51 Flowcode Programming User Manual
Freeware Requirements:

1. Install .net framework 3.5 or 4.0 first，http://msdn.microsoft.com/en-us/netframework/cc378097

2. Download the STC freeware and install it.

3. Connect the computer and the 89C52RC chip carrier board (51 Robot Car) through the USB-RS232 cable.

51 Flowcode Programming Steps:

1. Click the ToyCar.exe file –

Flowchart editor opened. Create flowchart according to the robot car running operations. Maximum 20 processes can be inserted between program start and end at present stage. The following processes can be inserted in the flowchart.

Process cannot be edited.				
Program start	Program end	Loop start	Loop end	Buzzer
2 front sensors obstacled	Left front sensor obstacled	Right front sensor obstacled	2 front sensors cleared	Sensors on track
Sensor leave track	1 right sensor on track	2 right sensors on track	1 left sensor on track	2 left sensors on track
Moving backward	Moving left backward	Moving right backward	Moving left forward	Moving right forward
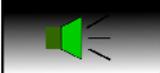
Process can be edited. Double click the icon, edit winidow will be displayed.	
	Process – for interested persons to input their commands.
	Moving forward - speed of left and right wheels can be input.
	Delay - time delay in millsecond can be input.
	Delete process – drag this ion on the process want to delete.
	Decision – criteria can be input.

Two examples are shown below:
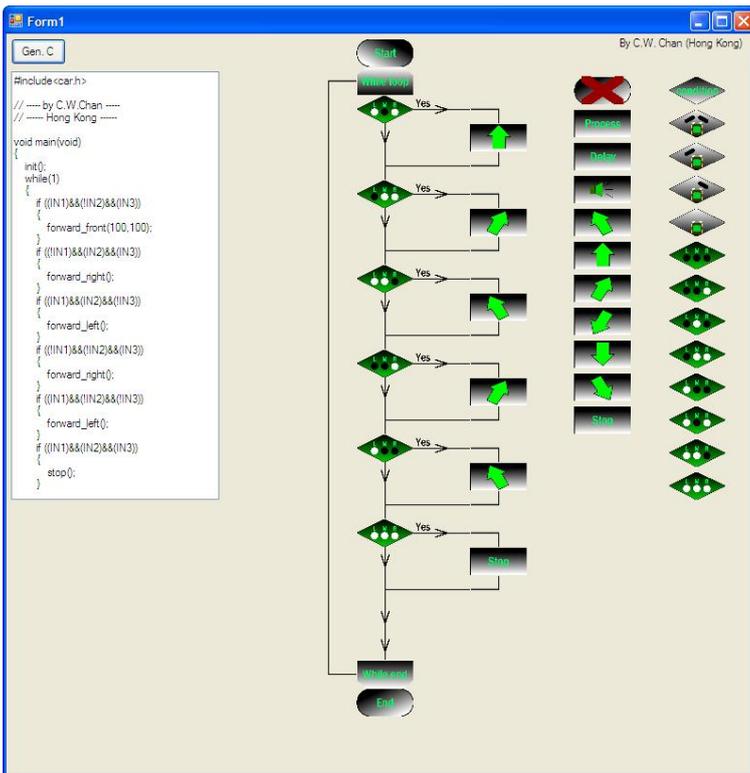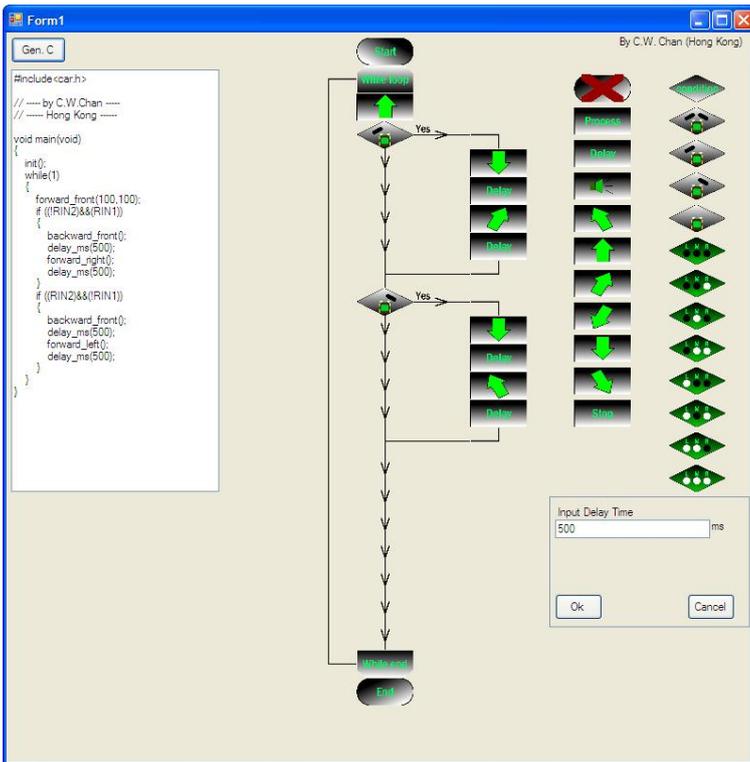
2. After create the flowchart, click Gen C ion to generate the C program and create the Hex file.

3. Check the corresponding USB-RS232 cable com port –
control panel 控制面板 – system 系统 – hardware 硬件-device management 設備管理 – com & LTP 端口
USB-SERIAL CH340. It will show you the CH340 corresponding com value.

4. Click the STC ion to execute the program:

In STC program:

1. Select suitable STC chip, usually is STC 89C52RC.
2. Change the com port value as shown.
3. Click open the file 打开程序文件 and select the hex file in the same folder of flowchart.
4. Click download 下载, when you see the response, switch off then on the 89C52RC carrier board. You will see the bar is running indicates download proceeding.