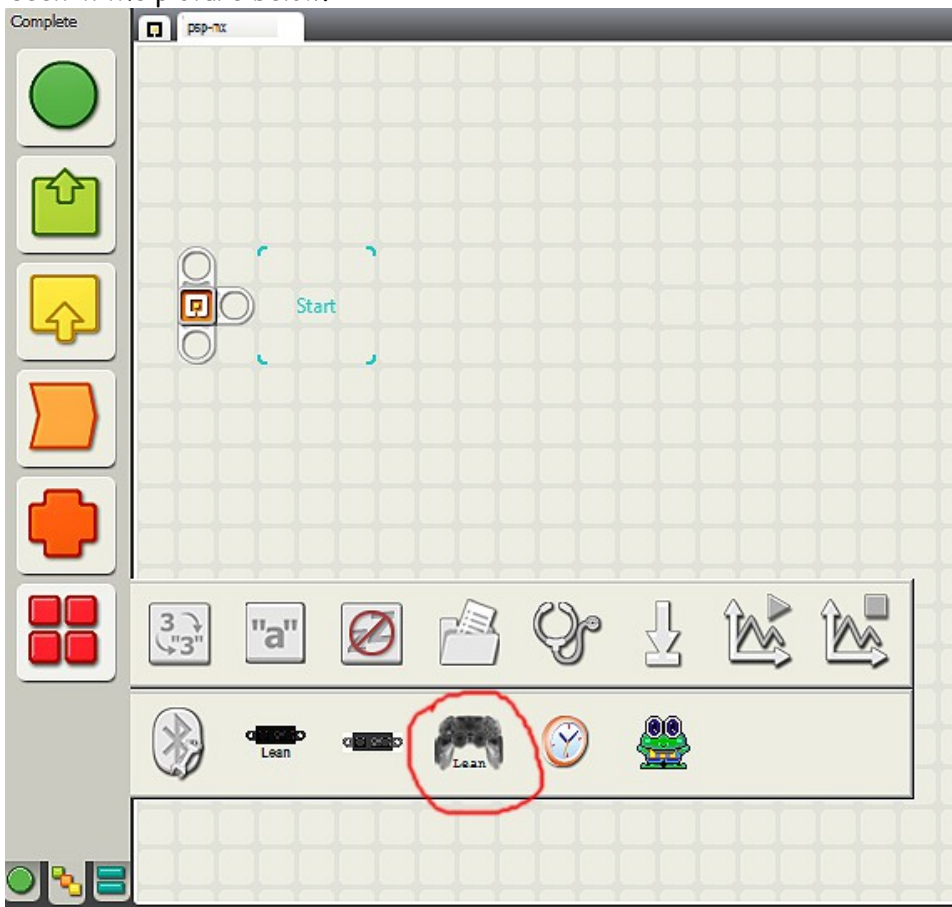
http://www.mindsensors.com/index.php?controller=attachment&id_attachment=263

2. For additional help to import the Block into your NXT-G, use the instructions from the link below:

<http://www.mindsensors.com/content/21-nxt-g-blocks-how-to-install-blocks>

3. The software used here is the NXT-G 2.0, yours might be a different version (with slight differences).

Once the block has been properly imported, it should appear in your advanced palette as seen in the picture below.



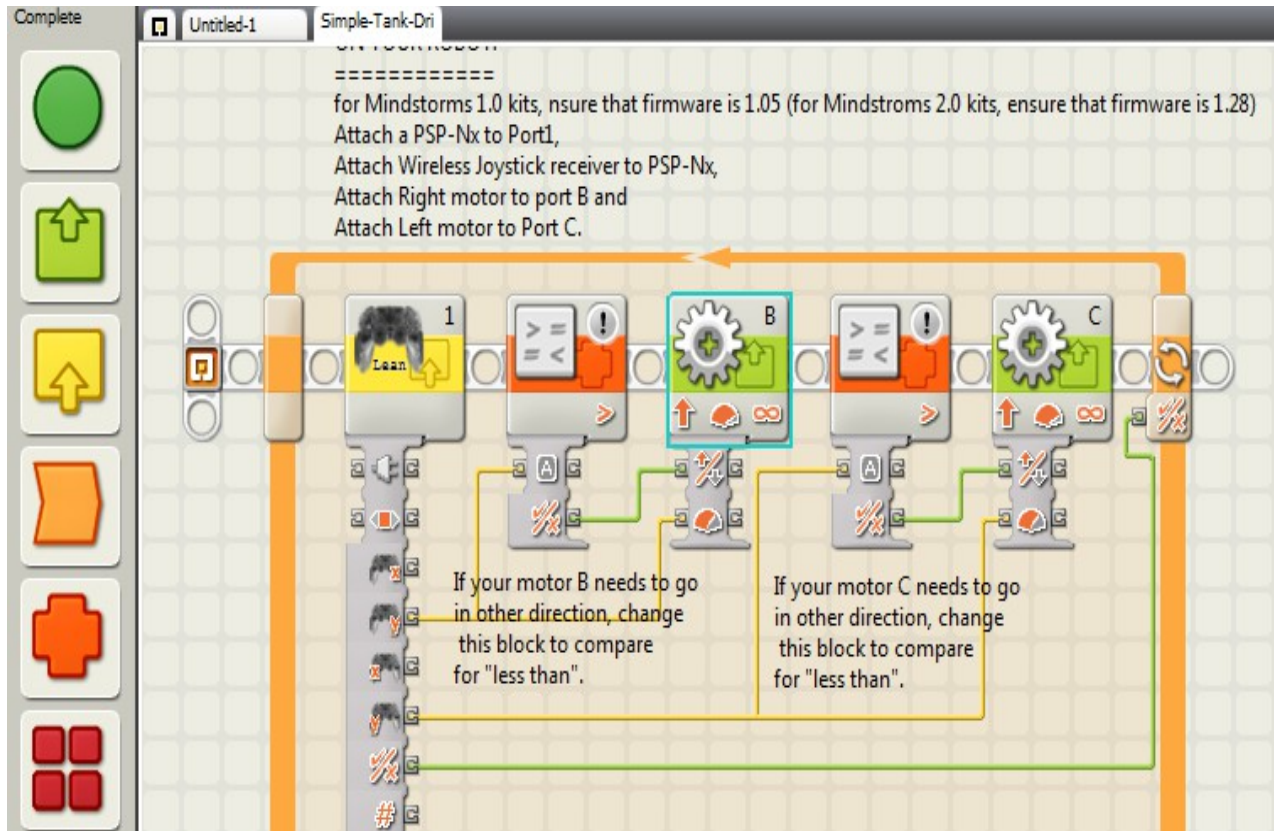
4. Using the following link, please download the "**Sample-Tank-Drive.rbt**" file for the program to run your "tank" robot:

http://www.mindsensors.com/index.php?controller=attachment&id_attachment=35

Note: Simply double click the "Sample-Tank-Drive.rbt," it should open the program into the NXT-G software.

5. The "Sample-Tank-Drive.rbt" file has instructions on how to connect the tank motors and PSP-Nx to the correct ports on the brick.

Note: These instructions can be found at the top of the page of the program.



Transferring the program to your NXT Brick

- Using the USB cord shown on the right, connect the Brick to your computer.



- Turn on your Brick by pressing the orange button in the middle.



- The program can be loaded into the NXT Brick by clicking the "Download" button on your NXT-G IDE.



- If the program is successfully installed on your Brick, you should see the program "Sample-Tank-Drive" in the Software Files Folder.

- > Select the Folder called "My Files."
- > Enter this folder by pressing the orange button again.
- > You will now find the "Software files" folder.
- > Press the orange button one more time.

- Click on the "Sample-Tank-Drive" by pressing the orange button. You would see a screen that says " Sample-Tank-Drive Run" Press the orange button again to run the program.

- Now on your Joystick controller, press the "Analog" button. You should now be able to navigate your "tank" robot using your controller.

- If the you are having problems with the direction your "tank" robot is moving (if you press left it goes right) go back to your "Sample-Tank-Driver.rbt" in NXT-G IDE and change the directions as instructed in the program.

Then re-download the program to your Brick following these steps.