Introduction to the NXT Sound Sensor

By Sanjay and Arvind Seshan
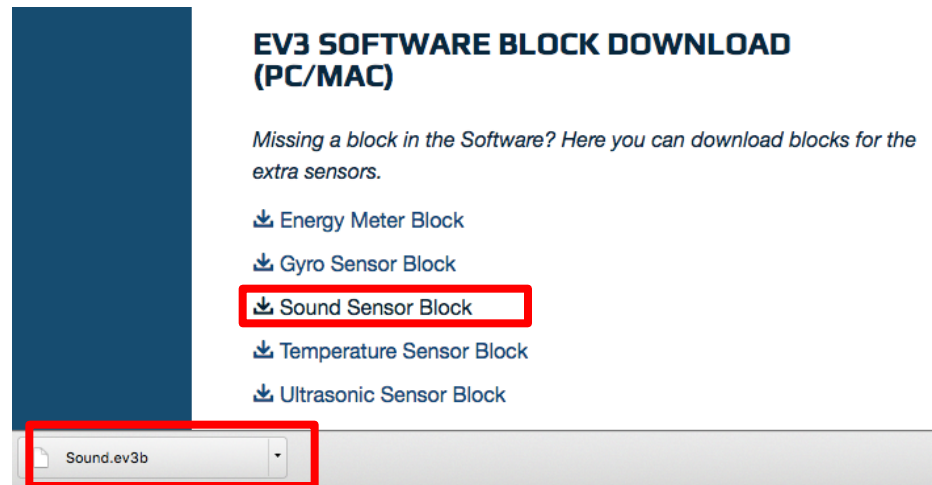
BEGINNER PROGRAMMING LESSON

LESSON OBJECTIVES

1. Learn to use the NXT Sound Sensor with the EV3

Pre-requisites: Switches

DOWNLOADING THE SOUND BLOCK

- The Sound Sensor Block is available for download on the LEGO.com site:

  - http://www.lego.com/en-us/mindstorms/downloads

- Download the block using the Importing Additional Blocks Lesson in Beginner

EV3 SOFTWARE BLOCK DOWNLOAD (PC/MAC)

Missing a block in the Software? Here you can download blocks for the extra sensors.

- Energy Meter Block
- Gyro Sensor Block
- Sound Sensor Block
- Temperature Sensor Block
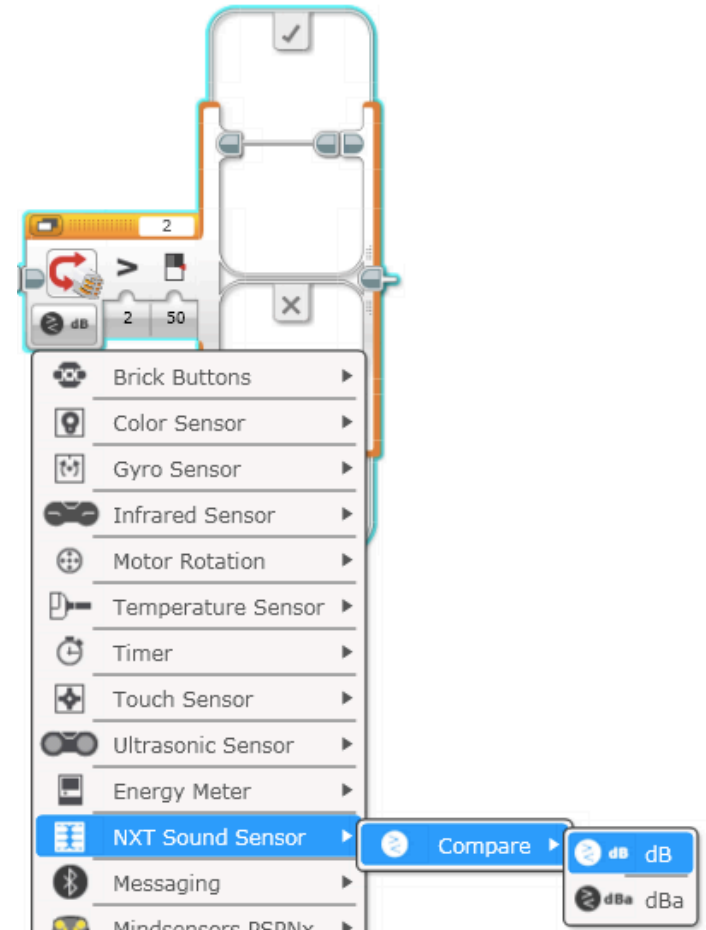- Ultrasonic Sensor Block

Sound.ev3b

3

SWITCH - NXT SOUND SENSOR

• **Compare Mode**

  • dB

    • Sound level, scaled to a percentage

  • dBa

    • Sound level, adjusted to approximate human ear sensitivity, and then scaled to a percentage
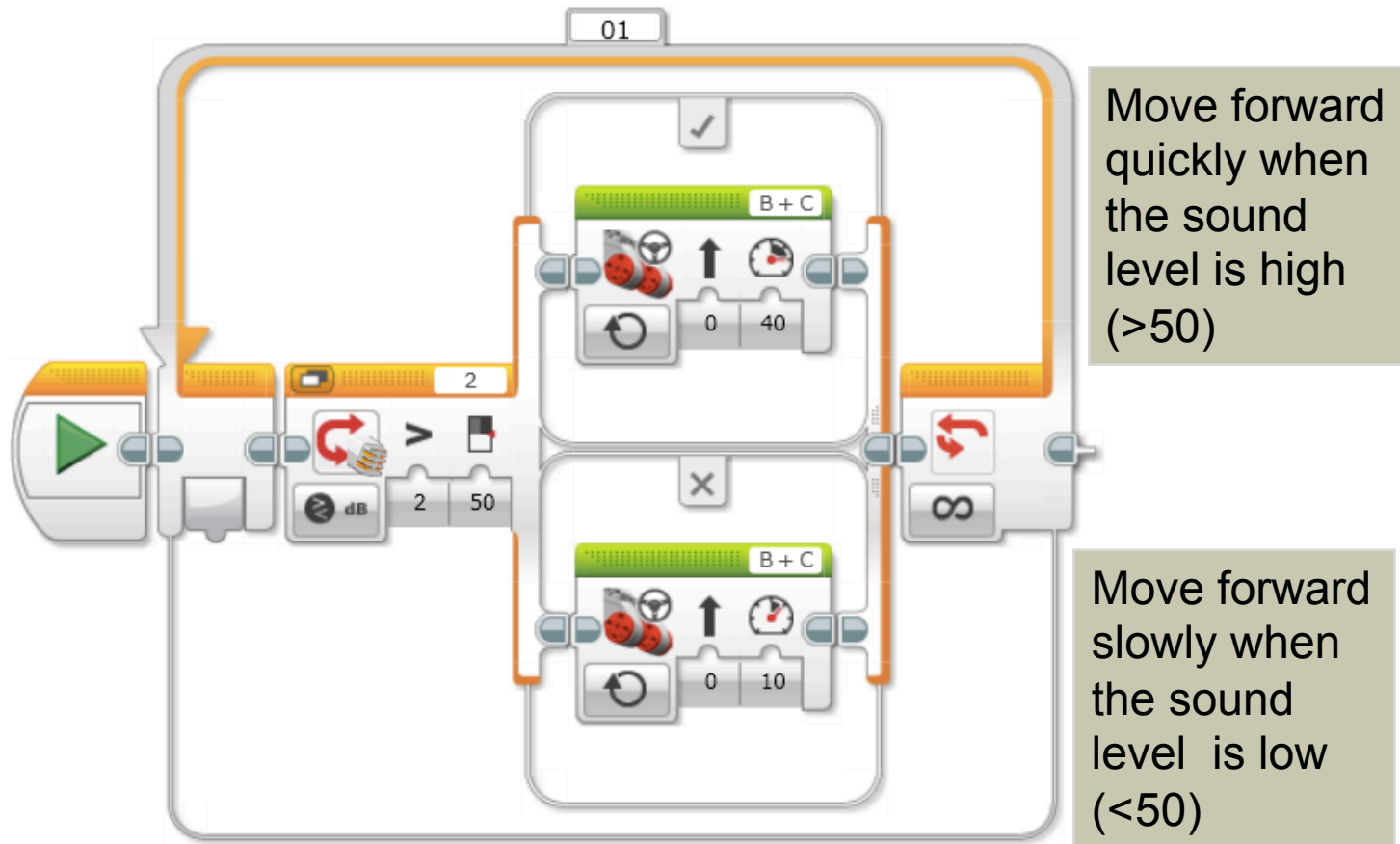
• **Source: EV3 Help Menu**

SOUND SENSOR CHALLENGE

• **Write a "Celebration" program where the robot moves faster or slower depending on how loud the sound is**

• **Hint**

  - Switch - NXT Sound Sensor Block will be used
  - You can use dB or dBa for this challenge

CHALLENGE SOLUTION

Move forward quickly when the sound level is high (>50)

Move forward slowly when the sound level is low (<50)

CREDITS

- **This tutorial was created by Sanjay Seshan and Arvind**

- **More lessons are available at www.ev3lessons.com**