Upgrading easyC to Version 2

EasyC version 2 is an upgrade to version 1.1, which is included with the RadioShack Vex Programming Kit (#276-2152). A licensed copy of easyC V1.1 must be installed before the version 2 upgrade can be installed.

Radio Shack will not offer a multiple seat license of easyC V1.1 by itself, however they are offering a special discount towards the purchase of multiple programming kits. This will be the only way to get a discount on multiple seats of easyC V1.1.

The discount schedule below is only available through RadioShack's Government and Educational Sales Group (1-800-442-7221):

- **1-4 units** **10% off the retail price of $99.99**
- **5-15 units** **20% off the retail price of $99.99**
- **16+ units** **25% off the retail price of $99.99**

Using easyC V2

EasyC V2 has many of new features that will enhance your programming experience. All the new features are outlined in the easyC help file. Six new advanced tutorials have also been added to the Getting Started portion of the help file. These tutorials show students examples of how some of the new easyC features can be used. If you complete the tutorials you will gain a basic understanding of:

- **Line Following**
- **User Functions**
- **Global Variables and Constants**
- **Libraries**
- **Competition Templates**

There are also several new sample projects included with the V2 upgrade to show how some of the new features can be used. Please refer to the help file first for all your questions. If you need further assistance, please email your questions to **support@intelitek.com**.

Important note:

Your transmitter must be set to 23 mode whenever you are using an easyC project!

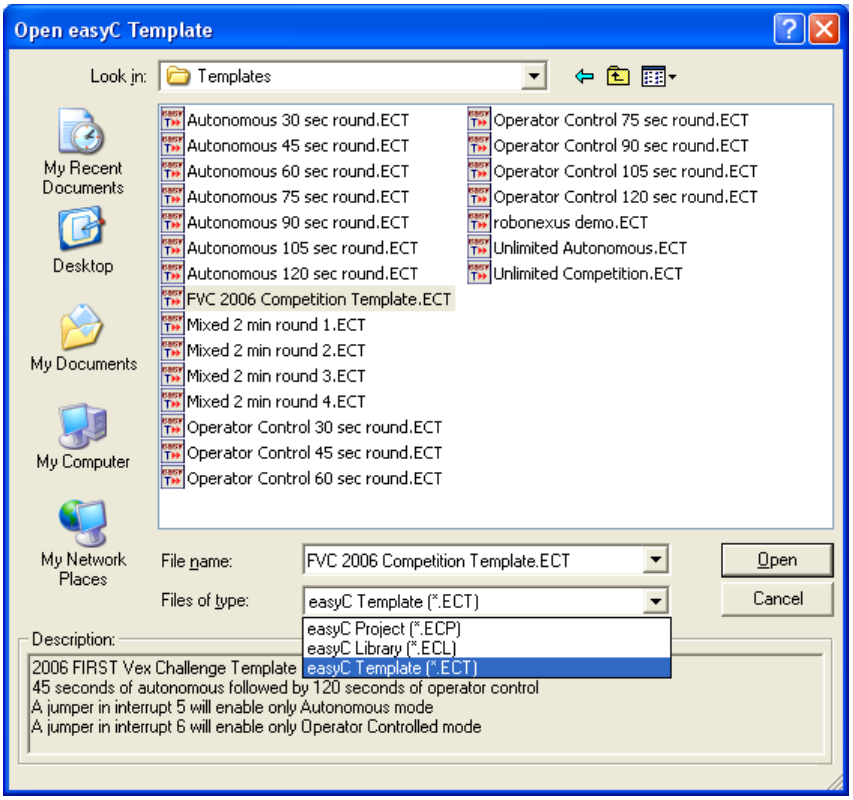
Please verify the drive option in the transmitter is set to 23 mode whenever you are using an RX command.

Competition Templates

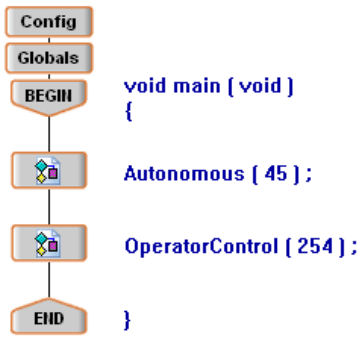
A pre-defined competition template is available in easyC for use in the 2006 FIRST Vex Challenge. A Competition Template provides a standardized platform for teams to use when competing in an event. The template has two sections, one for your Autonomous program and one for your Operator Control program. The template controls the duration of each of these matches and allows the FVC field to begin each match.

To open a Competition Template:

1. Select File > Select Open Project.
2. In the Files of Type drop down menu select easyC Template.
   The window will automatically display the default directory for Templates.



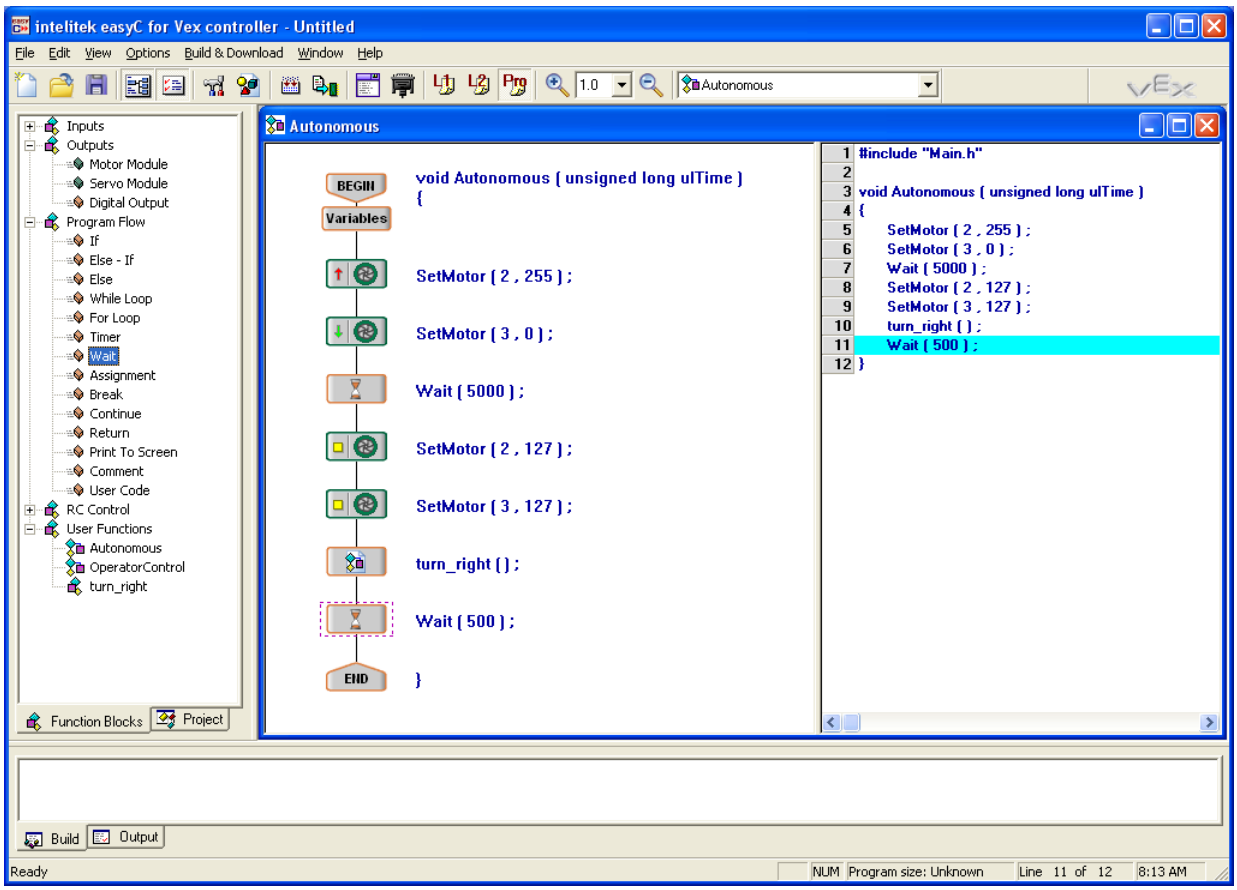
3. Select the 2006 FVC Competition Template, and click Open
   The Main Function will be displayed with two Function Blocks already defined.



These Function Blocks refer to user functions that have also been pre-defined for your use. The numbers in parentheses indicate the length of time of each period (in seconds).

The 2006 FVC Template has an Autonomous period of 45 seconds and a 254 second OperatorControl period. The OperatorControl period is set to the max default time of 254 seconds because the actual time of the operator controlled matches will be controlled by the FVC field during the competition.

Autonomous Mode



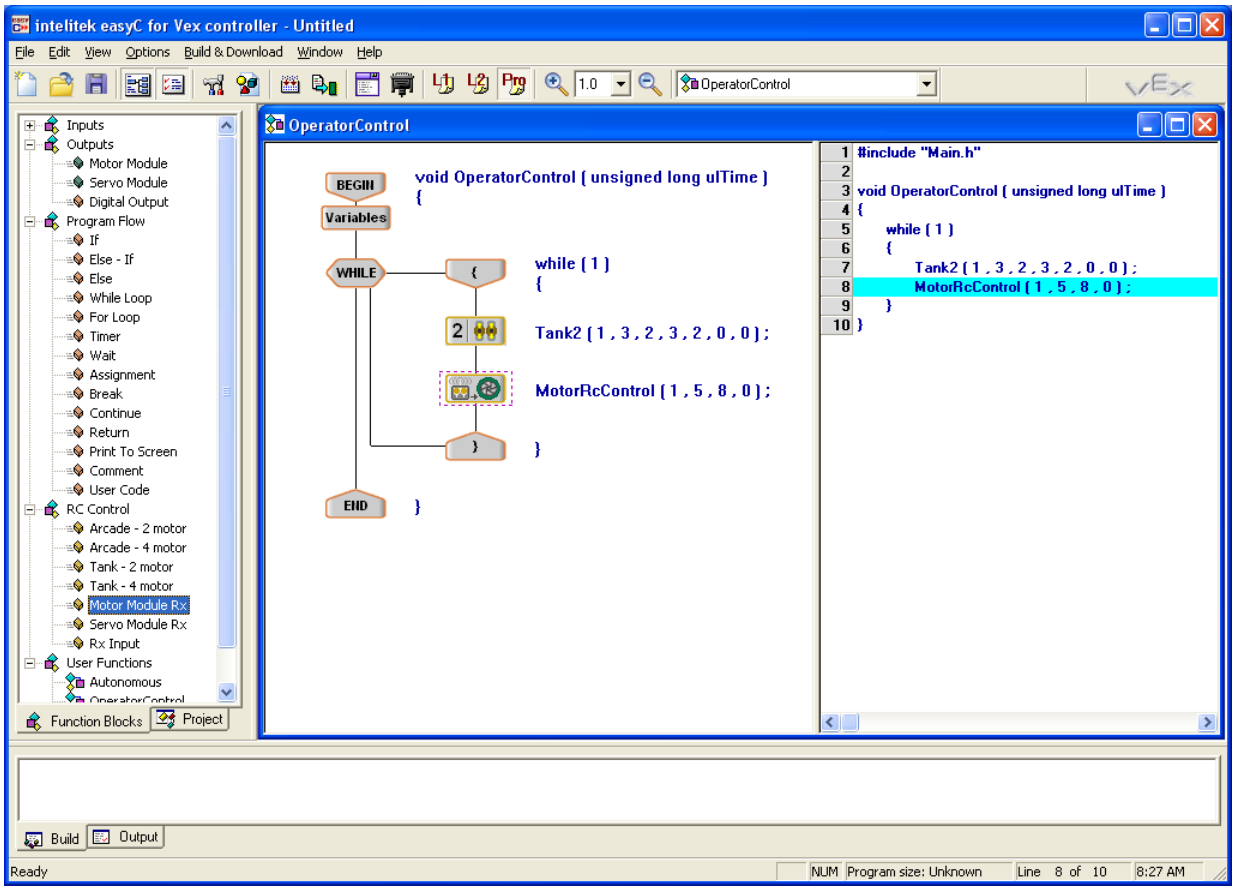
During the Autonomous Mode, the robot will move independently of operator controls for the prescribed length of time. The Autonomous period will begin when your robot first sees a signal from your transmitter or the FVC field. This is unlike a regular easyC project that would begin as soon as the robot's controller is turned on. Your robot will execute commands in the Autonomous section of your program until the time period elapses. During the autonomous portion of the template, any signals from the transmitters are ignored. This means that switching off your transmitter WILL NOT deactivate the Autonomous period or your robot. The orange eye on the controller will blink when the controller is in Autonomous Mode. At the end of the allotted Autonomous period, your robot's program will stop automatically.

Note:

A jumper clip must be placed in interrupt 5 to run only the Autonomous portion of your program. You will move this jumper clip to interrupt 6 when you place your robot on the Operator Control field. Be sure your robot is ON when you place it onto the field at the beginning of each match.

Operator Controlled Mode

Programming in the Operator Controlled Mode is very similar to programming in a normal project. The OperatorControl function of the template does not contain any predefined instructions; in fact the template is completely blank at the start just like the Autonomous function. However, you have the ability to communicate with your transmitter during the Operator Control period. You may add blocks from the RC Control group to control your robot. Switching off your transmitter during the Operator Controlled period will stop your robot. If you turn your transmitter back on, your robot program will continue to execute until the allotted time expires. At the end of the allotted Operator Controlled period, your robot's program will stop automatically. The FVC field will control the 2-minute duration of the Operator Control match.



Note:

A jumper must be placed in interrupt 6 so that only the Operator Controlled portion of the template will be executed.

On field robot testing:

When you place your robot on the field for an Operator controlled match, you will be asked to verify your robot and transmitter are functioning properly.

- **To test your robot and transmitter, turn on your transmitter and move your robot.**

Once this test is complete, your transmitter will be disabled until the start of the match.

- **To reinitialize the template before the start of the match turn off your robot controller, then turn it back on.**