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.						
Start		End	While loop	While end		
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	Process – for interested persons to input their commands.					
	Moving forward - speed of left and right wheels can be input.					
Delay	Delay - time delay in millsecond can be input.					
	Delete process – drag this ion on the process want to delete.					
condition	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.

9. 设备管理器	- 🗆 🛛
文件 (E) 操作 (a) 查看 (Y) 帮助 (H)	
→ PC-201001161508 → DVD/CD-ROM 驱动器 → DIE ATA/ATAFI 控制器 → DIE 1284.4 兼容打印机 → SCSI 和 RAID 控制器 → SCSI 和 RAID 控制器 → 女理器 → 女理器 → 大理器	
● 受 端口 (COM 70 LPT) 受 ECP 打印机端口 (LPT1) 受 USB-SEEKIAL CH340 (COM4) 受 通讯端口 (COM1) 登 試現器	
 ● 建盘 ● 建盘 ● 建立 人体学输入设备 ● ● 軟盤控制器 ● ● 軟盤/ ● ● 軟盤/ ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●	
 (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	

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 打開程序文件 and select the hex file in the same folder of flowchart.
- 4. Click download 下載, when you see the response, switch off then on the 89C52RC carrier board. You will see the bar is running indicates download proceeding.

		3		
	🖣 STC-ISP.exe 家晶科技官方网站: www.SICECU.gom	技术支持:13922805190(姚永平) ¥4.83 - □ 区		
1—	Stepi/步骤1: Select MCU Type 选择单片机型号 MCU Type STC12C5201 V 0000 - 53FF	[程序文件]_no_ 串口助手 工程文件 Program File: 地址 00 01 02 03 04 05 06 07 08 09 0A 08 0C 0D 0E 0F ▲		
2—	Step2/步骤2: Open File / 打开文件 (文件結園内未用区域填00) 起始地址 0020 校验和 0 ア 打开文件前请60候冲 11开程序文件 5 5 5 6 7	000000 00 <td< th=""></td<>		
-	Step4/步骤4:设置本框和右下方 /选项 中的选项 下次冷启动后时钟渡为:			
4-	下次下载用户应用程序时将数据flash区一并海0: ○YES ● 10 Step5/步骤5: Download/下载 先点下载按钮再MCU上电复位-冷启动 Download/下载 Step/停止 Re-Download/重复下载 □ 每次下载前重新调入已打开在缓冲区的文件,方便调试使用 □ 当目标代码发生变化后自动调入文件,并立即发送下载命令	 ▲ 日本 (10年) 10年 (10年) 10日 (10年) 10日 (10年) 10日 (11年) 10日 (111) 1		
	単片机出厂时的缺省设置是"F1 0/F1.1"与下截无关, P3.0/ku10 P3.1/TaD 通过 KS~232 转换器注接到电脑的管通 IS~232 串口就可以下载/编程用户应用程序到单片机内密用户 应用程序区了。 如果单片机在正常工作时 P3.0/ku10 外接的是 KS~485/ ↓ 成功计数0 Clear 请关注 www.STCMCU.com 网站,及时升级	Idle(空闲)状态时内部看门狗停止计数 € YES € 100 上电自动启动内部看门狗时的预分频数 258 ★ 下載成功声音提示: € YES € 100 重复下載间隔时间(00) 5 ★		