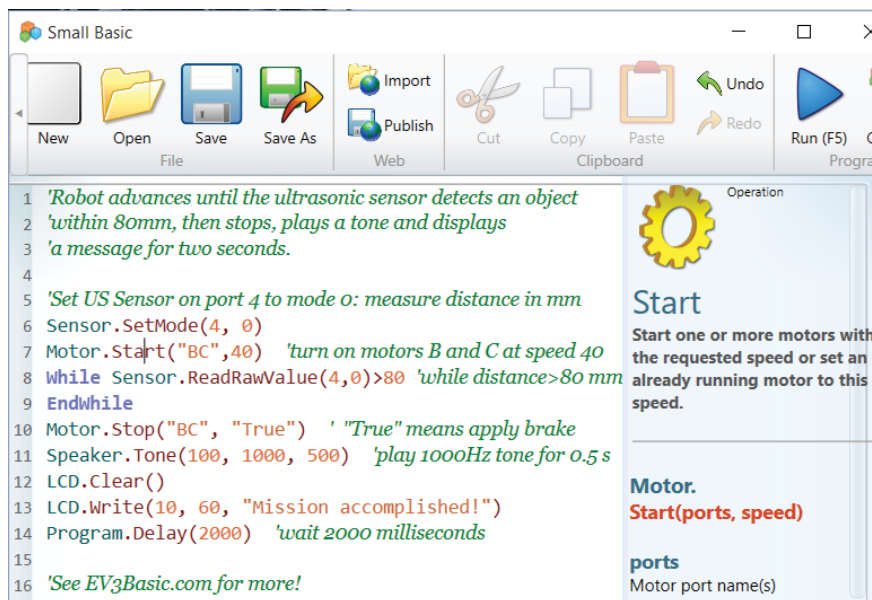# Introducing EV3 Basic

By Jetro

Pictures by EV3 Basic

Learning to program the LEGO EV3 robot with the standard software (EV3-G) is great fun but youngsters who have mastered EV3-G may want to go further and try programming the EV3 with a text-based programming environment that is more powerful and a step closer to the environments used by professional programmers. A number of text-based programming options exist for the EV3 such as EV3 Lejos or EV3dev with EV3 Python but most of these options are probably too difficult for young teens. However, one option stands out for its ease of installation and ease of programming: EV3 Basic. EV3 Basic is Microsoft Small Basic with the EV3 extension that was released earlier this year. It is compatible only with Windows PCs.

EV3 Basic is easier to install than other text-based programming systems for the EV3 and it does not require the use of a different operating system on an SD card nor a modification of the EV3 firmware. It is easier to program than other text-based programming systems for the EV3. The programming interface is extremely simple, and thoroughly appropriate for beginner programmers (the declared aim of Microsoft when Small Basic was released in 2008 was to put the fun back into programming).

EV3 Basic programs can be run directly from Small Basic – it is not even necessary to download them to the brick. It is also possible to compile the programs into 'brick format' (RBF) and download them to the brick using a companion program, EV3 Explorer. In fact this is the recommended way of using EV3 Basic with a wireless connection (either Bluetooth or WiFi)

EV3 Basic has many functions that are not included in EV3-G. For example, the EV3 can interact with the Small Basic graphics window, as in the remote control example on EV3Basic.com. It also supports all the standard LEGO EV3 and NXT motors and sensors. EV3 Basic is fast! Cube Twister uses mainly EV3 parts and EV3 Basic code and can solve random Rubik cubes in 2.2 seconds! You can see it in action in this video:
https://youtu.be/s2tCAf6yYoo

Both Small Basic and the EV3 Extension are entirely free! The official tutorials website, EV3Basic.com has dozens of sample programs, a YouTube playlist, and no ads. In addition, Small Basic is available in 18 languages and the documentation of the EV3 extension (Intellisense and manual) is available in English, Spanish, French, Russian and German. An important feature of the user interface is that you learn as you type, for it displays a pop-up with your options and provides helpful information about those options so you can make the right choice.

EV3 Basic has many more features so visit EV3Basic.com to learn more, then download Small Basic and the extension and give E3 Basic a try!
#