



InO-Bot

User Guide

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InO-Bot

InO-Bot, full of inputs and outputs.

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InO-Bot Bluetooth Connection

For all versions of Windows:

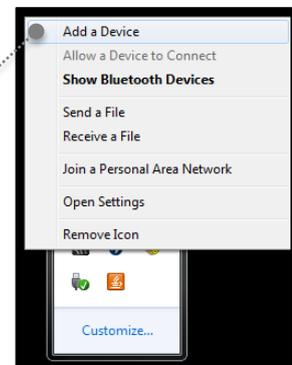
1. Ensure that Scratch 2 Offline is installed. For more details see:
<https://scratch.mit.edu/scratch2download/>
2. Download and install the TTS Scratch Launcher from the supporting material section of this page:
<http://www.tts-group.co.uk/ino-bot-scratch-programmable-bluetooth-floor-robot/1009821.html>

Windows 7 Bluetooth Connection

1. Switch on InO-Bot
2. Click on the small arrow on the taskbar and then click on the Bluetooth icon.

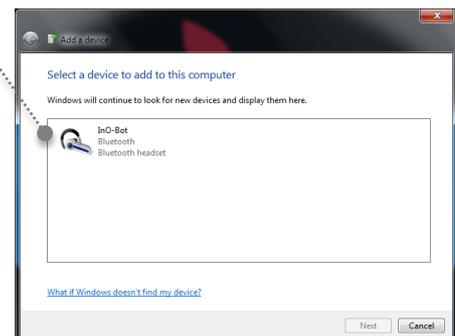


3. From the menu that appears click on Add a device.

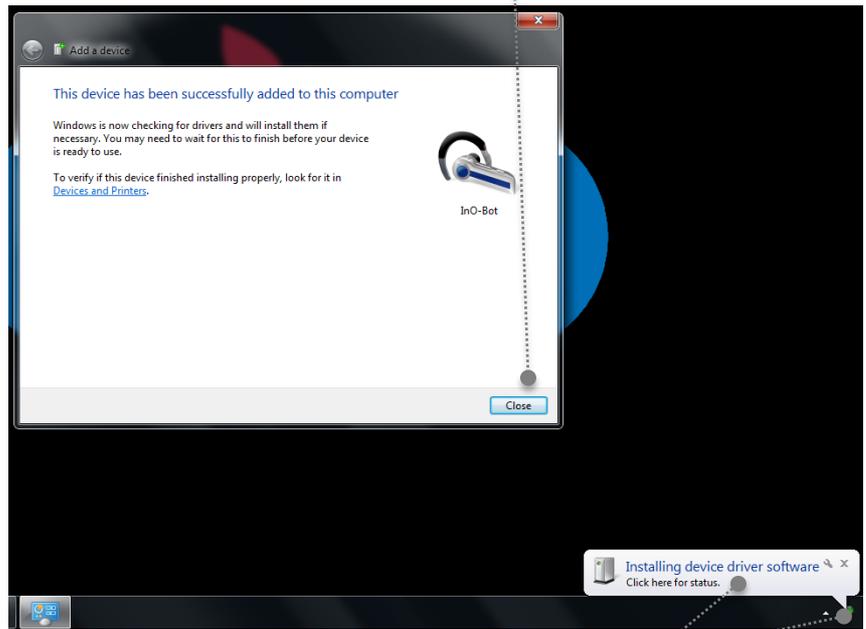


4. A list of available Bluetooth devices will be shown.

5. Click on the icon by InO-Bot and then click on next.

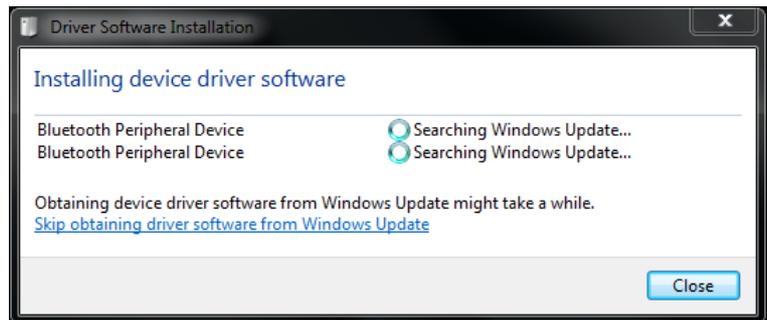


6. Once a connection is made the screen below will be shown. Click on close.

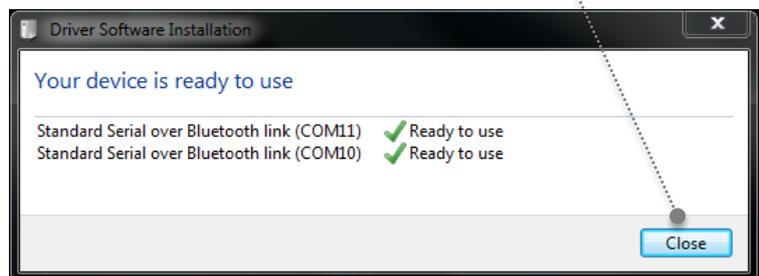


7. Click on this message or icon to view the driver installation progress (shown below).

8. Windows will automatically install the required drivers.



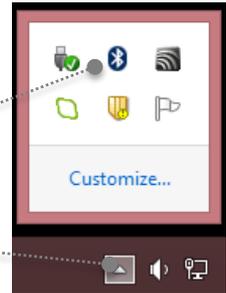
9. Once the drivers are installed the message below will be shown. Click on close.



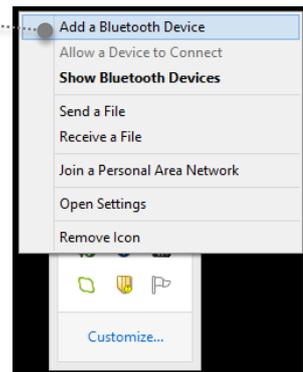
Note: Steps 2 to 9 above only need to be completed once for an InO-Bot to be used. Once complete the computer will remember that particular InO-Bot.

Windows 8.1 Bluetooth Connection

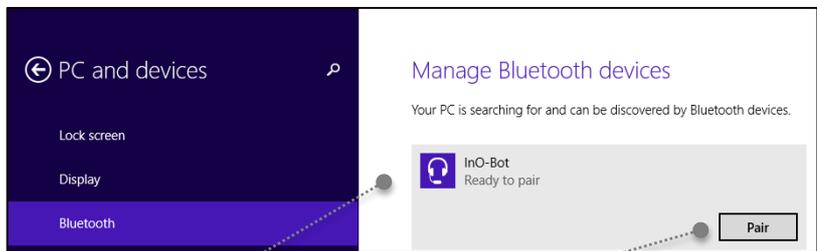
1. Switch on InO-Bot
2. Click on the small arrow on the taskbar and then click on the Bluetooth icon.



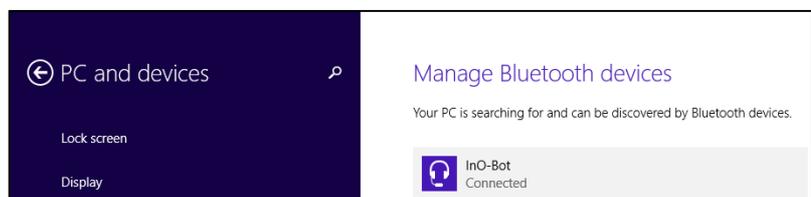
3. From the menu that appears click on Add a Bluetooth device.



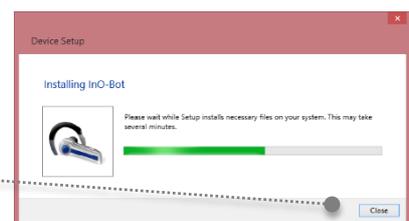
4. The screen will change and a list of available Bluetooth devices will be shown.



5. Click on the headphone icon by InO-Bot and then click on Pair.



6. Once paired a Connect message will be displayed.
7. The Bluetooth connections panel can be closed. Windows will display a message while the Bluetooth connection process completes.



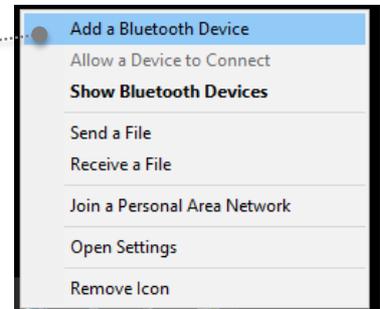
Note: Steps 2 to 7 above only need to be completed once for an InO-Bot to be used. Once complete the computer will remember that particular InO-Bot.

Windows 10 Bluetooth Connection

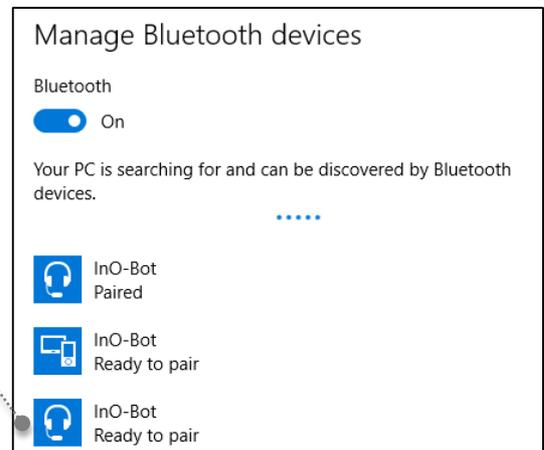
1. Switch on InO-Bot.
2. Click on the Bluetooth icon from the system tray (bottom right of the screen)



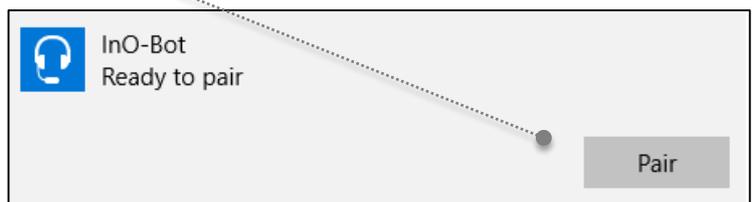
3. Click on Add a Bluetooth Device



4. Click on the headphone icon by InO-Bot (ignore the tablet / phone icon)



5. An option to pair should appear. Click on the Pair button.



6. Once the pairing completes the Connected message should appear:



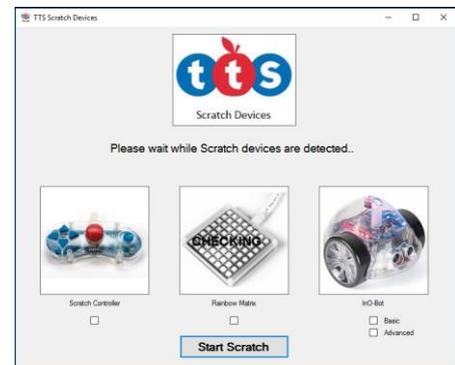
Note: Steps 2 to 6 above only need to be completed once for an InO-Bot to be used. Once complete the computer will remember that particular InO-Bot.

Using InO-Bot (Windows 7, 8.1 and 10)

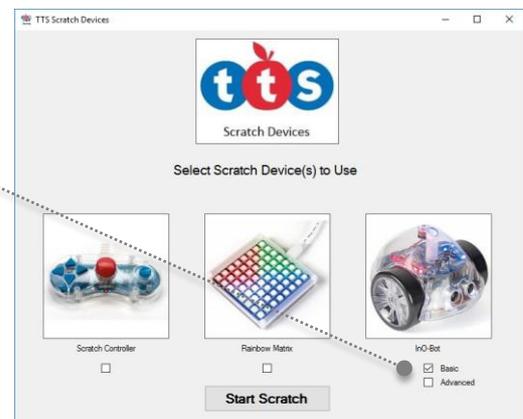
1. Double click on the Scratch Launcher icon



2. The TTS Scratch Launcher will open and try and detect if a Scratch Controller or Rainbow Matrix is connected. If either is detected a tick will appear in the box underneath the icon.



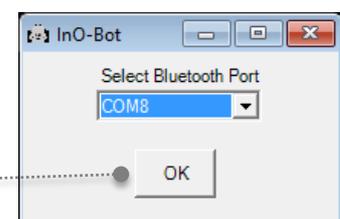
3. Tick the Basic or Advanced box underneath the InO-Bot icon. Basic is a more limited set of Scratch Blocks for InO-Bot and Advanced contains all blocks available for InO-Bot. Click on Start Scratch.



4. Scratch will open and a graphic will appear which indicates the PC is searching for InO-Bots that have been paired with that machine.

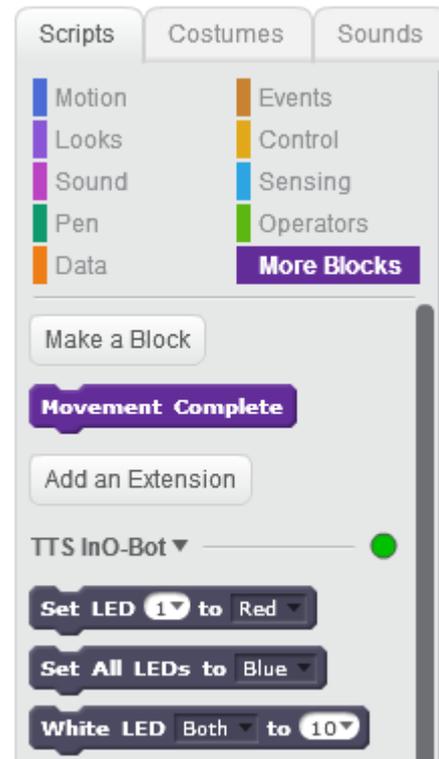


5. If an InO-Bot is detected a dialogue box should appear which indicates the COM port an InO-Bot is connected to (COM port can vary from machine to machine).



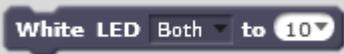
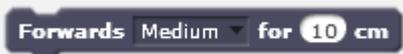
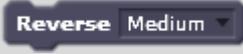
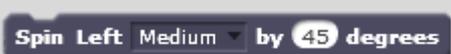
6. Click on OK to close the dialogue box.

7. InO-Bot can then be used with Scratch. Additional blocks to control InO-Bot are available in More Blocks.



Scratch Blocks

Basic

Command	Values	Description
	1 – 8	Lights the top LEDs in different colours. LED 1 is on the back right hand side and numbered in an anti-clockwise direction ie LED 8 is on the back left.
		Lights all the LEDs on top a given colour
	0 – 10	Lights the headlights – left, right or both. 0 is off. 10 is full brightness.
	1 – 127	Moves forwards the stated distance and given speed (slow, medium or fast).
	1 - 127	Moves backwards the stated distance and given speed (slow, medium or fast).
		Switches the motors on forward.
		Switches the motors on in reverse.
		Stops the motors
	0 – 180	Turns stated angle anti-clockwise at given speed (slow, medium or fast).
	0 – 180	Turns stated angle clockwise at given speed (slow, medium or fast).
	0 – 29	Plays given sound (see below for index).

"Scratch is developed by the Lifelong Kindergarten Group at the MIT Media Lab.
See <http://scratch.mit.edu>."

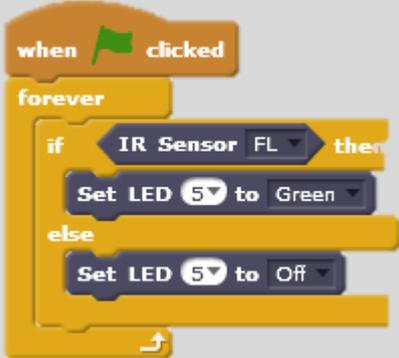
Sensors



Proximity (Corners)
 FL – Front Left
 FR – Front Right
 BL – Back left
 BR – Back Right

Line Follower
 Left
 Right

Returns a true or false value (true = triggered) e.g.



- Distance
- Light level
- Sound level
- Battery level

Return values from the on board sensors. Placing a tick by them will allow them to display values on the Scratch stage.

Advanced

The commands and sensors below are available in addition to the Basic blocks listed above.

Command	Values	Description
	0 - 255	Sets the top LEDs a given colour using red, green and blue values.
	1 – 8 and 0 - 255	Sets a LED on top a given colour using red, green and blue values.
	Forward, Reverse, Stop	For use with the external connector
	On / Off	Switches the infrared beacon on or off.

Sensors

<input type="checkbox"/> 	255 - 0	If infrared is detected. Lower value is high level of infrared.
<input type="checkbox"/> 		These show the readings from the wheel counters built in to the robot.
<input type="checkbox"/> 		

Sounds

Effect		Piano		Xlyo	
Index	Sound	Index	Sound	Index	Sound
0	1	10	a	17	1c
1	2	11	b	18	1d
2	3	12	c	19	1e
3	4	13	d	20	1f
4	5	14	e	21	1g
5	6	15	f	22	2a
6	7	16	g	23	2b
7	8			24	2c
8	9			25	2d
9	10			26	2e
				27	2f
				28	2g
				29	3a

Technical Support

Please visit www.tts-group.co.uk for the latest product information.

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